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Original Articles.

* SURGICAL APHORISMS.

BY

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Suspect any genital or digital sore which does not appear till ten days or more subsequent to possible syphilitic infection.

Previous syphilis, champagne dinners, and a bad conscience predispose to Herpes preputialis.

Herpes preputialis usually commences within twenty-four hours of sexual intercourse as an irritation and itching.

It is not safe to say of a soft penile sore that syphilis will not follow it—there may be a double infection.

Look carefully for other evidences of early syphilis in all cases of skin disease where the rash is multiform and the spots are rounded, ham coloured, and not itchy.

A course of iodide and mercury may "cure" certain obscure and serious diseases accompanied by muddy anæmia when all other treatment has failed.

• Specially contributed to "The Antiseptic."

Iritis unaccompanied by agonising pain suggests syphilis.

In an adult double vision or hemiplegia, preceded by a period of bad headaches and insomnia, suggest a course of iodide and mercury.

Loss of sexual capacity, followed by loss of bladder control and attended by no other evidences of spinal disease or by glycosuria in an adult male previously healthy, suggests an energetic course of iodide of potash.

In chronic synovitis of adults, especially when symmetrical, examine the fauces, the shins, the knees, and the skin all over for other evidences of syphilis, and if the bone is enlarged above the affected joint give a course of iodide and mercury.

Multiple circular ulcers and copper-coloured cicatrices on the upper 1-3rd of both legs are conclusive evidence of syphilis, so are a punched-out hole in the middle of the palate, multiple circular scars on the face, V shaped scars of the soft palate with lost uvula, depressed hard patches in the tongue, radiating cicatrices at the angles of the mouth, and Hutchinson's teeth.

A history of total blindness commencing in one eye at or about puberty, and after a time involving the other, an terminating (though slowly) in receding tells of congenital syphilis.

A single circular ulcer on the leg which has not healed with rest and ordinary treatment, or which heals at one part and breaks down at another, will often get well quickly on iodide of potash.

A parotid tumour, accompanied by facial paralysis, is not *always* malignant. It may disappear with iodide of potash.

All doubtful tumours should not be called sarcoma, especially if the pain in them increases at night. Iodide of potash occasionally works a miracle.

Before concluding that an enlarged testicle in a child is malignant, examine its eyes and ears and nose and mouth and throat for signs of congenital syphilis. An interview with the brothers and sisters of the patient may solve the problem.

A tumour of muscle is most likely to be a gumma.

In serious cases the dose of iodide of potash should not be less than 30 grains three times a day.

In cases of "rheumatic fever," which do not yield to salicylates, examine the urethra in the adult male, and the bones of the affected limb, especially in the neighbourhood of the epiphysis, in children.

The introduction of a catheter, or of any instrument, into the bladder is a responsible operation. A dirty operator may cause life-long damage.

In the diagnosis of a urinary case, use instrumental aids as a last resource.

Ask every urinary case four questions, viz., regarding:—

Frequency.

Pain.

3. Character of stream.

4. Character of urine.

Note with regard to this:—

1. Frequency of micturition; whether it is greatest during the night or during the day.

2. Pain; where it is and when it is.

3. Character of stream; its size and vigour.

4. Character of urine; odour, admixture of blood, hair, fæces, etc.

The following is a short summary of the symptoms characteristic of certain diseases:—

CYSTITIS.

Frequency equally great night and day. Pain in hypogastrium before micturition. Stream unaltered. Deposits of mucus in urine.

STONE OF THE BLADDER.

Frequency increased during day, and especially by exercise. Pain at end of penis and at the termination of micturition. Stream occasionally stopped by ball valve action of stone. Small quantity of blood with last drops of urine, after violent exercise or straining.

PROSTATIC DISEASE.

Frequency increased at night. Pain at end of penis and at termination of micturition. Stream diminished in force, not necessarily in volume. In cancer and tubercle of the prostate blood comes with last urine.

STRICTURE.

Frequency always increased (small thick-walled bladder). Slight pain in perineum

during micturition. Stream small, but forcible; purulent threads in urine.

Always make a careful examination of the kidneys before concluding that the disease complained of is in the bladder; for all the symptoms of bladder disease may be caused by a pyonephrosis.

The urine (hæmaturia) is frequently a diagnostic puzzle.

Blood in any quantity from the urethra escapes independent of micturition.

A small quantity from the deep urethra will appear with the first urine.

A large quantity from the bladder will be bright red, and in large nummular clots. A small quantity from the bladder escapes with the last drops of urine.

Blood from the kidney makes the whole urine smoky.

Long, worm-like clots have come from the ureter.

Smaller casts suggest an origin from the pelvis of the kidney.

Profuse, painless, relapsing hæmaturia suggests papilloma of the bladder.

Bloody anuria is characteristic of mechanical suppression (stone in a single ureter or in both).

Hæmaturia, with enlargement of one kidney, suggests a malignant growth.

Hæmaturia, with large tumour of both kidneys, suggests congenital cystic disease.

Hæmaturia, along with a hard pulse and alternating with epistaxis, suggests cirrhosis of the kidney.

A clouded, milky urine suggests pus.

Pus in the first urine suggests urethral disease.

A thick, heavy layer of sticky, offensive pus in alkaline urine suggests bladder disease.

A milky, purulent diffusion throughout acid urine suggests a kidney lesion.

In women, pus in the urine may be derived from a source other than the urinary tract.

Oil globules, found microscopically, suggests that the specimen was obtained by a catheter; hair, that a dermoid ovarian tumour has opened into the bladder; striated muscle, a fistulous communication with the intestine; foetal bones, the discharge of an ectopic gestation.

The presence of a vesico-vaginal or vesico-uterine fistula can be proved by the injection of sterilized milk into the bladder, when its escape from the vagina may be noted.

The most common causes of retention of urine are:—

In the child: Impacted urethral calculus; ligature round the penis.

In young men: Gonorrhœa (prostatic abscess).

In middle-aged men: stricture.

In old men: Prostatic disease.

In young women: Backward displacement of pregnant uterus.

In older women: Uterine fibroids.

Always empty a distended bladder, without delay. Opium is no remedy for this.

The stricture which causes retention and visible bladder distension is elastic, and readily yields to a catheter skilfully used.

A tight, old stricture

causes visible distension of small bladder.

which may be felt bimanually like a uterus. And a strong bladder ruptures the urethra, and urine is extravasated.

An indurated ulcer on the glans penis of a man over fifty, of three months' duration or over (if unattended by enlargement of the whole chain of inguinal glands on both sides, and a specific eruption on the trunk), is an epithelioma of the penis.

A stony, hard swelling in one or both corpora cavernosa is due to cavernitis. In nine out of ten cases it is syphilitic. It disappears slowly on anti-syphilitic treatment, but leaves a shrunken mass of fibrous tissue which prevents normal erection afterwards.

A hard lump in the perineum of a stricture case is due to abscess from extravasation of urine.

A black spot on the glans penis following rough catheterism, or the passage of a calculus, is due to urinary extravasation and gangrene of the corpus cavernosum. The patient will die.

Painful incontinence in a child suggests stone of the bladder.

In a young woman it is not infrequently cured by the proposal of thorough examination.

In an old man it suggests overflow.

In a woman after confinement it suggests vesico-vaginal fistula.

In an older woman it suggests cancer of the cervix and vesico-vaginal fistula.

If "senile" gangrene commenced in the sole of the foot, or in any part of it except the toe tips, examine the urine for Pain.

Examine the urine for sugar in all cases

When in doubt as to the cause of cystitis, remember the possibility of genito-urinary tuberculosis.

There is no such disease as spermatorrhoea.

It is the normal function of the testicles to secrete spermatic fluid; they may do so in excess.

There is no such disease as prostaticorrhoea. The prostate normally secretes a glairy fluid, which may escape from the penis during erection or during the passage of a constipated stool.

Gonorrhoeal prostatitis may result in chronic disease of the prostate and mucopurulent discharge from the prostatic urethra. This troublesome disease must not be mistaken for the functional disturbances called prostaticorrhoea.

Impotence is due either to gross genital defect, to organic nervous disease, to serious illness, or to mental defects.

The organic form of impotence never gives rise to serious complaint; the functional form fills the coffers of quacks and swells the lists of suicides.

The evil effects of masturbation are mental and moral; temporary debility in weakly lads may result from it, but no permanent physical disability.

Varicocele commencing in a patient over forty suggests a renal growth.

* SALPINGITIS.

BY

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A CONSIDERATION of salpingitis or inflammation of the mucous membrane of the fallopian tubes, which may be either acute or chronic.

contributed by

The Antiseptic

or chronic, would be necessarily imperfect and unsatisfactory unless the subject of its natural and frequent sequel, pyosalpinx (a collection of pus in the tube), were also included, hence in the remarks here made the two will be considered together. The opposite condition, or the one of stricture of the canal, results in sterility if it affect both sides simultaneously. The practitioner should remember the sphincter-like action of the muscular fibres surrounding the uterine openings of the tubes. A total or partial obstruction of the function of these tubes has an important bearing on the entrance of fluids into the peritoneal cavities, and on the danger of intra-uterine medication. We can readily understand how the sphincter action is arrested in severe post-partum hæmorrhage, and destroyed in deformed conditions of the lining membrane of the uterus, or from the presence of tumours in the adjacent muscular structure. In the adult woman, according to Carl Henning, the right tube is nine-and-a-half centimetres (three and three-fourth inches), while the left measures only eight-and-a-half. The abdominal extremity has attached to it five large and ten small fimbriæ. The walls of these tubes consist: 1st, of peritoneum, which covers them to the fimbriated extremities; 2nd, of connective tissue, in which are interspersed two sets of muscular fibres, external or longitudinal, and internal or transverse, which are communications of the muscular tissue of the uterus and broad ligaments. At the point where these tubes enter the uterus, Henning declares that the longitudinal and transverse layers of fibres both become greatly developed, and that the latter forms here a distinct sphincter tubæ; 3rd, we find within and lining the tube a mucous membrane, which is thrown into

large and small folds, which are very evident near the fimbriated extremity, and gradually become insignificant as they advance towards the uterus. Within this membrane Dr. Bowman discovered tubal glands, which consist of grape-like structures, extending downwards towards the subjacent muscular fibre. They differ from the muciparous follicles of the vagina, the Nabothian glands of the cervix, and from the utricular follicles of the uterine cavity. Kölliker denies the existence of these, but Henning describes them very fully. These compound glands of the Fallopian tubes are lined with an epithelium of basement form. The mucous membrane covering over the tubes, and not dipping down into these glands, is covered by a ciliated epithelium, the broom-like action of which is exerted towards the uterus. The object of this seems to be to sweep the products of the ovaries into the uterus, and to force in the same direction menstrual blood oozing into the tubes from their mucous lining, as a result of ovulation. The zoöspores or spermatozoa, which are known to pass through the uterus and proceed as far as the ovaries, are themselves endowed with powerful ciliary action in the single cilia which each possesses, and by this they overcome the opposing force of the tubal cilia. It is highly probable that the erectile condition induced in the mucous membrane of the uterus and tubes by contraction of the middle coat of their muscular fibres, produces in the latter, as in the former, rupture of blood-vessels and consequent hæmorrhage. Henning declares that "during menstruation throughout its entire surface the mucous membrane of the tubes assumes a dark red colour." Ruysch, an old anatomist of Amsterdam, who wrote in 1737, describes

a post-mortem examination in which he discovered the Fallopian tubes containing blood; this has by some of the writers upon the history of hæmatocele been construed into a record of that affection, but the passage appears to refer merely to a condition which depends upon ovulation. Messrs. Bernutz and Goupil mention instances of the collection of blood in the Fallopian tubes in consequence of obstruction of these canals. Dr. Duncan admits that some blood may come from the tubes in natural menstruation. In two of his cases of ovariectomy in which he employed the clamp, the patients menstruated regularly through the tube for three periods, when at the same time menstruating per vaginam. The abdominal opening then closed, and the discharge was thereafter confined to the vagina. Other cases of the same kind are on record. Now as in these cases there was free exit of blood per vaginam, there can be no reason for believing that a regurgitant action occurred. The blood flowing by the tube was more probably the result of hæmorrhage into that canal, the uterine end of which was constructed by traction, effected by the confinement of the abdominal end in the wound. Inflammation of the Fallopian tubes may doubtless be produced by diverse causes. While it is the belief of some writers that in all, or nearly all cases, the cause is specific contagion, there is no doubt that other causes may also prove effective. Among these may be mentioned colds, sexual excesses, vaginal or intra-uterine applications of an unclean or septic nature, a scrofulous diathesis tending to catarrhal inflammations of all mucous membranes, also the extension by contiguity of structure, or inflammation of the endometrium, especially of puerperal or gonorrhoeal origin, from the uterus.

Symptomatology.—The symptoms of salpingitis are not in all cases clearly defined from some other conditions. Pain with soreness in the region of the affected tube will be present with little if any constitutional disturbance. From the pain and soreness of the ovaries, a reasonable differentiation is made by the fact that at the menstrual period there will be little if any exacerbation. During the inflammatory stage it is not probable that any discoverable enlargement will exist. Menstruation will not necessarily be affected in nature, frequency, quantity or duration. Should the inflammation not end by resolution, the next stage will probably be an accumulation of pus in the tube, or pyosalpinx, which may remain as a chronic result of acute or sub-acute salpingitis. This will be evidenced by a varying but greater degree of constitutional disturbance, possibly occasional chills, increased temperature, a decline in general health, a more or less easily discoverable enlargement above the groin which sometimes from its oblong or 'sausage' shape renders its diagnosis from an enlarged ovary easy. Occasionally the tube, after being in a condition of painful distension for a few days, becomes opened at its uterine end, and the contents escaping by way of the uterus and vagina, will add another easily interpreted symptom to the diagnosis. Refilling and evacuation may then proceed with a certain periodical regularity, indefinitely. The most important disease of the Fallopian tube is a tubal gestation, but this accident of pregnancy is fully discussed in all works on obstetrics. The possibility, however, of a pelvic hæmatocele arising at any time during the growth of the ovum, from this cause, must not be lost sight of. So may this complication follow from a congested state of the

mucous membrane, and any rupture of the tubal vessels. By a careful digital examination in such cases, we may detect effusions, thickenings, enlargement, adhesions, or small fibroid tumours, which require considerable experience in gynecological examination.

Prognosis. In the majority of instances, without treatment, but with tolerably good hygienic surroundings the tendency in salpingitis is to a recovery practically perfect. Where pus has formed the prognosis is more grave, since it is not impossible that the tube may rupture into the peritoneal cavity and cause a fatal septic peritonitis, or it may after months of evolution develop a sac containing quarts of pus, and exposing the patient during the time to serious septic influences, and even ultimate demise, unless relieved by proper surgical treatment.

Treatment. All purely medical treatment will be found either absolutely ineffective or unsatisfactory. Rest, quiet, abstention from all sexual or other excitement, with such attention to the general health as may be indicated, will comprise the major part of the treatment. Abdominal packs of tepid water or the application of Tincture Iodi over the sore and painful part, with vaginal tampons of absorbent cotton or surgical wool saturated with a ten per cent. solution of Ichthyol and glycerine, will be found useful and practical adjuncts in treatment. Under this plan of treatment some most unpromising cases will get well, but always at considerable hazard to life, since the moment can in no way be foreseen, when a pus-distended sac may rupture and infect the peritoneal cavity. Where rupture of a pus-sac has taken place the consequences are usually of an extremely seri-

ous character, the only course offering any reasonable hope being a prompt caliotomy (opening the abdomen) with thorough cleansing of the abdominal cavity, but this will seldom be undertaken until after fatal mischief has been done. In a small percentage of cases, principally those of long duration, the pus contained in the affected tube will be sterile and no particularly serious results will probably follow rupture.

The course of treatment in pyosalpinx must vary according to circumstances. Where a case presents with a history of frequent evacuations through the uterus in the past, it may be considered that there will be less danger in delay, and consequently more reason for a tentative or expectant course. Should the plan already recommended after a fair trial for months, perhaps, prove ineffectual, there will be time for radical treatment; but if the case be recent and the symptoms of pyosalpinx be in process of development, with no probable uterine evacuation to be expected, the safest course will be a resort to operative treatment, in all but exceptional cases. The exceptional cases in which an operation is inadvisable, will be those where from great debility of constitutional derangement, or where from any other cause the life of the patient would be seriously jeopardised by an operation, also in the presence of advanced phthisis or malignant disease which is likely to soon prove fatal independently of the pyosalpinx. Where operative interference has been long delayed, an accumulation of pus amounting to some pints may take place, and often the best plan will be to make an exploratory caliotomy, when the exact location and connections of the pus sac may be noted, the incision closed up and drainage established by a vaginal opening.

through that channel; or adhesions to the abdominal wall having occurred, opening through it may be successfully practised with the establishment of drainage, to be followed by the subsequent removal of the sac or not, according to circumstances. It is not thought necessary to consider the procedure in ordinary cases, as it presents nothing novel or, for the most part, difficult in carrying out. The out-of-ordinary cases are the ones most likely to perplex one who has not met them previously, so to some of these we have drawn attention.

In conclusion, we have one word of caution to make, the necessity for which has been impressed upon some by past experience. In using antiseptic gauze for drainage, never neglect to remove it within twenty-four hours, replacing it by fresh gauze, if need be, as it will soon become attached to granulations, making its removal very difficult.

SOME COMMON SENSE VIEWS ON PLAGUE,*

BY

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After some introductory remarks Dr. Choksy continued:—

What is Plague?

The simplest definition of plague is that it is an infectious and contagious

**The Inaugural Lecture of the Bombay Sanitary Association, delivered at the Framji Cawasji Hall.*

fever of limited duration (about 10 days in uncomplicated cases) characterised by the appearance of enlarged and swollen glands, called buboes, in various parts of the body, and accompanied by grave disturbances of the nervous and circulatory systems. Except in very malignant cases, plague—as we have known in this city—does not kill on the first or second day; the days of greatest danger to life are from the third to the seventh or eighth. Thereafter, it becomes gradually less. What you have to recognise and impress upon the people, is the fact that—as the disease is of such limited duration and its greatest fatality is during the first week, in by far the larger number of cases within five to six days, the sick must be well taken care of from the first day, and no time should be lost in obtaining proper treatment. The value of this lesson, which our experience has taught us, is still unfortunately not sufficiently appreciated, even by those educated, and it is your duty to make it widely known.

Is Plague Infectious and Contagious?

It is fortunate for us that plague is not highly contagious, otherwise no doctor, nurse or attendant would be safe. There is no danger in touching the sick, visiting or walking through the wards of a plague hospital; but there is danger in embracing or kissing the sick or those just dead of plague. In their love and fondness for the near and dear ailing or departed, and in their great grief, people overlook this obvious danger, and it is well to restrain them from doing so. Plague is, however, highly infectious under certain well specified conditions, and that form which is known as the pneumonic or lung plague is the most deadly, as well as highly infec-

tious. The plague germs teem in their millions in the sputum or expectoration of the patient, and one cannot be too careful about it. It is well not to touch it; it should be received in a vessel containing some strong antiseptic. Should it fall on the floor or bedding, it should be cleaned with a rag soaked in the same, and whenever practicable all such soiled clothing, bedding, rags, &c., should be destroyed by fire. The sputum from plague patients, other than those suffering from pneumonic plague, is also not free from risk, and it should be similarly treated. Besides the sputum, all the other excretions of a plague patient, although not absolutely infectious in all cases or all stages of the illness, must be looked upon and dealt with as such for all practical purposes, and especially so in all fatal cases. The saliva, the vomited matter, the urine, even the faeces and the pus and other discharges from open buboes, sores and blisters are all infectious, and readily convey the infection to the healthy. The finger or hand coming in contact with these should be immediately washed with an antiseptic, and it is safer to avoid such contact as far as practicable. The excretions may be wiped off or removed in the case of the sputum and the soiled articles burnt. All articles of bedding, clothing, &c., in use by the patient, but not soiled, should be sterilized by steam in one of the several municipal sterilizers. The sources of plague infection being as above, excluding for the present the factor of direct or indirect infection from the sick or dead rat, it becomes obvious how easy it is for plague to spread, and to claim victims among the poorer classes of the sick, who remain at home, and die in such large numbers. Just imagine for a moment, a small dark, ill-ventilated and stuffy room

in a chawl, where neither God's light, nor air can or do penetrate; the patient lying in his rags on the floor, without medicine, without food, and with a wife and two or three children. His infectious sputum or discharges thrown about in all directions,—on the floor, on the walls, on his rags or on the *saree* of the wife tending him or even on her person; the children playing on the floor around him, all unconscious of their danger, in the midst of so much infectious matter, and is it any wonder that those in the room sicken and die or that friends and visitors who group themselves around him, share the same fate or convey the infection to others in their clothes and belongings? This is no mere fancy picture; you may verify it any day in this city.

How does Plague Infect?

There is a consensus of scientific opinion, that the plague poison enters the system through the skin. The skin may or may not be apparently injured. The injury may be so slight as to be invisible to the naked eye. The virus thus entering the body, leaves no visible traces on the skin and in only about 8 or 10 cases out of every 100, is it possible to locate the point of inoculation of the poison. A peculiarly formed blister or nodule indicates the site of infection. The inner lining of the mouth, the nose, and the throat may also similarly be the channels of infection, but not to the same extent as the skin. Occasionally a sore or inflamed eye may be infected by a drop of sputum falling into it, as in the case of one of the nurses at the Arthur Road Hospital, who becoming thus infected, succumbed to plague.

As to how the poison exists in nature; what form it assumes; how it is conveyed into the skin; whether through direct

contact or through the medium of an infected rat-flea or human-flea, are questions still awaiting solution. All that need concern us here, is to remember that during epidemic times, every sore, cut, open wound or bruise should be covered up and protected by some dressing or plaster and well looked after daily, special care being given to the hands and feet. Bare feet, even if it be for a few moments in one's bed room, should be eschewed. And on no account to neglect the smallest abrasion.

How to Recognise Plague?

The prompt and early recognition of plague is a matter of vital importance to the patient, as much as to his family. Much of the high mortality and attendant misery from plague must be ascribed to late and at times to too late recognition, to the disinclination to call the plague, plague, to the fear of creating unnecessary anxiety or alarm, and I regret to have to admit, to sheer carelessness. For, during epidemic times, no disease is so easy of diagnosis. If a healthy person following his usual vocation suddenly develops high fever with a tender enlarged or swollen gland, howsoever small it may be, and if with it there exist faltering speech, or some slight mental disturbance such as dulness or it may be delirium, rest assured you would be on the safe side if you were to look upon it as plague. Every such tender gland, which cannot be accounted for by other obvious causes, with which every physician is familiar, must be looked upon as a manifestation of plague. Take into consideration only the above factors, and none else, such as the patient's station in life or his house or bungalow or surroundings, for plague is no respecter of persons, and strikes down whosoever that

is susceptible. The presence of the above symptoms should put you at once on your guard. Sad to relate, however, that is not always done, and with results that are nothing short of disastrous. Take for instance the case of a patient so situated. If the fever is moderate and the gland not very painful or much swollen, the chances are that the doctor is not called in on the first day; the patient may remain at home, but never in bed; or else he may go about as usual. The second day is a trifle more severe; the doctor is called in; but the patient, and the more so his family try to explain away the symptoms to their own satisfaction. They are so sure and positive, that the doctor's confidence in himself is shaken and he hesitates to give a definite opinion, not caring to go against their united and implied wishes, or be proved ultimately in the wrong and his guarded warning neglected or laughed at. On the morning of the third day, there may be no fever at all or less than on the two days previous, and congratulations go round, as the patient is better, and the swelling confirmed as due to a strain or something similar! But unfortunately within a few hours a change comes over the spirit of the dreams, and plague becomes revealed in all its hideousness. The patient has grown suddenly bad; doctors and consultants are called in in numbers, but all in vain; he gets steadily worse; no treatment is found to be of avail, and he succumbs within a day or two. Cases like the above must have come within your cognizance during the last seven years. It has been my misfortune to have seen many. Now just see what timely recognition and timely treatment would have done in such a case. A life, a precious, a valuable or may be a great life saved. But so perverse is human nature, so indignant are some

at the bare mention of the word plague in connection with their family, that they would rather see a life sacrificed than admit a member to be stricken with plague. They must know that this is not a question of family reputation or pride, but that the life of one is at stake; that every suspicious case, if treated as plague from the very commencement, offers the best chance of recovery, should it eventually be proved to be plague; if not,—no harm is done thereby. I consider this to be the only sensible course to adopt in epidemic times, and its justification must be potent to you. Any medical man who forgets this incurs grave responsibility. In this connection I would crave leave to quote from a paper* which I read over three years ago, and what I then said will bear repetition even unto this day:—"No other affection presents the typical cardinal symptoms of plague which are evident, more or less, in every case, and during epidemic times there is no disease of which the diagnosis is so easy. And yet, in spite of this evident fact, it is often regrettable to observe that woeful want of commonsense, that fatal hesitancy, and that perverse inability to look things squarely in the face, that characterise the diagnostic efforts of some who ransack the heavens above and the earth below, for some cause or causes, probable or improbable of the clinical phenomena they see, whilst self-evident facts appeal to them mutely but in vain, and indicate what course to pursue. To this and to this source alone, I am inclined to attribute the high mortality rate that is often observed in private practice, especially among the better classes of people. Much valuable time is thus lost, and what timely assist-

* Paper read before the Bombay Medical and Physical Society, September 1900.

ance could have done in the early stages becomes unavailing later on."

So much then for the poor and innocent victim of pride, prejudice, neglect or carelessness, call him whatever you will, who has had to pay the penalty for the sins of others, with his own life. Now let us consider the fate of the rest. Should the patient have been infected from without, the house free from infection, and proper measures taken to prevent infection during his illness, no further mischief occurs, and no fresh cases develop. If, on the other hand, dead rats have been found on the premises, and their warning neglected, or should there exist some other and unknown sources of infection, another person is stricken down, even before the first case has succumbed, and then a third, and then a fourth, and so on. This again is no fanciful picture, and here, too, I have drawn upon my personal experience. You will thus realise how timely warning of the occurrence of plague, and its prompt recognition is necessary in the interests of others than the sick; and how neglect or carelessness leads to more cases and more deaths.

Protective Measures.

The greatest enemies that plague has are light and air, and you should try to secure the maximum of both. Do away with ornamental but unnecessary purdhas, lattices or screens and let Nature's gifts penetrate free and deep into your dwellings. Live temperately, eat and drink in moderation and banish from your minds the idea that alcohol in any form—be it brandy or whisky—is a protective against plague. Alcohol possesses no such virtues, rather the reverse; and the drunkard or the drinker offers less resistance and is more susceptible to plague than an abstain-

er or a moderate drinker. Cover up all abrasions or cuts. Do not neglect the warning of the dead or dying rats, but at the first sign evacuate, leaving the premises open and ready for disinfection. Do not delay, once you have the warning, lest you and yours have to pay dearly, nay even with your lives, as hundreds, and thousands have done before. Also remember that there is no drug, pill or potion, however much it may be lauded, puffed or thrust before you in specious and alluring guise that will protect you. All such nostrums are meant to put so much money into the pockets of the traders and do no good. Rather they do harm by engendering a false sense of security and lead people to neglect the essential sanitary measures, personal and general. *Science knows of no drug that has specific or protective action against plague. But at the same time it has not left you entirely to the mercy of the disease. It has provided you with one measure of protection which through various causes, which I need not enter into here, has fallen into disfavour, *viz.*, prophylactic inoculation. It is true that its effects are of short duration, and that it has to be repeated year after year at the beginning of each epidemic, and that it causes inconvenience and loss of wages to the poor. But situated as we are, is there any choice between it or an attack of plague in those susceptible to it? I do not believe that one or two or three inoculations, done in successive years, would do harm to any individual, provided that he is free from any taint of

* The advertisement of such nostrums should be suppressed inasmuch as some of them not only guarantee immunity from plague, but plainly tell the people that the necessity of evacuation from infected dwellings or streets is obviated, and that they can safely remain as long as they continue the use of such preparations.

tuberculosis, scrofula, rheumatism, heart-disease, &c. What effects more frequently repeated inoculations may have under similar circumstances we do not know. Nor would I advise you to have any person inoculated in a house where a case of plague has occurred: for I hold, that if such a person be in the incubating stage of plague, inoculation does harm. Evacuate first; have the house disinfected, and if you wish to re-occupy it, get inoculated before doing so, but not before at least ten days have elapsed since the occurrence of the last case. Should immediate protection be required for those nursing the sick, or for others compelled to live in the house, then get inoculated with a small dose of any curative serum which will cause no inconvenience, no fever, and give the much needed protection for about ten days to a fortnight. This is the only advice that I can tender you in this matter.

(To be continued.)

Cases and Comments.

Methylene Blue in Hysteria.

BY

U. RAMA RAU,

Medical Practitioner, Madras.

Under this heading Dr. M. G. Naidu, M. B., of Hyderabad had reported in November issue of "The Antiseptic" the result of his experiences of a number of cases of hysteria treated by methylene blue. After reading the report of these cases, I tried methylene blue in some cases of hysteria and proved to be very successful.

As Dr. Naidu says, the treatment of Hysteria depends more upon the will power of the medical man, than on medicine, so I find methylene blue to be a very good medicine in such cases. Methylene blue colours urine blue in the course of a few hours. No other medicine has that power of showing definite visible change (of course to the patient) as in methylene blue. I tried methylene blue in about 4 or 5 cases of hysteria, wherein I warned the patient and her relatives, the moment the urine gets coloured the symptoms will disappear, and so it did disappear, at any rate much earlier than their usual attack. In one case its effect is very satisfactory. The notes of the case are as follows:—

A young brahmin girl, Mrs.——, of 15 years of age, belonging to a very respectable and high class family, brought up on a very luxurious life, some 3 months back began to complain of severe headache between 12 noon and 1 P.M. every day. Thinking it to be ordinary neuralgia, I prescribed her all sorts of anti-neuralgic medicines, with no benefit. This headache after 15 days began to appear, after an attack of chill, followed by a little perspiration with no rise of temperature. The same attack continued day by day without yielding to any sort of remedies. As the father of the girl was very anxious about the attack, he consulted some other medical man, who diagnosed it to be a case of malarial fever and went on administering quinine for about a month. Under quinine the headache, chill and perspiration seemed to get better, but still at the appointed hour the headache, chill and perspiration used to appear in a mild form. The medical attendant went on pushing quinine, thinking all these symptoms

are due to malarial fever. Pushing the quinine had quite the reverse effect, all the symptoms re-appeared. The patient was again put under my care. In the interval the patient had fever for about 2 days, temperature going up to 104° every day in the evening. This made me to examine the blood for malarial parasite which gave me negative results. Without knowing how to proceed I just watched the case with no treatment. The attack began to come on very severe, as the father became more anxious, the chill continued for about an hour without any rise of temperature followed by profuse perspiration. As the mother of the girl was subjected to attacks of hysteria in her youth, I suspected the case to be hysteria. I expressed my opinion to the father of my patient, which consoled him to some extent. The next day she had 2 attacks one at 8-30 A. M., and the other at about 4-30 P. M. This cleared my doubt. I thought of administering methylene blue. Next morning I administered 1 gr. of methylene blue at 6-30 A. M. and warned the patient the moment the urine gets coloured blue, headache and other troubles will diminish and when the stool gets coloured blue every symptoms of her will entirely disappear. So 2 hours after administering the pill, urine appeared blue, the usual attack did come on but not even half as severe as before. In the evening she had no attack at all. I continued the pills for about 3 or 4 days. All those days she had no attack. I prescribed pills containing Ferri Velarin gr. i, Zinc Velarin gr. i and Quinine Velarin gr. i for about a month, one pill three times a day even since she had no attack at all, she is keeping pretty good health now.

REMARKS:—Practitioners are very liable to mistake such cases as malarial fever,

as I see in some older text-books, such symptoms are described as one kind of malarial fever. It appears like Quotidian, attack occurring every day and afterwards it became double Quotidian attack appearing twice a day. Quinine did improve the attack. But if it were a case of malarial fever the attack ought to have stopped with quinine, especially when continued for about a month.

[We have known cases of neuralgia not of hysterical origin, improve under methylene blue. It is one of the well known drugs used in all class of neuralgias.—Ed. "A."]

A Case of Exophthalmic Goitre.

Mr. V. P., a middle-aged Hindu gentleman and a chemist by profession, consulted me sometime ago for an ordinary cold with partial loss of voice. Even before I had examined him his appearance struck me and I was almost certain that my patient was suffering from something more than "an ordinary cold." His prominent eye balls and the peculiar nervous tremblings all over at once made me suspect exophthalmic goitre. On examination I found the larynx slightly congested, but the vocal cords moved freely and there was nothing else of any pathological significance detected by the laryngoscope. On examining the heart a mitral systolic murmur was detected, but I came to the conclusion that it was of functional rather than of organic origin. The pulse rate was 123. It was small in size and regular in rhythm. There was a slight swelling of the thyroid gland, the measurement over the thyroid round the neck being only 15 inches. A blowing systolic murmur was also heard over the enlarged thyroid. I could not feel any perceptible

thrill over the thyroid. There was marked debility, general nervousness, and muscular tremors present. The eyeballs were very prominent and his startled and staring appearance was very characteristic. But the enlargement of the thyroid, as I have already remarked, was only slight and not very prominent. He had no vomiting, diarrhoea, thirst or jaundice. In fact, there was no indication of any disturbance of the digestive system. The respiratory system was affected. There was slight cough and increased frequency of respiration and fairly well marked diminished inspiratory expansion, which is known as Bryson's symptom. Von Graefe's symptom was present and was well marked, and there was also a history of occasional headaches. The skin was moist and sweating was profuse. Urine was normal. After a complete examination and detection of the above explained symptoms a diagnosis of exophthalmic goitre was easy and inevitable. By way of treatment I prescribed for him a mixture containing arsenic and belladonna, and also ordered Thymusglad tabloids (5 grs.) to be taken three times a day. I also advised him to lead a quiet and easy life and to avoid exertions of any kind. The patient followed the above indicated treatments. He was under my observation for a couple of months. I must confess that I failed to notice any perceptible improvement. The real test of any improvement in cases of exophthalmic goitre is the pulse rate. During the whole time that the patient was under my observation the pulse rate varied from 120 to 125 per minute. After a time I lost sight of the patient and have not had any information from him or about him. Dissatisfied at the absence of any real

improvement he must have gone to some one else.

Remarks. Exophthalmic goitre is an exceedingly interesting disease which was first described by Graves of Dublin in the year 1835 and hence commonly called Graves' disease. On the continent it is called Basedows' disease after a German physician who published an elaborate account of it in 1840. A sudden fright or emotional excitement is said to be the cause of the disease in a large number of cases. And it is interesting to note, as Dr. Hector Mackenzie has pointed out, that the effect of sudden fright and terror closely resemble the symptoms and appearance of exophthalmic goitre. "The heart beats quickly or violently, so that it palpitates or knocks against the ribs. There is trembling of all the muscles of the body. The eyes start forward and the uncovered and protruding eyeballs are fixed on the object of terror; the skin breaks out into a cold and clammy sweat, and the face and neck are flushed or pallid."

The cardinal symptoms of exophthalmic goitre are (1) increased frequency of heart's action, (2) enlargement of the thyroid, (3) prominence of the eyeballs, (4) muscular tremor, (5) general nervousness. But while calling the above the cardinal symptoms I must remark that some of them may be absent or but slightly developed, with the exception of the increased action of the heart which is invariably present. There are a number of other secondary symptoms which are very often present in cases of exophthalmic goitre. The following table of symptoms is the one given by Dr. Byron Bramwell of Edinburgh and is a modification of the one given by the late Dr. Charcot of Paris.

Table showing the symptoms which may be present in cases of Exophthalmic Goitre.

Primary or Cardinal symptoms.	(1) Increased frequency of heart's action, palpitation, throbbing of the vessels, etc.
	(2) Enlargement of the thyroid.
	(3) Prominence of eyeballs.
	(4) General nervousness.
	(5) Fine rhythmical vibratory tremors.
Secondary Symptoms.	Digestive organs.
	Diarrhoea.
	Vomiting.
	Loss of appetite; bulimia, fits of hunger.
	Thirst.
	Jaundice.
	Cough.
	Respiratory organs.
	Increased frequency of respiration.
	Diminished inspiratory expansion (Bryson's symptom).
	Von Graefe's symptom.
	Stillwig's symptom (absence of reflex blinking).
Nervous system.	Defective convergence (Mobius).
	Ophthalmoplegia externa.
	Peculiar form of paraplegia.
	Epileptiform convulsions, chorea.
	Headache; neuralgia, angina pectoris.
Urinary system.	Psychical modifications such as mental depression, excitement, etc.
	Polyuria.
	Albuminuria.
Intigumentary system.	Glycosuria.
	Sweatings, flushings, sensation of heat, rise of temperature.
	Diminished electrical resistance.
Generative system.	Increased pigmentation.
	Leucoderma, other skin eruptions.
	Loss of hair, atrophy of nails.
General.	Loss of sexual desire, Impotence.
	Menstrual derangements.
	Debility.
	Loss of weight.
	Anæmia.
	Cachexia.
	Oedema of the lower extremities.

The pathology of exophthalmic goitre is a much discussed and still unsettled one. The old view was that this disease is caused by an initiative lesion of the sympathetic in the neck. That view is now discarded. It has also been suggested that the pressure of the enlarged thyroid on the sympathetic is the real cause of the disease, and in support of this it is stated

that section of the sympathetic in the neck is followed by disappearance of the symptoms.

Paralysis of the vaso-motor nerves with subsequent increased flow of blood through the coronary arteries and resulting excitability of the cardiac ganglia has also been suggested as a probable explanation of the phenomena of this interesting complaint. Lesion of the nuclei of the pneumogastric nerves and other nervous structures of the medulla oblongata has also been suggested. Filene and Bieufont by sections in the neighbourhood of the restiform body artificially produced exophthalmos, enlargement of the thyroid and tachycardia. But their results have not been generally accepted. That some lesion of the central nervous system is present in exophthalmic goitre is fairly generally admitted. But whether that lesion is the starting point of the disease or not has not yet been definitely established.

Mobius and Greenfield hold that hypertrophy of the thyroid gland and its hypersecretion is the primary cause of the disease. In that case the disease must be considered to be the exact antithesis to myxoedema, which is produced by the defective action or complete absence of the thyroid gland. As for treatment—drugs seem to be of only limited use in the treatment of this complaint. But among the most useful are arsenic, belladonna, phosphate of soda, and the mineral acids. Some also recommend cardiac tonics like digitalis and strophanthus. But opinion is divided, as to their usefulness. Extract of thy-mus gland is said to be specially beneficial. Electrical treatment by the application of constant current to the neck and the interrupted current to the praecordial

region is highly recommended by Charcot and other French physicians. Several surgical measures have also been recommended such as partial or complete excision of the thyroid gland, ligature of the thyroid vessels, division of the thyroid isthmus, stripping off of the capsule of the gland, division of the cervical sympathetic and so on.

The disease does not appear to be so common in India as it is in European countries.

T. M. N.

EDITORIAL NOTICE.

The Editor will always be pleased to receive communications on matters of importance to the profession for publication in the 'Antiseptic.'

Articles, letters, and all communications intended for publication, and books for review, should be addressed to the Editor, Lady Napier Villa, Egmore.

All communications relating to advertisements, subscriptions, and other business matters to be addressed to the Manager, 323, Thambu Chetty Street, B. T., Madras.

THE ANTISEPTIC. JANUARY, 1905.

SANITARY INSPECTORS IN MADRAS.

In the November number of the *Indian Medical Gazette* there is published a letter from Lt.-Col. King, I.M.S., on the subject of Sanitary Inspectors in Madras. In that letter the writer attempts to answer some of the remarks we made about a class of men some of whom, at all events, describe themselves as C. S. I's. Lt.-Col. King now informs the readers of the *Indian Medical Gazette* that these men are "Certificated Sanitary Inspectors—and not C. S. I's, as the author, with stale and borrowed facetiousness, states." When we called the Certificated Sanitary Inspectors C. S. I's we admit that we used a designation which was both stale and borrowed. It was stale because these men have been calling themselves C. S. I's for a long time past; it was borrowed because we did not invent that designation, but only found it being used by the Sanitary Inspectors themselves.

Lt.-Col. King does not "confute our statements seriatim" because he "does not want to give more advertisement to a journal of the type concerned," meaning of course *The Antiseptic*. We are glad to say that we do not stand in need of any of Lt.-Col. King's advertise-

ments. All the powers of advertisement that Lt. Col.-King is capable of he may reserve for advertising himself and his Sanitary Inspectors. The first point that Lt.-Col. King deals with is the educational qualifications of the Sanitary Inspectors. He says that we have "erroneously assumed that the men were of the most indifferent educational status." What we said was that among the Sanitary Inspectors there were a large number of men who had not even passed the Matriculation Examination. We made that statement in May last, and we repeat it now. And we shall prove that statement from statistics supplied by Lt.-Col. King himself. In his letter Lt.-Col. King gives the following figures to prove the educational qualifications of the Sanitary Inspectors.—Among 571 Sanitary Inspectors there were:—

B. A's	1.6	per cent.
F. A's	4.4	"
Matriculates	58.2	"
Uncovenanted Civil Service Examination.	7	"
Upper Secondary	1.4	"
Lower Secondary or Middle School	8.4	"
L. M. & S. of Madras	3	"
Hospital Assistants	4	"
Diplomates in Agriculture	3	"
Certificated Surveyors	1.4	"
Unpassed	19.3	"

It is interesting to notice the number of examinations inferior in educa-

tional value to the Matriculation examination that Lt.-Col. King has pressed into service to show the high educational attainments of the Sanitary Inspectors. And from the above quoted figures it is apparent that about 35 per cent. of the Sanitary Inspectors are of indifferent educational status, for no one will contend that the Lower Secondary or the Middle School or the Uncovenanted Civil Service Examinations! (does this examination still exist?) is equal in educational value to the Matriculation examination, and that is the minimum educational qualification that ought to be required from a man who afterwards develops into an official of the pretensions of a Sanitary Inspector.

Leaving figures alone for a moment, let us come to the explanation for the presence of nearly 35 per cent. of men with educational qualifications below those of the Matriculation examination. Here we will quote Lt. Col. King's own words:—"The class of men admitted were at first, compulsorily, all Sanitary Inspectors under five year's standing in actual employ of Local Bodies at time of passing of Government Order, and voluntary candidates who were matriculates, whilst a certain number of places were reserved for men who were not matriculates but who were nominated by me." (The italics are ours.) Now notice the last part of this explanation. The ordinary voluntary candidate was a matriculate, but a certain number of men who basked in the sunshine of Lt.-Col. King's smiles were admitted

even though they were not matriculates. We can quite understand the reasonableness of admitting men who were already in the employ of Local Bodies without any reference to their educational qualifications. But where in the name of common sense was the necessity for reserving a number of places for non-matriculantes whom Lt.-Col. King had taken under his immediate protection. "The general educational qualification of these men, until the rules of 1903 came into force, necessarily, *they varied somewhat.*" We should think that they did vary. Please note that the statistics given by Lt.-Col. King are of 571 men *now* entitled to certificates, and therefore they include a number of men passed out since 1903, when the rules with regard to educational qualifications were made more stringent. What was the proportion of the non-matriculantes among Sanitary Inspectors who passed out before 1903? Will Lt.-Col. King publish the figures giving the percentage of B.A.'s, F.A.'s matriculates and non-matriculantes among Sanitary Inspectors who received their certificates between 1894 and 1902? Will he also publish the exact figure of the non-matriculantes whom he nominated between those years. We have already quoted Lt.-Col. King's remark that the educational qualifications of Sanitary Inspectors before 1903 "varied somewhat." But the matter-of-fact way in which he admits that this variation was

partly the "result of my right of nomination" is delightfully frank. Now we have proved from Lt.-Col. King's own mouth that nearly 35 per cent. of the Sanitary Inspectors were non-matriculantes, men without any university qualifications whatever. We have also proved from Lt.-Col. King's own statements that he was partly responsible for the presence of this large percentage of non-matriculantes among the Sanitary Inspectors. And yet Lt.-Col. King had the impertinence to write to us to say that our remarks about the educational qualifications of the Sanitary Inspectors were actuated by "petty jealousy." No wonder that Lt.-Col. King is so touchy on the subject of the educational qualifications of the Sanitary Inspectors.

In our leading article in May last we entered a protest against the Sanitary Inspectors supervising the work of Hospital Assistants. We then pointed out that the Hospital Assistants received 3 years' training in a medical school and 4 years' in a hospital, and that they were qualified to practice medicine surgery and midwifery and they were considered to be medical men. On the contrary the training of the Sanitary Inspectors was short as compared with those of the Hospital Assistants, and that the Sanitary Inspectors were not medical men in any sense of the term, and to let such Sanitary Inspectors supervise the work of Hospital Assistants was a monstrous injustice to the Hospital Assistant. And now Lt.-Col.

King says that "there is no reason at all why these men should be contrasted with Hospital Assistants." There would have been no comparison instituted, no contrast depicted between these classes of public servants if the one had not been unjustly and unreasonably thrust over the head of the other. It may be true that the Sanitary Inspectors "do not meddle with medical work," but we maintain that when Hospital Assistants are posted for plague duty Sanitary Inspectors do exercise authority and supervision over them, and we are of opinion that that arrangement is an absolutely unjustifiable one.

In our article in May last among other things we complained of the high pay that was given to Sanitary Inspectors. We stated that they were entitled to a monthly pay of Rs. 70. This statement of ours Lt.-Col. King says "is the burden of the new journal's complaint." We admit that that was one of the points on which we did complain. But it is no more "the burden" of our complaint than the nomination of non-matriculantes to become Sanitary Inspectors is the key-stone of Lt.-Col. King's great sanitary reforms, about which we have heard so much.

Lt.-Col. King has made much of our mistake in confounding the Sanitary Inspectors with Temporary Sanitary Inspectors. We have also been guilty of another grave misstatement of fact. We stated that the Temporary Sanitary

Inspectors for plague duty underwent "10 days' training." It seems that they undergo "16 days' training." We go in sack cloth and ashes and beg for forgiveness of the sixteen day-incubated Temporary Sanitary Inspectors. Our sins in the part of omission to carefully study the different grades of men of 'varied' qualifications introduced into the sanitary service of this country by the genius of Lt.-Col. King are almost unpardonable. But we hope to obtain absolution by a vigorous effort in the future to find out the exact designation, status, pay and prospects of a certain pensioned sepoy, almost illiterate, who, we understand, is one of the officials of the King Institute, on a pay which would make the mouth of any sepoy water. When we have completed the study we shall publish it.

Lt.-Col. King is an active and vigorous controversialist and can use every little fact that tells in his favour with skill and effect. But he may sometimes sail too near the wind, as he does when he says that the Sanitary Inspectors "are usually of better castes" than the Hospital Assistants. Comparisons are proverbially odious, and in the case of Indian castes they may be even mischievous at times. We have no information about the various castes and their proportions to be found among the ranks of Sanitary Inspectors. But among the Hospital Assistants whose names we find in the *Quarterly Civil List* we find that

there are out of 459 Hospital Assistants of all grades about 75 Brahmins and 125 high class non-Brahmins, including Mudaliars, Naidus, Nairs and Menons. We hope that Lt.-Col. King will either substantiate or withdraw this statement in as public a manner as he has made it.

Our Contemporaries.

MEDICINE.

Tuberculosis of the Kidney,

BY

• H. EDWIN LEWIS, M.D.

Tuberculosis of the kidney is not a common disease, but it occurs with sufficient frequency to make its clinical study of considerable importance to the general practitioner. It is entirely probable that it occurs many times without being recognized, at least until very late in its course, and as its successful treatment, like that of all other tuberculous affections, depends largely on an early diagnosis, no contribution, however incomplete, is out of place or superfluous.

Clinically, tuberculosis of the kidney is always a secondary affection. I do not mean secondary to tuberculosis in some other organ as usually is, however, the case, but secondary to an inflammatory process in the kidney, bacterial or traumatic, in its origin. It is true that it is difficult to say in any case whether a pyonephrosis is the result or the cause of tuberculous disease. A suppurative process may induce tuberculosis, and certainly tuberculous disease always favors the development of active suppuration. All we can say with our present knowledge is that tubercle bacilli and pyogenic organisms are strong allies, and the presence of either one in the tissue of any organ increases the

susceptibility of that organ to the pathogenic influence of the other.

Certain diseases of the kidney, like calculous, prolapse, or anatomic abnormalities, predispose to tuberculosis, and diagnosis of any of these conditions should always stimulate search for the tubercle bacillus. Again, tuberculous disease anywhere in the genito-urinary tract or organs should always prompt investigation of the kidney as the probable source of the infection. In probably ninety out of a hundred male cases of genito-urinary tuberculosis, the kidney is the first organ attacked. The possible exceptions are those rare cases of tuberculosis of the penis, the result of local infection from without. In the female it is also true that the kidney is most often the starting point of genito-urinary tuberculosis, but anatomic and physiologic conditions rather increase the susceptibility of the female bladder, as well as the uterus, and an initial lesion may occasionally be seen in these organs.

Personally, I believe, however, that it is extremely rare, if ever, that tuberculosis of any other genito-urinary organ is contributed to the kidney. It is a possible occurrence, but I have never seen a case of renal tuberculosis that I could reasonably believe had been infected by continuity from some other genito-urinary organ. In my experience, tuberculosis of the genito-urinary tract is a descending process, with the kidney lesion almost always the cause, and not the result of tuberculosis of the ureters, bladder, urethra or generative organs.

There are three special symptoms that should always lead a physician to suspect the presence of renal tuberculosis. These symptoms are hematuria, pyuria, and painful urination.

The hematuria of renal tuberculosis is rarely extreme, and may only manifest itself as a few blood cells and an occasional blood cast, but even a very little blood in the urine

without evident cause, or the presence of an acute disease, is unquestionably one of the first and most significant symptoms of tuberculosis of the kidney.

Pus in the urine without the presence of a cystitis, and in connection with a slight hematuria is also suggestive, and a fairly constant symptom of renal tuberculosis; but painful and frequent micturition, without evident cause next to hematuria, is the most significant of all symptoms pointing to this disease.

In many instances, the discomfort in urinating arises from extension of the disease to the bladder, but severe burning and distress in voiding the urine frequently occurs when the disease is strictly limited to the kidney. The urine in renal tuberculosis is usually quite acid, and the painful urination observed before bladder involvement may be due to this. The other symptoms like fever, chilly sensations, sweating, dull pain and tenderness in lumbar region, occasional attacks of polyuria, the presence of broken down tissue in the urine, and the noticeable absence of tube casts, are corroborative; but hematuria, painful micturition and pyuria, without evident cause, in themselves point strongly to renal tuberculosis. The cystoscope and ureteral catheterization are valuable aids in the localization of a tuberculous process in the urinary tract, but their value depends to a very large extent on the degree of skill and experience in their use possessed by the examiner. While, properly used, the cystoscope and ureteral catheter are useful, they are by no means indispensable. As a general thing, detection of tuberculous ureteritis, cystitis, or urethritis only serves to strengthen the diagnosis of tuberculosis of the kidney.

Tuberculosis of the kidney is always a serious disease, insidious in its development, slow in its progress, and leading to a fatal termination in the majority of instances.

Treatment, however, is often serviceable, and in many cases a cure or an arrest of the process can be accomplished. Probably a fair majority of all cases could be arrested if treatment could be instituted in the first stages, and this suggests again the paramount importance of early diagnosis as the keynote of any successful treatment of renal tuberculosis.

Surgical intervention in this disease is never advisable unless there is an abscess formation with considerable accumulation of pus. Nephrectomy is exceedingly dangerous, and should never be performed unless there is absolute certainty that the other kidney is sound. As it is rare that one kidney is affected alone, and next to impossible to exclude the possibility of disease in the other, removal of one kidney is almost never justifiable. Surgical measures, therefore, are really limited to the evacuation of any abscess that may have formed, and the correction of abnormal conditions, like displacement, etc.

Medical treatment, however, has a great deal to offer in the average case of renal tuberculosis, particularly if it can be instituted early. The general principles of hygienic living serviceable in every form of tuberculosis should be religiously followed, such as open air living day and night, an abundance of proper food and nourishment, a careful regulation of rest and exercise, and the correction of all bad habits.

The bowels should be most carefully looked after, and at least once a week a good sized dose of calomel should be administered. If conditions are favorable, one grain of calomel every night for a week or ten days will often be found valuable in relieving backache and lameness.

For the relief of pain in urinating, nothing is better than codein in good sized doses, say one-half to one grain, every three or four hours if necessary. The familiar

opium and belladonna suppository is very useful, but I prefer the codein. Hot applications to the lumbar region and over the bladder are always soothing, and often give relief.

For the hematuria, cotarmine hydrochlorate, commonly called stypticin, is remarkably efficient. It should be given in three-quarters of a grain doses, three or four times a day, and its effect is usually prompt and certain. I know of no other remedy that equals stypticin for the relief of hematuria, and its immediate influence in some cases is almost startling. In several instances I have felt that stypticin has exerted a favourable influence on the disease itself, for following its use the blood not only has stopped, but the pus has markedly decreased, and in two cases the symptoms have not only subsided, but the bacilli have entirely disappeared from the urine after two months' use of the drug.

In general, the urinary antiseptics like salol, sodium benzoate, and urotropin, are useful, especially when there is considerable pus in the urine. More recently I have found that the internal administration of iodoform, or, better still, ichthyol, with the combined hypophosphites, accomplishes all that the urinary antiseptics can, and at the same time exerts a very profound influence on the general vitality as well.

For obvious reasons, large quantities of some mild alkaline water, like Vichy, should be taken daily. Every form of alcohol should be absolutely avoided, and milk should be taken in the place of tea or coffee.

Finally, it should be remembered that tuberculosis of the kidney depends for its presence and progress on condition of lowered vitality, usually general as well as local. Consequently nothing that will raise the tone of the whole body should be neglected. Every detail should be carefully adjusted to the needs of each individual case, and every

patient should be impressed with this all important fact that recovery from any tuberculous disease is a hard uphill fight. The price of victory is earnest, hopeful effort on the part of the patient; constant, painstaking surveillance on the part of his physician; and never-failing courage on the part of both.—*The Medical Brief.*

Hysterical Paroxysmal Bradycardia.

H. Triboulet and H. Gougerot have had under observation for some months a case of hysteria, in which each seizure was followed by transient slowing of the pulse. The patient was of a tuberculous stock. At 17 she had the first hysterical attack on being told of her mother's death. Subsequently attacks were numerous and always were preceded by weariness or "crossing." In April, 1902, the uterus (which was fibromatous) and the adnexa were removed. The operation had apparently no effect on the neurosis. In December, 1903, she had an hysterical seizure, which was followed by complete left hemiparesis, and diminution of sensibility on the same side, both of which are still present, with short inexplicable intervals. In Mar., 1904, she had another seizure, and at the end of April a severe and long one lasting nearly 8 days, during which she took notice of things for only a few minutes at a time.

She was first seen by the writer the day after this attack began and he noticed the slow pulse. She was a woman of 30, with a dull pale face. There was no diminution of the visual field. The pharyngeal reflex was almost abolished. Gradually the pulse recovered its normal rate after a short period of pulsus bigeminus. On June 2, after a sleepless night, she had a short attack lasting 15 minutes. Four hours afterwards the pulse-rate was 40, with some inequalities.

On July 12 the writer had an opportunity of observing a complete attack, which came

on about 1.30 in the afternoon when she was about to take a rest. For 8 days previously she had complained of feeling ill. She suddenly became pale, but had, however, time to sit down and tried to "pull herself together," and then slowly collapsed without uttering a word, passing into a comatose state and perspiring heavily. Some seconds later began the first of the 3 similar crises which constituted this attack. First there was short hurried respiration increasing in strength, with slight trembling of the limbs. Then she became active, clutching at her clothing, gasping for breath, weeping and groaning. With the left hand she tried to move an imaginary weight from her chest; then she clutched at her throat. The pupils were dilated and immobile. The pulse was irregular and rapid (90, 70, 110), as was also the respiration. A violent pulse-beat would be followed by several very weak ones, some of which could hardly be felt. The heart could not be auscultated. A short convulsion, with opisthotonos ended this attack. She became quiet, respiration was slow and regular, the pupils returned to the normal, and the reflexes reappeared. The radial pulse was 60 and bigeminal with some irregularity in the second pulsation. Then the second pulsation disappeared and the pulse-rate fell to 28-30. The heart sounds were dull and frequent. In the neck the jugular veins were still slightly distended and pulsated twice as quickly as the radial artery. The movements seemed to be due to the transmission of arterial beats from the carotid and subclavian arteries without the intervention of any auricular contractions. The attack lasted 6 minutes, and was followed by a second and a third of the same kind. She woke up from the attack suddenly, and did not remember anything, being surprised to find herself lying down, and she said she was not ill and at once resumed her work.

In an attack of June 27th there was the same gradual return to the normal pulse after a period of pulsus bigeminus. An hour after

the attack the pulse-rate was 34-36, and 2, 3 and 4 hours afterwards, 40, strong, and almost bounding. Over the heart the number of beats was double that of the pulse. A first strong contraction was followed by a second feeble one, with dull sounds. On palpation a strong ventricular wave was felt, followed by a second, distinct but feeble. Next day the pulse was bigeminal at 80 (40 strong and 40 weak beats). The day after the pulse had returned to its normal rhythm of 70, but still was irregular. The cardiac sounds were normal. Slight polyuria marked the end of the attack.

The succession of symptoms seemed to be invariable; viz., normal pulse, convulsive seizure, arrhythmic tachycardia, arrhythmic bigeminal pulse, slow pulse, bigeminal pulse, normal pulse. The slowing of the pulse was only apparent, for the number of cardiac beats was normal or augmented, but the rhythm was bigeminal or trigeminal. The second or third cardiac pulsation disappeared before the wrist was reached, and this constituted the bradycardia. The regularity and constancy of the pulse changes after each attack proved the close relation between the bradycardia and the neurosis.—*La Tribune Medicale*, July, p. 471.

Metrorrhagia in Typhoid Fever.

BY

W. E. DARNALL.

A woman, aged 30, was taken ill on May 21 with headache and muscular pains but she did not take to bed until June 9. On the 12th the temperature was 103° and there was severe diarrhoea. About 8 p.m. the temperature was 105° and metrorrhagia began. (Menstruation had occurred a fortnight previously and had always been regular.) There were constant nausea and abdominal pain and the stools were of a "pea-soup" character. On the 13th there was no action of the

bowels but the flow was freer and the micturition was difficult. The Widal reaction was obtained. Examination of the pelvic organs was negative. Ergot was given and the vagina was packed with gauze for 24 hours, which checked the hæmorrhage. On the 14th the temperature ranged between 101° and 103° and the pulse between 80° and 130. A few typical rose spots were seen. On the 15th the temperature ranged between 101° and 103° and the pulse between 114 and 143. The patient's condition was critical and the dejections took place involuntarily. The pulse was very weak and at times imperceptible. The stomach rejected everything. Death occurred on the 16th.

NECROPSY.—There were much inflamed Peyer's patches, 2 of which were almost perforated. The uterus and appendages appeared to be normal and no cause for the hæmorrhage could be found. In its early stages the case was an example of ambulatory typhoid fever.

Few cases of uterine hæmorrhage in typhoid fever have been recorded.—*Jour. American Med. Assoc.*, July 2, p. 24.

Suppurative Tonsillitis with Hyperæsthesia in the Area of the Fifth Nerve and Desquamation of the Fingers,

BY

DR. GUISEPPE SPEZIA.

A man, aged 25, complained of pain in the right side of the pharynx on swallowing. In 12 hours it attained a maximum and was accompanied by high fever and sleeplessness. The tonsils were red and covered with membrane. Next day there was hyperæsthesia in the areas of distribution of the fifth nerves on both sides. This lasted about 10 days. The urine contained albumin for 4 weeks. On both sides a tonsillar abscess developed

The right one was opened on the tenth day of the illness; the left one broke on the eleventh day. There was slight paresis of the muscles of the anterior pharynx for some days. On the fourteenth day desquamation of the fingers began. It affected the second and third phalanges on the dorsum and all 3 phalanges on the palmar surface. It began in many points, from which it extended in a centripetal direction producing the appearance of a map. The scales were lamelliform and not easily detached or friable. The underlying skin was rosy but otherwise normal, and its sensibility was unaltered. Desquamation lasted about 12 days and complete recovery took place.

The writer thinks that the hyperæsthesia and the desquamation were due to virulent toxins generated in the tonsils.—*Gazzetta Medica Lombarda*, Aug. 15, p. 319.

Hysterical Bilateral Amaurosis,

BY

DR. BOCCI.

A girl, aged 19, was fatigued by study and suffered from headache and insomnia. Once, while studying, the headache extended from the frontal to the occipital region. Her sight became confused and she completely lost perception of light. Various kinds of treatment proved useless. After 15 days of blindness she was admitted to hospital.

She complained especially of intense occipital headache. The corneal and conjunctival reflexes were absent; the pupils were slightly enlarged and reacted to the light. The fundi were normal. The pharyngeal reflex was absent and there was hyperæsthesia of the gastric region. Hysterical amaurosis was diagnosed. Under hypnotic treatment she recovered in a week. Her visual field was slightly restricted. Subsequently a sister had hysterical aphonia.—*Clinica Oculistica*, April.

The Leishman-Donovan Body.

The pathology of some of the most important tropical diseases, such as malarial fever, yellow fever, and sleeping sickness, has been revolutionised in recent years by the discovery that they are due to protozoa. The last of these organisms which have been discovered is termed "the Leishman-Donovan body." It appears to be the cause of kala-azar, a disease endemic in many parts of India and probably in other countries, and of the cases of tropical cachexia with enlarged spleen which have puzzled observers. The parasite was first discovered by Major Leishman in a smear taken *post-mortem* from the spleen of a soldier who contracted the disease at Dum-Dum, near Calcutta. Major Leishman published his discovery in the *British Medical Journal* of June 15, 1903. On April 23 of that year Major Donovan found the bodies in smears of the spleen taken *post-mortem*. After reading Major Leishman's paper he sought for the bodies during life by splenic puncture and found them. He sent a slide to M. Laveran, the discoverer of the malarial parasite, who had no difficulty in pronouncing the body to be distinct from that organism and thought it was a new protozoon, a species of piroplasm. The genus piroplasma was previously known as the comparative in pathology, for the piroplasma bigeminum is the cause of "tick fever," a malady which attacks cattle in many parts of the world. By the bite of the tick the parasite is transferred from one animal to another. On the other hand Major Leishman regards the body as a stage in the life history of a flagellate organism resembling a trypanosome, if not belonging to that genus, while Major Ross believes it to be a new genus of sporozoon.

At the recent meeting of the British Medical Association, Major Leishman stated that since his discovery cases of the disease have been reported from 3 or 4 widely separated

rated districts of India, from China, Tunis, Algiers, Arabia, and Egypt. The parasites have been found not only in the spleen, but also in the liver, mesenteric glands, bone marrow, kidneys, and ulcers involving the intestinal mucosa. They appear to be intracellular and are found in large mononuclear cells which are probably macrophages. In specimens obtained during life by splenic or hepatic puncture they are usually found free in groups. The principal symptoms are splenic and hepatic enlargement; a peculiar earthy pallor of the skin, and in the late stages, great emaciation and muscular atrophy; prolonged irregularly remittent fever frequently lasting many months, with or without remissions; hæmorrhages such as epistaxis, bleeding from the gums, subcutaneous hæmorrhages, or purpura; transitory oedema; bronchitis; diarrhoea; and dysentery. The disease is resistant to medication, especially to quinine.—*The Medical Review*.

Ocular Paralysis in Graves' Disease.

Ocular paralysis in Graves' disease is rare. It may be limited to a single extrinsic muscle or group of muscles of one eye, or all the extrinsic muscles may be affected. Paralysis of the ciliary muscle has not been recorded, nor of the associated movements of the eyes, except convergence. Paralysis of the levator palpepræ superioris may occur, and sometimes is accompanied by paralysis of the other branches of the third nerve. The paralysis may occur early in the disease, but usually it occurs late. It may be only transient, the muscles regaining full power. It may be associated with paralysis of other cranial nerves. Bristowe has recorded the case of a young man who developed ophthalmoplegia externa 3 years after symptoms of Graves' disease appeared. There were also right hemianæsthesia, colour blindness, and loss of taste and smell on the same side

(*Brain*, 1886, p. 313). He died from bronchitis, and the necropsy showed no change to account for the paralysis. In a case reported by Warner there was double ophthalmoplegia externa with paralysis of the fifth and facial nerves (*Med. Times and Gazette*, 1882, p. 540). Jendrassik has described paralysis of the muscles of mastication in conjunction with paralysis of the ocular and most of the facial and palatal muscles (*Arch. F. Psych.*, 1886, vol. xvii., p. 301). The writer records the following case:—

A woman, aged 43, was admitted to hospital. She had had poor health for about 10 years and suffered from palpitation of the heart and nervousness. For several years she had suffered from pains in the supra-orbital and temporal regions. Her sight had been good until 2 months before, when she began to see double. She was not aware of any swelling in the neck.

There was slight proptosis, especially of the left eye, and the palpebral fissures were widened. She fixed with the right eye, the left being rotated downwards and outwards. Von Graefe's sign was found in both eyes at times. The left eye could not be rotated upwards above the horizontal line; external and internal rotation were limited; downward rotation was good. A study of the double images showed that there was paralysis of the sixth nerve and of that portion of the third which supplies the inferior oblique and superior and inferior recti muscles. The thyroid was slightly prominent and the pulse was 110. Prolonged rest in bed was recommended, but after a few weeks she became impatient and left the hospital unimproved.

Ocular paralysis in Graves' disease is to be considered not as accidental but as part of the morbid process. The pathology of the paralysis is just as unknown as is that of the disease. The cases of more or less complete ophthalmoplegia externa, especial-

ly those in which there were associated lesions of the facial, hypoglossal, and glossopharyngeal nerves, seem to show that the paralysis is of nuclear origin. Its existence is another proof of the central origin of Graves' disease. The morbid process in the nuclei is evidently only functional, for the paralysis are sometimes transient, and necropsies have not revealed any changes.—*American Journal of Med. Sciences*, July.

Acute Diabetes Insipidus with Fatal Coma,

BY

ALFRED H. CARTER, M.D., F.R.C.P.

On July 11 the writer was called to see a little girl, aged 8. She was stated to be of a nervous and excitable temperament, but, apart from having thread-worms, she was considered to be in good health until June 25. On that day she went to a school treat, over which she was very excited. She ate only a moderate amount of bread and butter and plain cake. Next morning she complained of being unwell, but with no definite symptoms. On the following day she seemed to be better, but from that time forward she became very thirsty, was always drinking water, and passed large quantities of pale urine. The amount was not measured, but was said to be from 6 to 8 pints in the 24 hours. Sleep was disturbed owing to the frequent calls to micturate. Appetite gradually failed. She became pale and lost flesh, and the skin became very dry. The diuresis continued. On July 10 she complained of pain in the stomach and vomited. On the following day the vomiting stopped, but there was still some uneasiness in the epigastrium.

She was drowsy, but easily roused. The temperature was subnormal. She was reported to have "wandered from time to time in her sleep." She had only taken about a pint of milk-and-water that day, and the amount

of urine had fallen correspondingly. The respirations were 24 and deep. The pupils were moderately dilated. Beyond the dryness of the skin and emaciation, no physical signs were observed. The urine was of s. g. 1018 and pale; there was a trace of albumin, but no sugar. Half a pint of hot normal saline fluid was ordered to be injected into the bowel every 4 hours. The injections were retained, and the child took rather more nourishment, but was more drowsy, and her breathing was more rapid and panting. She became worse, and died in the afternoon of July 13. The comatose condition increased, and much less nourishment was taken. The amount of urine passed from the time the writer saw her until her death was about one-third of an ordinary chamber-potful. The s.g. was 1010, the re-action slightly alkaline, the colour very pale, with a slightly greenish tinge. There was no sugar, and only a slight trace of albumin. The pulse became feeble and compressible. About an hour before death it was 90. The respirations increased in frequency, became sighing, and numbered about 40. The frequency varied frequently from time to time. The temperature never rose above normal. Half an hour before death the conjunctivæ were insensible.

The condition was obviously closely allied to, if not identical with, the so-called Kussmaul's coma in diabetes mellitus. Coma is very rare in diabetes insipidus.—*Lancet*, Aug. 27, p. 588.

SURGERY.

Peritonitis from an Excoriation on the Toe simulating Appendicitis,

BY

H. LORENZ.

A boy, aged 3½, was admitted to hospital with peritonitis on Jan. 29. Two days previ-

ously he had been well. Vomiting then appeared with constipation and increasing abdominal distention. A practitioner, who found tenderness in the right iliac region, diagnosed appendicitis, and unsuccessfully attempted to overcome the constipation with enemata. The child became more and more prostrate, and at last the parents consented to an operation.

He was naturally strong and well nourished, but was collapsed, had a frequent, almost imperceptible pulse, and was constantly vomiting a brown material. The skin round the mouth was reddened from the irritation of the vomited matter, and the tongue and lips were dry and brown. The abdomen was distended and tender, especially in the right iliac fossa. The hepatic dullness was diminished. No free fluid was detected. The scrotum was empty, the testicles being palpable in the inguinal region. Per rectum nothing abnormal was found. General peritonitis, probably of appendicular origin, was diagnosed, and a hopeless prognosis was given. At the request of the parents laparotomy was performed, the incision being on the right side as for appendicitis. The subperitoneal connective tissue was infiltrated with pus. On opening the peritoneum distended coils of small intestine, which were covered with a fibrinous exudation, became prolapsed. The surface of the cæcum and appendix also participated in the general peritonitis, but were otherwise healthy, and evidently not the primary cause of the disease. The source could not be found, but the further the parts were from the right iliac fossa the less was the peritonitis. A Mikulicz tampon was placed in the peritoneal cavity, and the peritoneal wound was partially sutured. The peritoneum, with the cæcum and ascending colon, were then peeled off the abdominal wall as in the operation for exposure of a ureter. The retro-peritoneal tissue was infiltrated with pus and largely converted into a greasy, grey, inodorous mass. The peritoneum was separated

superiorly as far as the kidney and towards the middle line to the vena cava, but everywhere the same condition was found. The retro-peritoneal space was drained, and the abdominal wound was closed. An hour later death occurred.

NECROPSY.—The head alone was examined. The pia mater throughout was deeply congested and there was a little serous effusion on the surface of the brain. Over almost the whole convexity and base of the brain was fibrinous pus. The spinal cord was not specially examined, but the part removed with the brain seemed less deeply injected and no pus was found on its surface. Cover-glass specimens prepared from the meningeal exudate showed large numbers of capsulated and extracellular diplococci, which readily stained by the ordinary aniline dyes as well as by Gram's method. The diplococci were also well seen in smear preparations from the brain tissue.

Pneumococcic meningitis is generally secondary to acute lobar pneumonia, and results from extension from disease of the nose or ear, or from an injury to the skull. In this case it was primary.—*Wien. Klin. Woch.*, April 7, p. 393.

Poisoning in an Infant from a Carbolic Dressing,

BY

LOUIS E. STEVENSON, B.A., M.B., B.C.

An infant, aged 6 weeks, was circumcised on Mar. 10. The wound was dressed with lint soaked in carbolic oil (1 in 20). Early next morning he vomited. During the afternoon the napkins were stained a dark colour. The carbolic dressing was discontinued. On Mar. 12 he was rather restless. The appetite was poor, and the urine was scanty and dark-coloured. There were 2 motions, 1 of which was dark. Towards evening the urine was more free and the appetite was

better. He had a very restless night. On the 13th the motions were normal. The eyes had a glassy appearance, with the eyelids somewhat injected. He was pallid, but had a fairly good appetite. There were twitchings in the limbs at intervals all day. He slept better at night. On the 14th the symptoms continued. At 6 P.M. there were rose-coloured patches on the chest and abdomen. He slept well. On the 15th the rash was very thick over the chest and abdomen. At 9 A.M. the child became extremely pallid with feeble pulse. He was ordered brandy, 5 drops every 2 hours. There was a second fainting attack about 11 A.M. The appetite was good. At 6 P.M. the rash was disappearing, but a slight rash developed on the back. On the 16th the rash was thick on the back and slight on the hips, neck and face. The pallor was still marked. On the 17th the rash had almost disappeared. The conjunctival injection and the glassy appearance of the eyes were rapidly disappearing.

The writer has used the 1 in 20 carbolic oil in many cases of circumcision and has never known a case of poisoning before.—*Lancet*, May 7, p. 1279.

Appearance of 11 Chancres in a Month,.

BY

M. QUEYRAT.

A man, aged 22, noticed, on June 23rd, 1904, a chancre on the right side of the furrow of the glans penis. On July 1 a second chancre appeared on the prepuce; about the 5th a third appeared on the pubes; then at 1, 2, or 3 days' interval 8 chancres appeared on the prepuce. The 2 last ones appeared on the 22nd. He came to hospital on the 27th, when the first 3 lesions were typical indurated chancres. The other 8 were incompletely developed chancres, and the more recent they were the less were they developed. The inguinal glands were enlarged. The

patient had daily intercourse with a mistress until June 23, when on discovering the first chancre he left her. The lesions corresponded neither clinically, chronologically nor bacteriologically to soft chancres. They were not auto-inoculable.

The writer suggests that the chancres were successively inoculated about a month before the appearance of each. As time went on the patient was becoming more and more immunised against the syphilitic virus. Hence the later chancres were abortive. The 2 last chancres, which appeared on July 22, evidently were the result of the last intercourse on June 23. A similar phenomenon is exhibited when a person is vaccinated day by day. Immunity against vaccination is not complete until the 10th day, and the later the vaccination the less complete is the evolution of the vesicle; finally only small papules, which soon disappear, result.—*Bulletins de la Soc. Med. des Hopitaux*, July 29, p. 905.

Subcutaneous feeding in Surgery.

Friedrich's later experiences have fully confirmed his previous announcements in regard to the great value of subcutaneous feeding in certain severe gastrointestinal disturbances, in which feeding by the mouth, or rectum, and the formation of a fistula are contraindicated. His method, as quoted in the *Journal of the American Medical Association* of May 28, 1904, consists in the daily injection of a 3-, 4-, or 5-per cent solution of 40 to 100 grammes of grape-sugar. He also uses a pure pepsin-peptone, free from albumoses (the chemically pure product being made according to the method devised by Professor Siegfried of the Leipsic Physiologic Institute). Twenty grammes of this combination injected subcutaneously are completely utilized by the organism. He gives it in a 7-per cent solution with or without the grape-sugar. An admirable combination is 2 grammes table salt, 2 grammes grape-sugar, and 4 grammes pepsin

peptone to 100 grammes of water. With this subcutaneous nourishment he has been able to tide patients past the critical period of perforation of the stomach or bowel, or of severe peritonitis from any cause.—*The Therapeutic Gazette*.

ABSTRACT OF A LECTURE ON
The Problems of Cancer,

DELIVERED TO THE CLASS OF EMBRYOLOGY
IN THE UNIVERSITY OF EDINBURGH ON
OCT. 18TH, 1904,

BY

J. BEARD, D.Sc. VICT.,

University Lecturer in Comparative Embryology, Edinburgh.

GENTLEMEN,—The fundamental problem, the very basis of embryology, is the course of the life-cycle in the higher animals, including man. This question of the mode of the development far exceeds in import all other forms of pure embryology. It touches upon, without at present offering any explanation of, the nature of life itself. But while the latter is now beyond human grasp and may elude it for ever, the solution of the great problem of the life-cycle, seemingly so complex albeit so simple, furnishes results of overwhelming import for all the sciences of life. The history of embryology tells us how for centuries the fight, whether epigenesis or preformation, went on; how, on the one side, the development was regarded as analogous to the building of a house, "part being added to part"; and how, on the other, men like Haller denied any coming into being, the embryo being preformed in all its parts. So slow is real progress in a science like embryology and so greedily receptive of error is the human mind that in our day we hardly dare hope to see the last of the two rival erroneous doctrines of epigenesis and preformation. Like the chameleon of the story, "the creature's neither one nor t'other." Underlying the phenomena of

development in the higher animals there are an antithetic alternation of asexual and sexual generations, a morphological continuity of germ cells from generation to generation—the Alpha and Omega of development—and an unfolding based in predestination. At the basis of all development lie the germ cells which, paraphrasing Robinson's eloquent words, go back to a beginning so remote as to be utterly beyond our knowledge and pass to a future of which we can form no conception whatever. Under the phenomena presented by the germ cells in their cycle direct development and epigenesis can find no places. Looked at in the light of the facts they are impossibilities and, like the recapitulation theory, merely illusions of the human imagination. An antithetic alternation is seen to be an iron necessity of the development as soon as it is perceived that an organism, an asexual one, must develop upon which germ cells can arise, while the sexual generation, "the embryo" of embryologists, is called forth from one of these germ cells to contain and to nourish the rest for a certain brief span of time. Moreover, the facts of development, which to some extent have been unearthed during the past 15 years within these walls, throw a flood of new light upon the crude materialism of modern embryological text-books. The biophores of Weismann and the pangens of de Vries become shadowy entities of the real existence of which there are no evidences. And while with humility admitting that to say it is to furnish no explanation of the riddle of life, it must be recognized that the characters or qualities of animals or plants are certainly not present in the germ in the shape of ultra-microscopic particles of chromatin, the pangens or biophores, but that all the wonderful and infinite variety of animate nature has its fount in unconscious memories of germ cells.

Modern embryology, not to be confused with that extent in text-books, claims as its own two vastly important regions of human

knowledge. These are the facts and nature of heredity and genetic variation and that portion of pathology treating of the tumours of neoplasms, benign and malignant. The phenomena termed heredity are germinal in nature and in this way they fall within the province of the embryologist, not in that of the mathematician. But at first sight it is, perhaps, not so clear that neoplasms—living things possessing simple or complicated structures but devoid of any useful functions—should be entities about whose nature the embryologist need concern himself at all. As recently as four years ago but few of the higher teratomata were recognised as embryonic in nature. Now almost the other extreme has been reached and possibly there are few tumours, benign or malignant, the embryonic nature of which has not been advocated by some observer or other, usually a pathologist. By embryonic is meant that their tissues would be identical with, even according to some observers derived from, some of those making up an embryonic body, that they would be, in the word employed by Wilms, "embryomata." As to their origin—apart from the so-called "parasitic theories," which are more remarkable for the things they leave untouched than for the "facts" they explain, for benign or malignant tumours or for both—certain erroneous views, not really based in embryology, have within the last year been advocated at home and abroad. Malignant neoplasms, such as cancer, have been supposed to arise from somatic cells of the individual either with or without a conjugation of such. To my mind there is as little evidence—and that is none at all—to show that somatic cells could take on malignant characters as that cancer cells could, or do, conjugate with their fellows or with other cells such as leucocytes. Indeed, the appearances described and figured as conjugation in a cancer are capable of other and simple explanations. Certainly if they represent a real conjugation the preparations ought to carry conviction to the minds of

embryologists and cytologists such as, to name three Wurzburg ones, Stoehr, Schultze, and Sobotta. This is improbable, for the true nature of the preparations shown last July at Oxford appears to be fairly clear.

Very common among pathologists is a modification of Cohnheim's theory of embryonic rests as the basis of neoplasms. This doctrine of "shunted germs," only possible under the erroneous dogma epigenesis, has many followers, especially in Germany. The apparent manifold variety of the malignant tumours, which, fortunately is not real, led to the conclusion that they were made up of embryonic or somatic cells that, for example, a primary cancer of the liver or kidney was composed of liver or kidney cells and so on. The embryological conclusions to be advanced in this room, and which are based on research, do not permit of that explanation. A malignant tumour is such in virtue of the facts, among others, that its cells are *not* embryonic (though they may mimic such, or even resemble no other cells in the human body), and that, like cells of the trophoblastor chorion of normal development, the neoplasm eats or erodes its way through other structures, even through bone. On the other hand, a benign tumour does consist solely of somatic or embryonic cells. Its tissues are normal in structure, for it is a true embryoma, or more or less rudimentary embryo, in Wilms's sense. A neoplasm is, in short, a futile attempt to repeat a greater or less portion of the cycle of normal development. A true embryoma recites merely some greater or less piece of the embryonic portion; a pure cancer or sarcoma, for these are one and the same thing under different disguises, may attempt to produce the whole life-cycle with the sole exception of the embryonic part. In an unmixed cancer or sarcoma there is absolutely nothing whatever of an embryo; there is not a vestige of a somatic cell.

To reinforce their attitude several supporters of the doctrine of shunted germs have

invoked the aid of fertilised polar bodies. Every elementary student knows these and is aware that nowhere in the animal kingdom have they ever been known to exhibit any potentialities worthy of the least notice. To the embryologist versed in recent advances the theory of fertilised polar bodies, with its allied assumptions of all sorts of embryonic rests are germinal shunts, must seem to be one of the most absurd ideas ever enunciated in science. Like the somatic origin and the supposed "conjugation" this must be rejected. Fortunately or unfortunately, the number of polar bodies formed by the mammalian egg is far too limited to permit of their introduction into the question. No mammal is known in which more than one polar body arises, while, for example, Wilms found as many as five embryomata in one ovary, and Baart de la Faille¹ recorded a case of quadruplets where three of the foetuses hung as more or less incomplete parasites from the palate of the fourth. On the present occasion a few words more must suffice regarding the manifold embryological aspects of neoplasms. They form—and this requires emphasis—only one set of many degenerative and retrogressive phenomena encountered as all sorts of stages of the cycle in comparative embryology. Truly, in dealing practically with embryology, "in the midst of life we are in death." "Das Werden" is ever accompanied by "das Vergehen."

The whole doctrine of the tumours centres in the problem of identical twins. Than these latter there is nothing more replete with interest in embryology. Of vast import is the recognition of the existence of two kinds of these. There are identical twins, which come as it were out of the same mould, and there is a second and rarer kind, the "looking-glass-image" twins. The occurrence of the latter throws welcome light upon various zoological and anatomical questions, on the right-handed and left-handed snails, fishes, &c., as well as upon the

phenomena of reversed viscera. In other directions identical twins pass gradually into double monsters and these in their turn into the higher tumours or teratomata. At the basis of the tumours is the fact that from one fertilised egg a multiplicity of embryos may arise, just as from one such in a sea-polyte a legion of jelly-fish may take their birth. As in the polar bodies of oogenesis we have rudimentary or abortive gametes, so in the development of the higher animals we meet with rudimentary or abortive germ cells, originally really destined to form embryos. In other words, in the history of the race there has been a reduction in the number of actual normal embryos arising, but with the persistence of such "embryonic" germ cells (embryonic in destiny) and the retention by these of more or less of the "memories" needed to unfold an individual of the species. As shown two years ago in *THE LANCET*,² a malignant tumour, and this is true of both cancer and sarcoma, is nothing more than an irresponsible trophoblast or chorion, the asexual generation, which in every normal development is the forerunner of an embryo. Though not recognised, or, all events, not stated by them, the researches of Farmer, Moore, and Walker,³ as well as those of Bashford and Murray,⁴ have

¹ Vide Schatz: *Klinische Beiträge zur Physiologie des Fœtus*, Archiv für Gynäkologie, 1900. The original paper by Baart de la Faille is said to be very rare. The specimen is described (p. 252) with some others by E. Schwalbe in Ziegler's *Beiträge zur Pathologischen Anatomie*, vol. xxxvi., 1904. pp. 242-72, *Der Epignathus und seine Genese*.

² *THE LANCET*, June 21st, 1902, p. 1758.

³ Farmer, Moore, and Walker: *Resemblances exhibited by the Cells of Malignant Growths in Man and those of Normal Reproductive Tissue* *THE LANCET*, Dec. 26th, 1903, p. 1830.

⁴ *The Zoological Distribution, the Limitations in the Transmissibility and the Comparative Histological and Cytological Characters of Malignant New Growths*, Scientific Reports of the Imperial Cancer Research Fund, No. 1, London, 1904.

confirmed the truth of this view, and to the hilt. For it is an inalienable property of the trophoblast of normal development that upon it germ cells arise. Once these have come into existence, it is but a question of a certain limited number of cell divisions before they present the phenomena associated by many embryologists with the reduction of chromosomes. In short, the proof furnished by the researches of Farmer, Moore, and Walker and confirmed by Bashford and Murray, of the occurrence of divisions in cancer and sarcoma cells usually associated with the maturation of germ cells, was the one thing lacking to establish beyond question the true nature of a malignant tumour as the pre-embryonic portion of the life-cycle, the asexual generation. While at present it would be wrong to assume that such cell divisions must of necessity occur at some time or other in all malignant tumours, for even a malignant tumour may conceivably be so reduced, or retrograded as to be unable to repeat the whole cycle of the germ cells, just as no tumour is known to form actual sperms, it is now beyond doubt that the occurrence of such divisions in certain cases proves a malignant neoplasm to be the pre-embryonic portion of the life-cycle. It is a life-cycle with the embryo omitted. Germ cells never do arise and never could have arisen from somatic or embryonic cells or tissues.

The true science of the tumours, then, has its embryological basis in the facts and phenomena of identical twins, triplets, &c. The facts of normal development, as seen in identical twins as well as in certain armadillos, many sheep, &c., demand that we should recognise that just prior to the unfolding of an embryo there are "n" divisions of germ cells resulting usually in one embryonic cell and a certain as yet undefined number of retrograde or rudimentary embryonic cells. Like the polar bodies of oogenesis as rudimentary gametes, these have now lost to a greater or less degree, this varying in differ-

ent cases, their powers of undergoing a completely normal development. They are not to be confused with those germ cells destined for the sexual organs of the individual. A malignant neoplasm, due to the spontaneous development of such a retrograde germ cell, which in the days of long ago would have given rise to an identical twin, has lost to a greater or less degree those potentialities, those unconscious memories, which would have permitted it to complete the full-life cycle of normal development, ending in the formation of a normal embryo. The memories which it retains condition the character of the tumour to which it will give rise, and it is these rudimentary memories, stimulated by its environment in some particular organ, which result now in a sarcoma, now in a carcinoma, mimicking the structure in which it lies. This explains why in one development a certain germ cell will produce an identical twin, while the corresponding germ cell in another instance develops into a monster, or into an embryoma, or into such with a malignant tumour, or into a mixed and malignant neoplasm, or, lastly, into a simple sarcoma or carcinoma. All depends upon the amount of unconscious memory retained by those retrogressive germ cells, which formerly gave birth to normal embryos, identical twins, triplets, &c. Nay, one may safely take a further step in the like direction. Chorio-epithelioma, a deadly form of cancer in pregnancy, usually rises in instances where either no embryo has been formed (hydatid mole) or it has been aborted at the critical period⁵ as a monstrosity. Is it at all unlikely that here, for some reason or other, either the wrong germ cell had developed or, at any rate, that such a one had early usurped the place of the developing one? This would be one the memories of which could but result in a malignant

⁵ For a full account of the "critical period" and its peculiarities see J. Beard, *Certain Problems of Vertebrate Embryology*, 1896, and *The Span of Gestation and the Cause of Birth*, 1897, both published by Gustav Fischer, Jena.

tumour—that is to say, one mimicking the structure of correct chorion. If this be true we have in chorio-epithelioma merely a form of cancer arising very early in the life of the individual and invading a new host, the unfortunate mother.

The things that we have been dealing with are startling enough and it may be asked, What steps are being taken to apply them in practice and to carry our embryological knowledge of the malignant neoplasms still further? Practically none. Except in the Universities of Edinburgh and Leeds. I am not aware that at the present time the embryological aspects of the malignant tumours (in the sense of my conceptions of that science as opposed to the utterly erroneous fairy-tales of the text-books) are receiving any particular attention. Abroad, for example, the leading investigators appear to be hopelessly at sea. In cancer research, momentous as it is for human welfare and hopes, there is far, far too much industrious but futile digging in cul-de-sacs. But there is a gleam of hope for the immediate future. Authorities connected with a great institution which is distinguished for its rapid and wonderful advances in scientific research have for some little time been considering and elaborating a scheme by which cancer research within its walls may be placed shortly under the direction of an able embryologist. If this be done the first important step in Great Britain will have been taken towards the proper recognition and independent establishment of a science of the utmost moment to mankind—the true science of life, embryology. In these conditions and given abundant material of the right sort we may hope to witness soon advances in our knowledge of the malignant neoplasms of which we can now form no conception and the vast importance of which it is impossible to gauge.—*The Lancet*.

* By Professor A. S. F. Grunbaum, lately Director of the Liverpool Cancer Research.

OBSTETRICS AND GYNÆCOLOGY.

A Case of Lithopædion 41 Years in the Abdominal Cavity,

BY

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Edinburgh.

Samples of true lithopædia are of such infrequent occurrence that the following case, which came under my observation through the kindness of Dr. Stone, Montrose, is worthy of recording:—

Patient, age 71, when 30 years of age became pregnant, and when at supposed full time, in January, 1868, went into labour without tangible result. The abdominal swelling remained, and for some years gradually diminished in size. On February, 1904, she died somewhat suddenly of cardiac disease. On *Post-mortem* examination the abdominal tumour was found to be due to a calcified foetus placed behind the uterus, and densely adherent to the intestines and its surroundings. The foetus was disposed head downwards, and was intimately adherent to surrounding parts, so that no true relations could be differentiated. There was no appearance of an enveloping sac. The uterus was atrophied and adherent to the front of the foetus. The patient was well aware of the presence of the child, and frequently commented on it. Beyond occasional bouts of inflammatory abdominal symptoms she enjoyed good health, and performed her duties till shortly before death. Menstruation returned a few months after her spurious labour and continued regular till the age of 45. There were no subsequent pregnancies.

The foetus, as shown in the accompanying photograph, preserved in a marked degree its normal configuration. The attitude of flexion was undisturbed; the limbs, to the finest digits, were in absolute preservation,

and the nails projected over the finger tips. The tissues were contracted and calcareous on the limbs, but on the back scalp and breech they seemed of normal thickness.

Many similar cases have been recorded, and, so far, I have been able to unearth nine records of cases where the foetus was carried over 40 years. They are as follow:—

Date	Author	Years retained	Age of patient at death	Bibliography
1720 ..	Leinzell	46	.. 91 ..	
1767 ..	Nebel	54	.. 91 ..	(1)
1790 ..	Cheston	52	.. 77 ..	(2)
1819 ..	Seiler	46	.. 80 ..	(3)
1820 ..	Bruns	50	.. ? ..	(4)
1825 ..	Cruveilhier	42	.. 77 ..	(5)
1828 ..	Heiskell	40	.. ? ..	(6)
1876 ..	Chiari	49	.. 82 ..	(7)
1880 ..	Kuchenmeister	57	.. 87 ..	(8)

Many others of less than that period are described. In several the foetus has been shown to be contained in the sac of membranes, which was also calcareous, but in most it was in the peritoneal cavity attached to the surrounding organs without an intervening sac. In most of the cases described menstruation returned regularly, and in Cruveilhier's case two subsequent children were born.

In the majority of cases of advanced ectopic pregnancy decomposition results with subsequent disintegration and passage of the foetal members through the hollow viscera; and it is difficult to discover the reasons which in the one case tends towards calcification, and in the other to disintegration. Prolonged retention of the foetus in a normal uterus with resulting lithopædion has, as far as I can find, not yet been conclusively proved; but a case of Pearson's would appear to be an example of lithopædion retained 26 years in a rudimentary horn of a double uterus.—*Journal of Obstetrics and Gynaecology*.

Enlargement of the Spleen simulating a Pelvic Growth: Splenectomy,

BY

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I.M.S.,
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In most works on gynaecology, enlargement of the spleen is mentioned as one of the diseases to be differentiated from an enlargement of the ovary, but up to the present time I never had any difficulty in diagnosing an enlargement of the spleen, and I must have seen hundreds of cases—for India is the land of the enlarged spleen. This is a most unusual case of splenomegaly, and it seems worthy of record, if only to put others on their guard, and to prevent them from mistaking an enlarged spleen for some growth rising out of the pelvis. In most cases of splenomegaly there is a history of more or less continued fever extending over a long period, and there is generally a very marked cachexia attending on such cases. Major Simpson, I.M.S., who admitted the case during my absence on leave, could not make up his mind as to the diagnosis. When I first felt the tumour I said it was an enlarged spleen, but I was led to alter my opinion by the peculiar characteristics of the swelling, and the general good condition of the patient. I have felt before now the lower end of the spleen through the vagina, but in these cases I have always been able to trace the growth to its origin under the ribs, and there has usually been a well-marked history of fever, or cachexia has been present, and the "notch" has always helped to make the diagnosis clear. In this case all these guides were absent.

Elsie, æt. 25, ii-para, Native Christian, married 10 years, last child born November, 1902. Admitted to the Government Maternity Hospital on June 30, complaining of a

painless swelling filling the abdomen, which has existed for the past 16 months. Menstruation commenced at the age of 11 years, regular, lasting five days, and painless. Last period two years and four months ago. Micturition normal. States she had been getting thinner lately. Had fever on and off for about a year before marriage, and has had it occasionally since. She lives at Chudderghaut—Secunderabad,—and malarial fever is very prevalent there.

Present state. She is a well-nourished young woman, not anæmic, tongue clean but indented. Bowels regular. Pulse 108. Temperature normal.

Abdomen. Considerable enlargement; a large irregular tumour is found occupying the right iliac and lumbar regions and encroaching on the left side, extending from the pubes to three fingers-breadth below the ribs. It fills more of the right side of the abdomen than the left. The umbilicus is flattened out. The tumour is hard, smooth, freely moveable, especially towards the right side. A hard ridge is felt in the neighbourhood of the left rectus muscle, but the ridge evidently belongs to the tumour and is not the muscle thrown up. On deep pressure in both flanks an indistinct fluid thrill is felt, but whether due to free fluid in the peritoneal cavity or in the tumour could not be made out. There is dulness all over the tumour, but the flanks are tympanitic. The hand can easily be passed under the ribs over the top of the tumour, and can be made to dip underneath it, therefore it presumably does not grow from above.

The following measurements of the abdomen were taken:—

Girth at umbilicus	33½ in.
Girth at ensiform cartilage ..	27 "
From umbilicus to pubes ..	8½ "
From umbilicus to R.A.S.S. ..	8½ "
From umbilicus to L.A.S.S. ..	7½ "

P. V. The uterus is small, os almost at the outlet: Douglas's pouch is filled with

a tumour which seems continuous with the uterus. In front the anterior vaginal wall is bulged down by a growth which seems to be a part of the tumour in the abdomen. The sound goes backward for 2½ inches.

As I was uncertain as to its nature, I determined to explore, and for this purpose made a small incision over the right rectus on the 6th July. On opening the peritoneal cavity some fluid came away, the abdominal wall was devoid of all muscle, and a bluish-red mass presented, which was evidently not cystic and was not uterine. On passing my hand into the right iliac fossa I came on the splenic notch, resting on the right ilium. Above, the spleen did not pass under the ribs; the incision was therefore enlarged and after a little manoeuvring the spleen was delivered. The pedicle was long. The splenic artery, which was about the size of a goose quill, divided into two branches before entering the spleen, and these two branches were first tied, and then the main vessel ligatured. The vein was of enormous size, and like the artery divided into two branches, which were tied separately; a pedicle needle was then passed between the pancreas and the vein, and the vessel and a portion of the pancreas tied in an interlacing double-loop ligature. The spleen was then cut away. No blood was lost during the operation, which was a very simple one. The appendix was found to contain a round worm—not an uncommon experience; it was cut across, and the outer portion with the worm removed; the cavity of the appendix also contained some focal matter. The liver was much enlarged, but as the spleen lay over it, it was not discovered until that organ had been removed. As a considerable quantity of blood was removed with the spleen, a pint of salt solution was injected under the right breast during the operation, and a litre of the same injected into the rectum at the close of the operation. The external round was closed in three layers. The spleen weighed 4 lbs. 3 oz., and

was remarkable for the number of notches—three or four deep cuts at its edge,—near the usual notch.

On the afternoon of the day of operation she complained of feeling chilly and the temperature rose to 103° 4; she was ordered quinine, and the blood was examined but no parasites of any kind were found. She continued to have rises of temperature up to the 6th August, when the temperature fell to normal and remained so until she was discharged on the 27th August. She was given quinine, arsenic, and iron. The fever did not apparently affect her, for her appetite remained good, and she did not look the worse for the almost constant rise. She suffered from a few boils which may have helped to keep up the temperature. On her leaving the hospital the liver could not be felt. She was strong and able to walk about and was to all intents in good health, and had gained considerably in weight.—*Journal of Obstetrics and Gynaecology.*

Rupture of Uterus Twice in Six Years,

BY

E. PATZ.

A woman, aged 29, was delivered of her first child with forceps at 22. Four years later a living child was born spontaneously. An abortion in the third month followed 12 months later. The fourth pregnancy continued to term. Labour began early on Aug. 4, 1898, and proceeded normally. At 2. p.m. the foetal head was visible through the vulva, and it was decided to deliver with forceps. But no sooner was a blade placed in position than the head disappeared. She was admitted to hospital 5 hours later.

She was apparently moribund with clammy perspiration, blue lips, sunken cheeks, and a scarcely perceptible pulse. Foetal parts were felt with unusual distinctness

through the abdominal wall, but per vaginam there was no trace of a child. Evidently rupture of the uterus had occurred and the child had escaped into the abdominal cavity. Though it appeared improbable that she would survive the operation, laparotomy was performed. A great quantity of blood and clots escaped. A recently dead child, weighing about 4½ lb., was seized by a leg and rapidly extracted with the placenta. There was a vertical laceration which involved the vagina from its attachment to the bladder and the entire length of the cervix uteri. A large artery which was spurting in the cervical wound was ligatured, and a roll of iodoform gauze was conducted through the cervical rent out of the vulva for drainage. The laceration was then closed with silk, the abdominal wound was sutured in 3 layers, and a litre of normal saline solution was injected under the skin of the thorax. She rallied well and in 4 weeks was discharged cured. A firm cicatrix could be felt in the position of the laceration.

The cause of the rupture was disproportion between the size of the foetal head and the pelvis, which was of the generally contracted, rickety type. She was a short woman with bilateral genu valgum and a waddling gait.—(*Wien. Med. Woch.*, Aug. 27, p. 1609).

The forceps appeared to have been applied skilfully. She was warned that induction of abortion should be performed if she again became pregnant. But on July 13, 1902, she was admitted in labour at term. The os was fully dilated, the membranes had ruptured, and the head had engaged in the pelvis. Forceps were applied but were ineffectual. Perforation was therefore performed and a full-term child was extracted with the cranioclast. The puerperium was normal and she was discharged 6 days later with the same warning as before.

On Oct. 9, 1903, at 9 p.m., she was again admitted in labour. The os was of the size

of a crown, and the head had engaged in the pelvis. The membranes were intact. The writer, who hoped to deliver by craniotomy, instructed the midwife to call him when the os was fully dilated. At 1 P.M. he was told that the pains had completely ceased and that the fetal head had disappeared. The child could be felt immediately beneath the thin abdominal walls and no trace of it could be found per vaginam. Half an hour later an anæsthetic was given and the abdomen was opened at the site of the former wound. A quantity of blood escaped. A dead child, which weighed about $7\frac{3}{4}$ lb., was rapidly extracted with the placenta. Against expectation the laceration involved the posterior aspect of the vagina and cervix, in an oblique direction from left to right and below upwards. The cicatrix on the anterior aspect was found. To prevent the possibility of further pregnancies hysterectomy was performed. A rubber tube was tightly wound round the cervix and adnexa at the level of the middle of the laceration, 2 long needles being inserted for additional security, and everything above the ligature was removed. A large drainage tube was then inserted through that part of the laceration below the rubber tube and conducted out of the vulva. The laceration was closed with sutures except for a small opening for the drainage tube immediately below the ligature. This was somewhat difficult owing to the friable nature of the injured vaginal wall. The abdominal wound was closed with interrupted sutures from the umbilicus to the uterine stump, which was fixed on either side to the wound with a continuous suture, just below the level of the drainage opening. The stump and drainage opening were thus entirely extra-peritoneal. Convalescence was apyretic. The ligature separated from the stump on the eighth day and the drainage tube was removed. The wound rapidly healed and she was discharged cured 5 weeks after the operation.

Rupture of the uterus occurs, according to Bandl, once in every 1,180 labours, or according to Franque, once in every 3,225. Cases in which the child escapes into the abdominal cavity are even rarer. The prognosis in such an event is extremely gloomy. The child usually dies immediately, and the mother succumbs from shock or hæmorrhage. If she survives these dangers general peritoneal infection is probable. The maternal mortality of any variety of uterine rupture in the pre-antiseptic era was variously estimated at between 89 and 95 per cent. Treatment was either expectant or directed to vaginal delivery at all costs; if the child was in the peritoneal cavity it was brought back through the rent. Since the introduction of antiseptics laparotomy has been performed not infrequently. Though no statistics are as yet available the results appear to have been disappointing. Thus the fact that a woman should survive 2 laparotomies for rupture of the uterus is remarkable. It is also noteworthy that the second laceration was on the opposite side to the first.—*Wien Med. Woch.*, Aug. 27, p. 1609.

The Influence of some Gynæcological Operations on Menstruation.

J. Bondi has investigated the effects of certain operations on menstruation in 72 cases.

(1) Curetting is in the majority of cases without influence on menstruation, which may appear 5 or 6 days after the operation. This agrees with the observation of Werth, who removed the uterus, in 2 cases, 5 days after curetting and found the mucous membrane to be completely regenerated. Hæmorrhage during the first period after the operation is usually profuse. This is of importance, as it is apt to frighten the patient and suggest to her that the operation is useless. Later the periods recur at the same intervals as before the operation. Exceptionally, however, there may be amenorrhoea of considerable duration. In one case men-

truation did not re-appear for 6 months, and in another had not done so at the time of writing, 18 months after the operation.

(2) After unilateral oophorectomy there may be prolonged amenorrhoea. This is probably due to the shock of the operation, as amenorrhoea is not uncommon after non-gynæcological operations. In most cases menstruation when re-established is scantier and less prolonged than it formerly was. —

Wien. Klin. Woch., Jan 28, p. 104.

Fatal Puerperal Eclampsia ; Forceps Delivery after Death,

BY

WALTER P. COCKLE, M.D.

The writer was called to a multipara, aged 46, who was in labour. He saw her about 9 a.m. and was told that convulsions began about 3 a.m. She was scarcely conscious but could be roused. The face was puffy, the temperature subnormal, and the pulse slow. Micturition had taken place in the bed and a specimen of urine could not be obtained. The child's back was to the left and in front, the os was fully dilated, the membranes were ruptured, and the head presented. Everything was ready for the expulsion, but there were no uterine contractions. The writer determined to deliver with forceps under chloroform. He went to fetch the latter but on returning found that the patient had just died. He put on the forceps and delivered the child within 2 minutes. The child had all the appearances of recent asphyxiation, but could not be resuscitated.

With the os fully dilated and no obstruction post mortem forceps delivery method is preferable to Cæsarian section. It is cleaner and less repugnant to the patient's friends and is as rapid. Considerable success has been obtained in *post-mortem* delivery in the few cases recorded.—*Transact. Royal Acad. of Med. in Ireland*, 1903, p. 306.

OPHTHALMOLOGY.

Trachoma,

BY

JOHN L. ADAMS, M.D.

While trachoma is a common disease of the eye, and familiar to the specialist, it is not always promptly recognized by the general practitioner. It is a contagious disease and can be contracted at any age, but occurs most frequently in childhood.

In our large cities medical inspectors are appointed who examine the eyes of children attending the public schools, and under this wise provision trachoma is detected at an early stage and placed under treatment before any serious involvement of the cornea can result. Many children are thus examined who might be unable to consult a specialist, and are sent to institutions and cared for, who would otherwise be overlooked until the disease had passed the incipient stage. The children of the smaller towns and cities are less fortunate in this respect, and, therefore, it behoves the general practitioner to keep a sharp lookout for this disease when visiting his patients.

The most pronounced symptoms of trachoma in the early stage are sensitiveness to light, causing the patient to partially close the eye; there is also lachrymation and some pain, with a sticking together of the lids. This partial closing of the eye is caused, in addition to the sensitiveness to light, by the thickening of the upper lid.

Examination.—On turning over the lid we find that the conjunctiva covering the tarsus is reddened and thickened, its surface uneven, which changes are caused by hypertrophy of the mucous membrane. This hypertrophy is caused by the development of the so-called papillæ, and is characterized by the presence of trachoma granules. Disturbance of sight, commonly complained of by patients, is due to pannus and ulceration,

which not infrequently occur together. Pannus trachomatosis is the deposit on the cornea of newly formed vascular tissue, which pushes its way over the edge towards the centre of the cornea. Ulcers may develop at a point otherwise normal, or in connection with pannus. When the pathognomonic "millet seed" or "frog spawn" symptom is present, there is no doubt about the affection being trachoma.

It is my belief that all diseases of the eye characterized by a watery discharge are contagious, and this is especially true of trachoma, which is usually transmitted by actual contact. That is, by children sleeping together, by the use of towels or basins in common, etc. The first step in treatment is to caution the patients in this respect; to have them wash the face in running water, if possible, and to use separate towels, etc. Cleanliness is a great factor in the prompt recovery of this affection.

The most successful treatment is that of bathing the eyes every two hours with a saturated solution of boracic acid, or of a solution of four of Seiler's tablets to a pint of water, and the application every other day of a sulphate of copper stick to the lids while they are thoroughly everted. Treatment by application and bathing should be used before operation is resorted to. Scars and atrophy are the result of the most carefully conducted operation, and though the medicinal treatment may require a longer time to bring about the same result, it is preferable.

The time required for recovery varies from two weeks to two months, depending largely upon how closely the patient attends treatment. It depends also to a certain extent upon the virulence of the poison, the susceptibility of the patient, and upon the equality of his food and environment.

With early and proper treatment the prognosis is most favourable.—*The Medical Brief*.

THERAPEUTICS.

Yohimbin: Its use in the treatment of Eye, Ear, Nose, and Throat diseases.

This drug, used by some as an aphrodisiac, is discussed by CLAIBORNE in the *Medical News* of July 9, 1904. He thinks the following conclusions are justified from a study of his cases:

1. A two-per-cent solution of yohimbin-spiegel, either alone or in equal mixture with adrenalin chloride solution, dropped into the conjunctival cul-de-sac from five to six times in ten or fifteen minutes, will produce both corneal and conjunctival anesthesia. Marked anesthesia of the cornea lasts from thirty to forty-five minutes after the last instillation; the conjunctival anesthesia is at no time so profound as the corneal, and disappears several minutes before the latter.
2. There is a slight stinging sensation immediately following the instillation, which becomes less and less with each instillation, finally disappearing altogether.
3. The eye becomes immediately suffused and continues red for more than an hour after the last instillation.
4. There is no widening of the palpebral fissure.
5. There is a moderate but marked dilatation of the pupil, which comes on several minutes earlier after the last instillation with adrenalin and yohimbin in combination than with yohimbin alone, but lasts in either case from fifteen to twenty minutes.
6. The slight blurring of the vision for far and near appears to be due to spherical aberration rather than to paresis of accommodation.
7. Yohimbin alone or in combination with adrenalin is an exceedingly mild mydriatic.

8. Adrenalin when mixed in equal parts with yohimbin in two-per-cent solution loses its constricting power upon the blood-vessels of the palpebral and palbar conjunctiva.

9. This last mentioned fact suggests the idea that yohimbin may be an antidote to adrenalin chloride.

10. In view of the congestion caused by yohimbin it cannot be considered the ideal anesthetic for operations involving the conjunctiva or muscles.

11. As an anesthetic in cataract extractions and in iridectomy it would probably be effective.

12. On account of the congestion produced by it yohimbin would be inferior to cocaine as an anesthetic in all operations upon the eye.—*The Therapeutic Gazette*.

The Results of X-Ray Treatment.

To the *New York Medical Journal* of July 2, 1904, CHILDS contributes a paper upon this subject. He believes that sufficient time has not elapsed since the first cases of malignant disease were successfully treated for applying to them anything but the term "symptomatically cured," and it is in this sense that the word "cured" is used in this paper. When surgeons report recurrences of carcinoma ten years after operation, we feel that there is no definite time limit for this disease. Realizing, however, that it will require several years to establish a just judgment on the value of the x-ray as a remedial agent in certain malignant forms of disease, and that even then we can only arrive at its correct status after a careful synopsis of the results or failures reported by many different operators, the author has endeavored to draw a few conclusions from his own experience and that reported by others.

First, the therapeutic field of greatest usefulness of x-ray is with superficial epitheliomata, rodent ulcer, and lupus vulgaris, when the area involved is conspicuous, as on the face or neck, and where a cosmetic result is particularly to be desired.

Second, healing by the x-ray leaves the smallest and least perceptible scar, for when properly applied it destroys only diseased tissue, and particularly commends itself for use in those localities where it is undesirable to sacrifice the surrounding tissues.

Third, the x-ray is very efficacious in many obstinate cases, which have resisted the ordinary methods of treatment, such as acne rosacea, chronic localized patches of eczema and psoriasis, lupus erythematosus and kindred skin diseases.

Fourth, the x-ray in tuberculous glands when no suppurating focus is present are encouraging, and the enlarged masses of glands in Hodgkin's disease appear to be susceptible to the treatment.

Fifth, the x-ray should not be employed in any operable, deep, malignant growth, with two exceptions: first, as pointed out by Coley, where a surgical operation would sacrifice an extremity, and even in this case the value of the x-ray is uncertain, and is determined by a few weeks' trial; secondly, as mentioned by Pusey, with a view to limiting the operation by checking the growth when immediate operation is inadvisable.

Sixth, the x-ray may be of service even in inoperable malignant growths, by relieving pain, diminishing discharges, and lessening their offensiveness, and in many cases life may be prolonged in comparative comfort for a considerable period of time. Furthermore, from these apparently hopeless cases a number of remarkable improvements and a few recoveries have been reported.

Seventh, the x-ray should be used as a prophylactic against return after all operations

for the removal of deep malignant growths.

Eighth, the area of exposure should be wide, and the intensity and quality of the rays should be adapted to each case.—*The Therapeutic Gazette*.

Acid Sodium Phosphate and Adrenalin in Vesical Diseases.

To the *Medical Press and Circular* of June 29, 1904, WHEELER reports his further experience with these drugs. In concluding his clinical report he says that the efficacy of adrenalin in hemorrhage needs little comment, but it is more admirable in some cases than others. When applied locally it is very reliable as a hemostatic, and also as a local anesthetic, pure or mixed with cocaine. Given internally it seems, naturally enough, to be inefficient in hemoptysis or other remote hemorrhages, and in hematemesis the action might almost be considered "local;" yet in a case under the writer's care of violent hemorrhage from a gastric ulcer internal administration did not check the hemorrhage; a subcutaneous injection of 5 minims of the 1-in-1000 saline solution brought back a pulse in three minutes which was not perceptible in the patient before. She was blanched, fainting on the slightest movement, and in a most critical condition. The hemorrhage in this case ceased on giving liquor ferri perchloridi every hour in 4-minim doses, and occasional 5-minim capsules of turpentine.

As to acid sodium phosphate, the author cannot pronounce definitely on its action until he has treated many more cases, yet he is strongly of the opinion that it is a good urinary acidulant. This he has demonstrated in the case he describes. He also has a record of three other cases whose urine became acid after administration of this drug. Hutcheson, of London, first called attention to its value. Several of the author's professional friends in Dublin have also had suc-

cess, and others have promised to try it and give him the benefit of their experience. After all, theory must be modified according as practical facts present themselves, and if we find acid sodium phosphate a useful addition to urinary acidulants, physiologists will soon present us with all the scientific details of its action.—*The Therapeutic Gazette*.

The Abortive Treatment of Tonsillitis with Quinine,

BY

VON SZENTGYORGY.

In all forms of tonsillitis which are not a part of some acute infective disease such as scarlet fever or diphtheria, quinine is a specific. The temperature falls by crisis with profuse perspiration within 4 hours of its administration, and the local signs, such as the white patches, the redness, swelling, and pain, disappear, even in severe cases, within 24 hours. So certain is this action if quinine is given according to the writer's practice that the treatment differentiates cases of primary tonsillitis, whether catarrhal, follicular, or phlegmonous, from those in which the tonsillar inflammation accompanies acute infective diseases. This applies to phlegmonous tonsillitis only if the quinine is given before suppuration has occurred. The only exception to this rule is the class in which the tonsils are affected successively. Quinine then produces some sweating and a fall of temperature more or less complete during the night. But instead of convalescence being established the following evening, with the onset of inflammation in the second tonsil, there is renewed pyrexia. In these cases, if quinine be given in the same dose and manner on the second evening as on the first, a permanent cure results. Again, there are cases of tonsillitis in which pyrexia precedes the appearance of the local lesion by some hours or days. In these quinine

has no effect until the local symptoms have developed. Thus, though it is a specific for the fully developed disease, it is not prophylactic.

The quinine should be given as a powder in 2 doses of (for adults) $7\frac{1}{2}$ gr. each at 7 and 7-30 p.m. respectively. If administered in smaller doses or at another hour the results are uncertain and disappointing. Why this should be it is impossible to say, though the analogy of malaria suggests a possible explanation. It was long known empirically that the best time to give large doses of quinine was a few hours before an attack was expected. No explanation was forthcoming until Golgi showed that this time coincided with the sporulation of the malarial parasite. The treatment of tonsillitis has of late assumed great importance, as many cases have been reported within the last few years in which it has been followed by septicæmia and pyæmia. Further, there is a well-recognised connection between tonsillitis and acute rheumatism. Probably these complications might be averted by the early application of the writer's method. The following is an example of the results obtained.

At midnight a man was awakened by a violent rigor. There was such pharyngeal pain that deglutition was impossible, and such swelling that respiration became noisy and laboured. There was a constant flow of saliva. The pharynx was swollen and red, especially on the left side, the soft palate and tonsils were prominent, and the uvula was of the size of the little finger. The temperature was 105° . Iced compresses were ordered, with ice to suck, and the progress of the disease was so far arrested that the following evening the condition was unchanged. At 7 and 7-30 p.m. he was given doses of $7\frac{1}{2}$ gr. of quinine. At midnight such profuse perspiration occurred that the mattress was soaked. He then slept well till morning, when the temperature was normal and the pharyngeal pain had subsided, and

he ate his breakfast with relish. The following evening the throat was normal, and the next morning he got up cured.—*Pest. Med. Chir. Pflsse*, Jan. 24, p. 85, and Jan. 31, p. 109.

Treatment of Malignant Oesophageal Stricture with Radium Rays,

BY

A. EXNER.

A. Exner reports 3 cases of carcinoma of the oesophagus which were treated with radium rays. The resulting shrinkage of the tumour allowed of a less frequent passage of a larger bougie and alleviated the dysphagia. In 1 case in which the stricture admitted a No. 12 bougie, a No. 16 was passed after 3 weeks' mechanical dilatation. Within the next fortnight 7 applications of radium rays, each of 20 minutes' duration were made. During the succeeding week no treatment was employed. A No. 19 bougie was then easily passed, and a week later a No. 23. The stricture remained permeable for this instrument, although it was passed only every 8 or 10 days. The dysphagia was less. In other cases the result was similar. Evidently the rays produce a disintegration of the tumour. The treatment is merely palliative, but may occasionally obviate the necessity for gastrostomy. Care is necessary that the applications are not of too great duration or a perforation of the oesophagus may result.

TECHNIQUE.—The oesophageal bougie is so modified that the cylindrical vulcanite capsule, which contains the radium, can be screwed on to its lower end. The bougie and capsule should be of the same calibre. Sixty mgm. of radium are enclosed in the capsule and are surrounded with dammar varnish. In all cases the application of the rays to different parts of the tumour was

carried out under the control of the oesophagoscope.—*Wien. Klin. Woch.*, Jan. 28, p. 96

DERMATOLOGY.

CLINICAL LECTURE.

Some General Principles of Treatment in Dermatology.

Lecture II.—Local Treatment,

BY

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Hospital for Children.

GENTLEMEN.—Those of you to whom I had the pleasure of lecturing last session on the General Principles of Treatment in Dermatology will remember that on that occasion I dealt with the management and internal treatment of skin affections. This afternoon I will try to put before you the general principles which should guide us in their local treatment; and these I will endeavour to discuss with you practically and informally. In many ways this is the most important part of my subject, because every type of skin disease requires more or less local treatment, while in not a few of them internal treatment is not in the least degree necessary. Just as internal treatment, if injudiciously prescribed, is capable of doing harm rather than good, it is equally the case with local treatment, and many a diseased condition of the skin is aggravated rather than improved by unsuitable local applications or medicaments applied in a wrong manner. In the hands of the inexperienced the local treatment of a skin affection too often resolves itself into dabbing on an antiseptic lotion or applying zinc ointment, and should these fail ointment after ointment is tried, gross errors of polypharmacy fallen

into, and the treatment becomes more and more hopeless from the inability to realise the fact that ointments in any shape or form may in themselves be harmful and that the patient's disease is being irritated through over-treatment rather than subdued.

The tendency to polypharmacy in our local applications in dermatology is sometimes extraordinary. As a rule it does no serious harm, but occasionally a drug is added which counteracts the action of another or even unites with it to form an irritating compound. At the same time polypharmacy makes it very difficult to be certain which of the various ingredients in our local application is acting beneficially or otherwise. As an example of the length to which this multiplying of ingredients in ointments or lotions may go to, I remember the case of a neurotic patient, who was a chemist by profession, and suffered from a long-standing eczema chiefly affecting the legs. Various local applications were tried, but with doubtful success, as he was a highly-nervous patient and was unable to refrain from irritating the eczema by rubbing and scratching. One day he came up for examination and appeared and felt decidedly better, and proudly asserted that he had made up an ointment for himself which he thought had done him so much good that he would like me to see the prescription. It contained the following:—

R

Hyd. am. chlor. ʒ ii.
Calam. prep. ʒ ii.
Glycerini ʒ ii.
Hazelini ʒ ii.
Lanolini ʒ xii.
Vaselini ʒ vi.
Morphinæ ʒ ss.
Liq. Picis ʒ iii.

} Fiat Ung.

The patient had faith in his own remedy, refrained from scratching, and in spite of the fact that the ointment contained a hope-

less jumble of stimulants and sedatives, and it was practically impossible to decide which the active ingredient really was, it caused a certain amount of improvement which could have been far better secured if the patient had applied a zinc-calamine cream or paste, and exhibited somewhat greater self control.

In discussing the general principles of the local treatment of skin diseases, I will refer first to the relative merits of the various drugs in common use, and next I will discuss the different methods of applying them. The drugs which are most commonly applied in the therapeutics of the skin may be grouped conveniently under the following headings, namely:—astringents, caustics, bactericides, parasiticides, reducing agents, and antipruritics and sedatives.

Astringents.

Astringents act partly on the tissue fluid of the skin and partly on the blood vessels. They cause directly or indirectly a contraction of the vessels, they coagulate albumen in the tissue fluids, and they limit exudation. Prescribed as they usually are in the form of lotions, they have a cooling effect through evaporation. They are thus indicated in acute inflammatory states of the skin associated with oedema and exudation, and are also valuable in ulcerated and granulating surfaces.

One of the most useful of the astringents is lead in the form of the solutions of the acetate and subacetate. Solution of subacetate of lead *m* xx. to an ounce of water, with the addition of *m* x. glycerine, or the B.P. Glycerinum Plumbi subacetatis diluted with water 1 to 6, are suitable formulæ.

Besides the salts of lead, solutions of sulphate of zinc, alum, tannic acid, or nitrate of silver may be substituted. A very favourite astringent lotion on the continent is that known as Burrow's solution, which contains:

R

Alum. gr. xxv.
Liq. Plumbi. Subacetat. ʒ ii.
Liq. a3. ʒ i.

Solutions of nitrate of silver, 5 grs. to the ʒ i., are frequently recommended to astringe weeping eczemas.

Dermatol is a recent astringent powder and contains gallic acid, but has no special merits. In cases of hypersecretion of sweat (hyperidrosis) affecting the feet, solutions of formalin have a powerful astringent action and are extensively employed to combat this affection in the German army. Formalin is also a disinfectant, and it has the power of dissolving the keratin of the horny layer, which greatly enhances its value in the treatment of this complaint, as there is frequently a good deal of thickening of the horny layer of the foot associated with the hyperidrosis. Weak solutions of permanganate of potassium have a strongly astringent action on the skin in virtue of their power of oxidation. In concentrated solutions, however, this salt has a destructive effect.

Astringents may be used also in the form of ointments or powders.

Caustics.

The consideration of the astringents of the skin leads us naturally to the next group of local remedies, namely, the caustics. The caustics are much more powerful drugs, and act in various ways.

Caustic potash is one of the most powerful of them: applied in the form of the B. P. solution (5.84 per cent.) it has a hygroscopic action on the tissues, it emulsifies and removes the skin fat, it coagulates the albumen, it macerates the horny layer, and it dissolves the keratin. It causes little or no initial discomfort when applied, and it has a much deeper action on the skin than one would expect, so it must be carefully used. I have seen it employed with doubtful success for

the removal of the keloidal scars produced by burns, and for the horny thickening in hyperkeratosis of the palms and soles. Zinc chloride is sometimes used as a substitute for caustic potash, but its action is more superficial, and it is at the same time more painful.

One of the most active of the caustics or escharotics is arsenic, and it was once extensively employed in the form of pastes for the destruction of malignant growths. A favourite paste of this nature was one which contained equal parts of arsenious acid, gum arabic, and orthoform (to relieve the pain), or the liquor arsenicalis was itself painted on. It was a very painful and barbarous method of treatment, and if used over a large area the arsenic might be absorbed with disastrous results. Consequently it is now being gradually abandoned, in favour of surgical methods of radio-therapeutics. Antimony, in the form of the liq. antimonii chloridi, is occasionally used as a caustic, as are also the various acids, such as nitric, chromic, and lactic acids.

Nitrate of silver has a useful function in the treatment of the nodules of lupus vulgaris, especially on the mucous membranes, and also in the boring out of soft lupus nodules in the skin. This is a rough and ready means of treatment, but it is effective, and the caustic has comparatively little action on the surrounding healthy tissue.

Acid nitrate of mercury was once largely used as a caustic in conditions such as lupus erythematosus, and many cases of this most intractable affection have been fairly successfully treated by it. In one case of which I know, and in which a large patch of lupus erythematosus was treated by this method by the late Sir Erasmus Wilson, and the patient had had over a hundred applications of it, the lupus erythematosus has disappeared, but a very unsightly white scar has been produced in its place. It is always well to remember that any of these caustics if too heroically used may cause gangrene and sloughing.

The next group of local remedies to be considered are the *parasitocides* and *bactericides*. By parasitocides I mean the drugs which destroy the larger vegetable and animal organisms. Sulphur is one of the most useful of these for the destruction of animal organisms, such as the acarus of scabies, or vegetable organisms, such as the microsporon furfur of pityriasis versicolor. It acts best prescribed as an ointment, and the most satisfactory preparation of it to use is the precipitated sulphur, which is more pure than the sublimed sulphur; and of the compounds of it the hyposulphite of sodium is one of the most efficacious. *B-naphthol* and balsam of Peru may be substituted for sulphur, and the latter drug in ointment form is specially serviceable in cases of scabies where the patients are liable to suffer from sulphur dermatitis.

Carbolic acid and the mercurials are often in requisition for destroying pediculi and the fungi of favus and ringworm; and to this list we must also add chrysarobin oleate of copper, and iodine. The bactericides differ from the parasitocides rather in their degree of activity than in kind. Their action is weaker, and the same drugs in less concentrated form are employed, or such mild antiseptics as boric acid, ichthyol, resorcin, and iodoform. These drugs are so familiar to all of you that I need scarcely occupy your time by doing more than mention them.

A very important group of remedies employed in connection with skin diseases is that which is known as the "*reducing agents*." These act in virtue of their power of abstracting oxygen from the tissues. When employed in dilute form, the slight degree of deoxidation occasioned by them on the cells of the stratum corneum and the remainder of the epidermis delays the process of cornification, and has the initial effect of hardening the horny layer and making it more coherent. This effect is followed by a loosening of the layer in all its thickness, and it comes away

in the form of a scale. This has been named the "kerato-plastic action" of a reducing agent. But this process of deoxidation does not stop at the horny layer: it affects the whole of the epidermis; the swollen oedematous prickle-cells become smaller and firmer, the inter-epithelial oedema dries up, and a more healthy epidermis is substituted. The reducing agent also acts on the blood-vessels, causing them to contract and diminishing the exudation from them. In this way not only is the epidermis stimulated to healthier growth, but the nerves of the skin are also stimulated, and the tension and inflammation are reduced. Consequently, these reducing agents are indicated in all the inflammatory affections of the skin associated with scaliness, such as eczema, seborrheic dermatitis, and psoriasis.

The reducing agents may be roughly divided into two classes, namely, strong and weak reducing agents, and the action of these two types varies considerably.

The stronger reducing agents may be so powerful as to do actual harm and be responsible for inflammation, oedema, and even bullous formation. They macerate the epidermis, and may cause a softening of the underlying fibrous elements of the corium. The strong reducing agents are chrysarobin and pyrogallol acid, and they should be employed with caution and well diluted.

Chrysarobin is specially irritating, and should be avoided on the face, and if applied to the scalp this had better be covered up with a cap, in case the chrysarobin reaches the eyes, where it may set up severe conjunctivitis.

Anthraxarobin acts in a similar fashion, but is a much less potent remedy.

Of the weaker reducing agents, those in most common use are salicylic acid in small percentages, ichthyol, resorcin, sulphur thiol, and tar. These have the therapeutic effect indicated above. Salicylic acid has a

marked keratolytic action, and hence is particularly valuable in removing horny thickenings such as callosities, corns, etc. Tar is also a valuable reducing agent. One of the strongest preparations of it is the oleum rusci (birch tar), which not only acts on the superficial cells of the epidermis, stimulating them, but also on the underlying cellular infiltrations of the corium.

Antipruritics and *sedatives* form the last group of drugs I wish to refer to. One of the most valuable of these is carbolic acid in weak solution, 2 or 3 per cent. Tar is also largely used, especially in the form of the alcoholic solution of coal-tar, known as liquor carbonis detergens (2 i or more to Oss. of water), weak alkaline solutions, such as 10 grs. of potassium or sodium bicarbonate, or of borax to the Oss., also belong to this category.

Of the more powerful sedatives, I may mention specially menthol in a 2 per cent spirituous tincture, hydrocyanic acid, 2 per cent. solutions of cocaine, and the extract of belladonna.—*The Polyclinic*.

(To be continued.)

HYGIENE.

Hygienic Essentials,

BY

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Lecturer on Hygiene, California Medical College.

VENTILATION.

Amount of cubic space necessary.—A large supply of air is required to preserve the air of an inhabited room in a wholesome state of freshness. The amount has been fixed (as stated before) at 3000 cubic feet per hour for each adult healthy man. In order to secure the required change of air without perceptible, or at least uncomfortable cur-

rents of draughts, a certain amount of cubic air space is necessary.

The sizes of the room, or the cubic air-space will depend on the means by which the necessary amount of air is supplied. If the room is small the air must be changed more frequently than when it is large, and the rate at which the air passes through the space will necessarily be more rapid, and the chances of uncomfortable draughts more imminent.

It has been determined that each person should have, as a minimum allowance, from 750 to 1000 cubic feet of initial air space, which will permit of a change of air four or three times in an hour without discomfort. These figures are based upon the assumption that six-tenths of a volume of carbonic acid per 1000 is the correct standard of purity of air of an occupied room; any modification of this standard would, of course, make a change in this allowance.

It has been demonstrated by Prof. Pettenkofer that a much smaller space than that designated as the standard can be efficiently ventilated. By using the best mechanical contrivances and warmed air, he succeeded in renewing the air in his chamber with an air space of only 424 cubic feet six times in an hour without creating any perceptible movement in the air. If the cost is a matter of no concern there can be no doubt that, with proper appliances, a very much smaller space even than that just described can be comfortably ventilated; but with natural ventilation it need not be attempted. Of course in most dwellings the use of contrivances such as have been alluded to scarcely enters into the question. They are too costly, and require too much attention, consequently may be neglected. But the main objection to a small air space is the impracticability of renewing the air sufficiently often without causing draught. In ventilating small spaces the inlets are so near the

person occupying the room as to make a draught unavoidable. In exemplification we only need to examine the prisons in which convicts are confined in cells during rest, the air space of which seldom exceeds 250 cubic feet, often less. To avoid the unpleasant effects of these draughts the prisoners frequently block up the inlets as best they can and thus obstruct ventilation with serious consequences. Even with the aid of a well devised plan of ventilation it is hard to supply the necessary amount of fresh air per head per hour without creating perceptible draughts occasionally if the space be less than 600 cubic feet. With an air space of 1000 cubic feet the problem of ventilation becomes much easier. The current of fresh air is more easily broken up and mixes more readily with the larger volume of air in the room, and the occupant being further from the opening does not perceive the movement of the air.

Dr. De Chaumont gives the following results of an experiment to determine the length of time it would take to bring the air to the limit of permissible impurity (six-tenths per 1000 of carbonic acid, initial and respiration) in unventilated air spaces of different sizes:

One man in	10,000 cubic ft.	3 hours 20 min.
" "	5,000 "	1 " 40 "
" "	1,000 "	20 "
" "	600 "	12 "
" "	200 "	4 "
" "	50 "	1 "
" "	30 "	36 sec.

The larger amounts mentioned are scarcely ever met with; it is more commonly the case that the air space is less than the standard selected (750 to 1000 cubic feet). Even with an air space of 10,000 cubic feet the limit of impurity would be reached in a little over three hours, and thereafter 3000 cubic feet of fresh air would be required each hour to keep the air in a condition of freshness.

the hourly supply of air being the same for a space of 100 or any number of cubic feet.

The error of supposing that the cubic space may take the place of a change of air, so that by providing a large room less fresh air will be required, is a very common one and should be carefully guarded against. It is very unwise to attempt to make up for bad ventilation by providing increased cubic space, particularly if this increase be in the height of the room and not in floor space. The air above a certain height is of little advantage if the floor space be too limited, for an enclosure relatively unlimited in height but contracted about a man, would suffocate him.

It has been proven that a man standing on a square foot of ground with walls 3000 feet high all around him would be in 3000 cubic feet of space, but it is evident that he could not survive in it.

Rooms should not be over twelve feet in height.

Under no circumstances, then, can a large supply of fresh air be dispensed with and the habitation remain healthy, and no arrangement whatever can take the place of that air.

A large space does not require so frequent and rapid a renewal of the air as a small space, but the greater expense of maintaining a comfortable temperature with the necessary ventilation may lead to a dangerous exclusion of the outer air. On the other hand a small space will necessitate a more frequent and rapid change of air, and if perfect renewal takes place more frequently than three or four times in the hour the movement of the air causes a draught and becomes uncomfortable.

Between these two extremes lies the practical mean which requires that the cubic space shall be neither too large nor too small, but sufficient only for maintaining perfect ventilation without perceptible movement of the air or draught.

Some think that so large an air space as 1000 feet is extravagant and unnecessary and not at all practicable. That it is in excess of what is generally obtained is no doubt true. In the case of the poorer classes it is seldom that an air space exceeding 250 cubic feet is encountered. When poverty pinches, overcrowding is an inevitable result. So also with the artisan class, the allowance per head is apt to be low. But the results of this condition are only too likely to declare themselves in an increased rate of mortality.

A proper standard must be selected and the people educated up to it, otherwise no improvement need be expected.

For the sick the allowance of air space must be increased as there are other impurities besides those due to respiration which require to be taken into consideration.

The room for the sick should be large and airy, especially when the disease is of an infectious character, as the emanations from the body rapidly pollute the air to the detriment of the patient and attendants, unless provision is made for the immediate dilution of the impurities by an ample distribution of air without draught, which is more likely to be secured in a large room.—*The California Medical Journal*.

CORRESPONDENCE.

To
The Editor,
"THE ANTISEPTIC,"
MADRAS.

SIR,

In your leader in the "Antiseptic" for the last month you have among other things most accurately remarked about the "enormities that are committed" in the matter of transfers of

Medical Subordinates, and you will do a great public service if you will wield your influential pen for the amelioration of this state of affairs. The Hospital Assistants throughout the Presidency, perhaps more so in certain Districts which I do not mention, are subjected to a most harassing and heart-burning system of transfers and bye-transfers. If the Government can be induced to call for an annual return showing the number of times an Hospital Assistant was transferred, the places he was transferred to, and the various duties he had to perform a truly painful state of things will be disclosed. The public money wasted in these transfers will be enormous, and much private money also is wasted, as

in several cases the sanctioned travelling allowance will not cover the actual expenses. Of course a few percentage of the total number of Hospital Assistants have been enjoying long leases of some good places, and the secret of their success is inexplicable and known only to themselves.

In this connection I would humbly suggest that a transfer-list of all Medical Subordinates in the Presidency may be obtained and published monthly in your much appreciated journal. Such a step will not only increase the popularity of the journal but will also probably be a check on the "enormities" committed in the matter of transfers.

"A SUFFERER."

Business Notices.

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Original Articles.

* SURGICAL APHORISMS,

BY

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INFLAMMATION.

KNOWLEDGE of the causes and progress of inflammation is essential to satisfactory surgical treatment.

The changes concerned in the aseptic repair of injuries may be regarded as physiological inflammation.

Acute pathological inflammation, considered from the practical surgical point of view, results only from infection by micro-organisms.

INFLAMMATORY PHENOMENA.

The first minute change observable in the damaged tissue is occasionally a transient contraction of the smaller blood-vessels.

The next is invariably dilatation of the bloodvessels and increased vigour of the circulation in them.

Then follow gradual slowing of the circulation; oscillation of the blood in the vessels; and,

* Specially contributed to "The Antiseptic."

Finally, stasis.

When retardation of the local circulation is proceeding, examine the contents of the bloodvessel.

They will be seen to divide into a central red, more rapid, and a peripheral slower light current.

The central consists chiefly of red corpuscles.

The peripheral consists chiefly of liquor sanguinis and leucocytes.

When stasis is complete, the red corpuscles adhere and form a bright central red axis.

The leucocytes tend to attach themselves to the vessel walls.

"Diapedesis" follows adhesion of the leucocytes; by means of amoeboid movements the leucocytes crawl through the vessel walls and escape.

In a short time the connective tissue surrounding the smaller bloodvessels is crowded with leucocytes.

These are joined for purposes of defence by "free cells," always present in greater or less numbers in the connective tissue spaces. Both are described as "microphages."

A large third cell derived from the connective tissue elements, a "microphage," adds to the strength of this wonderful army.

Micro-organisms, dead cells, and destructible dirt are devoured by these voracious soldiers. This is "phagocytosis."

The general control of the army finds its analogy in the chemiotaxis of the body.

The invading organisms produce toxins, which may be compared to lyddite. Both paralyse and demoralise the army of defence.

In less serious battles the invading micro-organisms are destroyed or imprisoned by the cells.

In the thickest of a severe fight heaps of dead soldiers form pus.

CAUSES OF INFLAMMATION.

The causes of inflammation are predisposing and exciting.

Predisposing causes are:—

- (1) Local.
- (2) General.

Of local causes, defective circulation is the chief.

Varicose veins and arterial disease are the most important. Both diminish tissue resistance.

Nerve lesions less commonly have the same effect.

A previous attack of inflammation in the same part diminishes its vitality and predisposes to further attacks.

Traumatism is also a predisposing factor.

General predisposing causes are such as lower the bodily resistance. Malnutrition, old age, heart and kidney disease, diabetes, and alcoholism are the chief.

The known exciting causes of inflammation are:—

- (1) Traumatic, mechanical, chemical, electrical, thermal (heat and cold), X-rays, &c.
- (2) Microbic infection.

There are two distinct forms of inflammation:—

- (1) Acute, and
- (2) Chronic.

ACUTE INFLAMMATION.

The only known cause of acute inflammation is microbic infection by a pyogenic organism.

Staphylococcus pyogenes—a ureus is the most common cause of acute inflammation.

Expect it in boils, carbuncles, abscesses, septic osteitis, and other localised suppurations.

In spreading inflammation, of which erysipelas is the type, streptococci are the usual cause.

A spreading inflammation, accompanied by abscess formation, frequently results from a mixed *staphylococcus* and *streptococcus* infection.

CHRONIC INFLAMMATION.

The two known causes of chronic inflammation are tubercle and syphilis.

An inflammation, the cause of which is unknown, can be ascribed to traumatism, rheumatism, or gout.

TERMINATION OF INFLAMMATION.

The possible terminations of inflammation are to be remembered.

In all essentials they are the same in each structure. They are:—

- (1) Resolution.

- (2) Thickening; fibrosis in the soft parts—sclerosis in the bones.
- (3) Partial destruction; ulceration, caries, sloughing, pus formation.
- (4) Total destruction; gangrene, necrosis.

SIGNS OF INFLAMMATION.

The local clinical signs of inflammation are redness, swelling, heat, pain, and loss of function.

Redness is the result of hyperæmia.

Swelling is due to escape of fluid constituents of the blood vessels into the connective tissue.

N.B.—Though the swelling usually coincides with the inflamed area, this is not invariable. An inflamed scalp produces œdema of the eyelids; an inflamed palm, swelling on the dorsum of the hand; of the lower abdominal wall, œdema of the scrotum, &c.

This swelling follows the path of least resistance. These transferred swellings may be of considerable diagnostic importance.

On the chest or abdominal wall, or on the scalp, or surrounding a long bone, they suggest deep-seated suppuration.

Heat results from increased blood supply.

N.B.—It is an invaluable clinical sign, for it denotes active and progressive change. If a swollen joint is hot, it requires rest; if cold, there is no such need for care.

Pain results chiefly from increased tension. It is increased by dependency, relieved by elevation of the inflamed part.

N.B.—The most tender spot indicates the position of greatest mischief. Pressure with the point of a probe will demonstrate

the best point for an incision in palmar abscess. Point pressure with the finger may suggest that inflammation of the gall-bladder or of the appendix is the cause of an obscure abdominal illness.

The character of the pain may give a hint as to the structures involved.

A boring aching pain, worse at nights, suggests bone inflammation.

Mucous membranes smart.

Serous membranes stab.

A sickening pain suggests testicle, kidney, mamma, or ovary.

A throbbing pain suggests suppuration.

Pain may be referred and misleading.

The following are examples:—

Kidney pain may be felt in the testicle.

Spinal pain in the abdomen.

Hip pain in the knee.

Rectal pain in the heel.

Prostatic pain in the penis.

Eye pain in the head.

Intestinal pain in the umbilicus.

IMPAIRMENT OF FUNCTION.

A young child never shams.

If it walks lame, or the movements of any of its joints are impaired, suspect inflammation.

DIFFUSION OF INFLAMMATION.

Red linear streaks leading from an inflamed part to the next set of glands, mean lymphangitis.

Enlarged tender glands suggest an attempt on the part of the invader to reach the bloodstream.

Inflammatory fever is associated with a quick pulse, increased tissue metabolism, shown by excess in excretion of urea and urates, and with general impairment of

all the organic functions—digestion, secretion, excretion—and of nervous, mental and muscular adequacy.

TREATMENT OF INFLAMMATION.

In the ordinary conditions of life, battles between invading micro-organisms and defensive cells are being constantly waged.

Fortunately for most of us the advantage lies with the defensive cells.

Parts of the body specially liable to invasion, *e.g.*, mouth, tonsils, lymphatic glands, are specially guarded by extraordinary numbers of free cells.

A large quantity or specially virulent quality of micro-organisms is essential to produce disease in a healthy person.

In less healthy ones, or in damaged tissues, serious results may follow slight infections.

The most serious results of all follow infection of the blood stream.

The most important item in the treatment of inflammation is its prevention—by avoidance of or destruction of its cause.

This embraces a knowledge of antiseptic surgery by which wound treatment has been revolutionised.

The object of this is to prevent the intrusion of micro-organisms, and to destroy any that may already have found an entrance to wounds, before a surgical wound is inflicted.

The patient must have a surgically clean skin.

The surgeons, assistants, and nurses' hands, must be surgically clean.

Instruments, sponges, dressings, ligatures, sutures, &c., must be sterile.

Tissue damage must be avoided by gentle handling. Bruising, tearing, pulling,

and rubbing diminish tissue vitality and favour organismal infection, so do strong antiseptics.

Wounds must be kept dry either by drainage or by elastic compression. Organisms grow in pent up fluids.

For dirty wounds generous washing with normal saline, the removal of parts damaged beyond redemption, and free drainage are essential.

Remove the causes of inflammation when possible.

If you doubt the overwhelming importance of this rule, watch the disappearance of a traumatic conjunctivitis when its causative foreign body has been removed.

Incise pus collections freely, and drain them thoroughly. The defensive cells will do the rest, if protected by skilful care from further attack.

Rest and steady elastic compression are the chief symptomatic remedies for inflammation.

General rest is secured by confinement to bed; local by the application of splints and bandages.

Elastic compression is best accomplished by careful firm bandaging over abundant cotton wool.

Cold, heat, local blood-letting, belladonna, are of secondary importance. Their chief effect is mental.

General.—In acute inflammation the general principles involved are to help the patient to eliminate the circulating toxins. Rest in fresh air, hot baths, saline purgatives, abundant simple drinks and milk diet, are the chief aids.

For certain specific inflammations the injection of a special antitoxin has been attended by success, and in this direction lies still further promise for the future.

Chronic Inflammation.—The ideal treatment for a localised tuberculous lesion is complete excision.

This should always be done when the operation can be accomplished without inflicting serious damage.

If this is not possible, thorough exposure of the tuberculous focus, removal of as much of the tuberculous products as possible, and this followed by cleansing and disinfection, is the best course.

If the diseased tissues can be completely excised, or nearly so, the resulting wound, however large, should be closed without drainage.

If the diseased tissues cannot be removed (with few exceptions), the wound should be left wholly open, and packed from the bottom with iodoform gauze.

This serves three purposes.

1. It allows of repeated applications to visible tuberculous surfaces (pure carbolic acid is the best).

2. It ensures free drainage.

3. Iodoform stimulates the defensive cells.

The great majority of tuberculous joints recover if kept entirely at rest from one to two years.

Even neglected tuberculous joints with sinuses, the result of secondary infection by pyogenic organisms, are likely to recover if treated by rest and careful dressing.

The general treatment of chronic tuberculous inflammation consists in improvement of the resisting power of the patient.

The details are :—

Fresh air night and day.

Two pints of milk and two eggs daily in addition to ordinary food.

A general soft soap inunction every night, lathered off, in a hot bath, the drying to be done with a rough towel.

The local and general treatment of chronic syphilitic inflammation is by anti-syphilitic remedies.

The most generally useful consists of a mixture of potassium iodide grs. xv., and hydrarg. perchlor. $\frac{1}{8}$ th of a gr., dissolved in a wine glassful of water and taken three times a day.

* Remarks on the Causation and Treatment of Oblique Inguinal Hernia,

BY

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THE causes of oblique or indirect hernia fall into two groups, the predisposing and the exciting. The predisposing cause is anatomical and consists in a weakness of the abdominal wall in the situation of the inguinal canal; this may be of congenital or of acquired origin. The immediate exciting cause in all cases is an increase of the intra-abdominal pressure.

The inguinal canal is the passage through which the testicle descended, or in cases of undescended testicle, should descend from the abdomen into the scrotum. After the descent of the testicle the canal should, by its valvular action, prevent the descent of any other viscus and exist solely for the transmission of the structures forming the spermatic cord.

* Specially contributed to "The Antiseptic."

These leave the abdomen, carrying with them a covering of its lining fascia, the transversalis fascia, called in this situation infundibuliform. This fascia forms the innermost of the coverings of the cord and encloses, in addition to the structures making up the cord, fatty connective tissue continuous through the internal abdominal ring with that in the subperitoneal space. The internal abdominal ring is the line of reflection of the transversalis fascia into the inguinal canal around the structures forming the spermatic cord, which have come together here from different parts of the abdomen. The internal abdominal ring opens into the subperitoneal space and the parietal peritoneum should pass over its inner surface without dipping down into it.

This weak spot in the abdominal wall is normally strengthened by the origin of muscles from the deep part of Poupart's ligament. The lower edge of this ligament is U shaped, the external limb of the U is long and continued up into the wide aponeurosis of the external oblique muscle. The concavity of the U forms, in its inner half, the floor of the inguinal canal, and from it arise the internal oblique and transversalis muscles of the abdominal wall; the former is an anterior relation of the cord and both arch over it to end in the conjoint tendon which in the lower fourth of the canal is a posterior relation of the cord.

The external abdominal ring plays no part in the prevention of this variety of hernia.

From this short account of the function and structure of the inguinal canal it is clear that there are two predisposing causes of the hernias which pass through the whole length of the inguinal canal.

1. Muscular.

2. Imperfect closure of the funicular process.

1. As previously mentioned, the internal abdominal ring should be guarded on its outer surface by the origin of the internal oblique muscle from the deep part of Poupart's ligament, and in addition, the fibres of this and the transversalis muscle which end in the conjoint tendon play the part of a sphincter muscle. In this way protusion of any process of peritoneum through the internal abdominal ring should be prevented, whatever the intra abdominal pressure. They may fail to do this in one of two ways:

(a) From abnormality of attachment.

(b) From weakness.

(a) The internal oblique normally arises from the outer two-thirds of Poupart's ligament; failure in extent of attachment will leave the ring unguarded by muscle.

(b) Weakness of this and the transversalis muscle, the result of illness or want of exercise, may play the same part, and it is quite possible that injury to the nerve supplying the lower portion of these muscles may result in the formation of a hernia.

2. The funicular process should be closed at birth. If it is not closed at this time it seems very probable that it may remain patent throughout life, and a "congenital" hernia appear whenever the exciting cause is called into play, even after the individual has reached adult life.

We have no exact knowledge of the tendency or otherwise of the funicular process to close after birth. But the number of cases that come under observa-

tion in which such closure has taken place is very small. It is common to see a case of recurrence of the "cure" of a "congenital" hernia by the use of a truss. In these cases operation reveals no attempt at obliteration of the process, or at most a septum, the result of adhesions of the anterior and posterior walls of the sac caused by truss pressure.

The immediate exciting cause of a hernia is increase of intra-abdominal pressure. This of course owns a multitude of causes. In children, flatulent distension of the intestines plays a great part, in other cases straining at micturition, the result of vesical calculus or phimosis.

With a normal inguinal canal, with the funicular process completely closed and the muscles normally developed and functional, it is difficult to imagine the formation of an oblique inguinal hernia. Some writers for this reason have considered that all inguinal hernias of the oblique type are "congenital" and due to imperfect obliteration of the funicular process.

It is not realised as it should be that the classification of congenital hernias in surgical text books does not include all the cases that are of undoubted congenital origin, that is, that owe their origin to imperfect obliteration of the funicular process, or to abnormality in the origin of the muscles from Poupart's ligament.

The following are the forms usually described:—

1. *The complete congenital*, in which the funicular process is patent and communicates with the tunica vaginalis.

2. *The funicular*, in which the funicular process is patent but does not communi-

cate with the tunica vaginalis, but ends at the upper pole of the testicle.

3. *The infantile*, in which the funicular process communicates with the tunica vaginalis, but is closed in the inguinal canal. The contents of the hernia descend as far as the point of closure and then invaginate this sac into the large tunica vaginalis from behind.

4. *With undescended testicle.*

There is certainly room for two other groups, one in which there is failure in the normal development of muscle, and the other in which there is imperfect obliteration of the funicular process, but of less extent than that called "funicular."

In recent hernias it is possible to distinguish the cases belonging to these two groups from each other by the condition of the lower portions of the internal oblique and transversalis muscles as seen at the operation. But in cases of large or long standing hernias the lower edge of the muscles is retracted and atrophic and no conclusion can be drawn from it.

All cases of inguinal hernia cannot be placed in the congenital class, however large we make it. I have operated on early cases of hernia in adults in which there was a wide bulging of peritoneum under the arching lower border of the muscles, the bulging corresponding to the amount of retraction of these muscles. These cases in adults are usually acquired. Careful investigation of the history in most cases will reveal some cause for the muscular weakness. In recent cases the diagnosis may sometimes be made before operation. When the patient coughs a bulging is seen of the outer part of the inguinal canal corresponding to the arch-

ing lower fibres of the muscles which are seen to be distant from the region of the internal ring.

To recapitulate as briefly as possible the predisposing causes: the majority of cases of oblique inguinal hernia owe their origin to congenital causes. These congenital hernias are the result of the failure of the normal valvular action of the inguinal canal, either from the poor development of the fibres of the internal oblique and transversalis muscles arising from Poupart's ligament, or more commonly from the imperfect obliteration of the funicular process. The minority of the cases, the acquired, owe their origin to failure of the valvular action of the inguinal canal from weakness of the muscles forming it, particularly the internal oblique.

The causes given have an important bearing on the treatment. In cases of congenital hernia in infants, due to non obliteration of the funicular process, it is possible, if means are taken to prevent the entry of gut or omentum into the pre-formed sac, for obliteration to proceed as it should have done before birth. Most of the cases however, even if fitted with a truss, do not go on to closure of the process and cure of the hernia. In infants the intra-abdominal pressure is frequently raised considerably above the normal by violent expiratory efforts in crying, etc., and constant skill and attention on the part of the mother is necessary to see that the truss covers the region of the internal abdominal ring. In children and in adults it is useless to expect that the process will be obliterated even although the sac is kept empty by means of a well-fitting truss. Operation should be performed and the funicular process closed. Theoretically nothing need be

done beyond removing the sac and closing its communication with the abdominal cavity; in most cases the muscles are seen to be guarding the internal abdominal ring. But when the hernia has existed for any length of time or is of large size it will be necessary to suture the muscles to the deep part of Poupart's ligament. Whenever it is seen after the sac has been dealt with that the muscles are not covering the region of the internal ring, they must be sutured to the deep part of Poupart's ligament.

It is not always an easy matter to free the sac from the vas deferens in these cases of congenital hernia in infants. Sometimes the vas is lying in the sac attached to its posterior wall as by a mesentery; the greatest care is necessary to avoid injury to the vas. Ligature of the neck of the sac without freeing it from the cord is not sufficient. The communication with the abdominal cavity must be obliterated. Recently I operated for recurrence after radical cure in a child in whom the sac had been tied without freeing from the cord and obliteration of its opening into the peritoneal cavity. A hernia had descended into the small unobliterated process left, the ligature forming the fundus of the sac. Obliteration of the sac at its peritoneal opening is essential to success.

When the hernia is due to acquired muscular weakness the treatment differs in the old and the young. In young adults when the hernia is confined to the inguinal canal, massage and exercises to strengthen the muscles may be tried before deciding on radical cure; in some cases this leads to cure. But this method is useless when the hernia has passed outside the external ring: operation is necessary if a cure is desired. In males

past middle age in whom the hernia has arisen as the result of muscular weakness the operation of radical cure is as a rule followed by relapse within six months. If the hernia is not controlled by a truss operation should be performed in order that the patient may be fitted with a truss, but a radical cure should never be promised.

With regard to the operation that should be performed for the radical cure of oblique inguinal hernia, Bassini's operation was for a long time a favourite one with English surgeons. Many, myself among the number, have given it up. In Bassini's operation the sac is removed as high as possible and the neck tied, the lower edge of the internal oblique and transversalis muscles is then sutured to the deep part of Poupart's ligament *behind the cord*, the cord being brought out between two sutures opposite the internal abdominal ring. It lies in a new canal between the internal and external oblique muscles.

Upon anatomical grounds and from the after results of my own and the operations of others, I came to the conclusion that this operation was by no means an ideal one.

In the first place, the anatomical conditions of the inguinal canal are not restored, the cord comes out directly from the abdominal cavity to the space between the external and internal oblique muscles, leaving here a weak spot. Recurrence when it occurs is usually through this opening and is extremely difficult to deal with. Bassini's operation involves much disturbance of the spermatic cord, it must be lifted from its bed in order to suture the muscles behind it. This is often followed

by a considerable amount of oozing, and in some cases by orchitis. It also involves tying the neck of the sac, leaving a depression in the parietal peritoneum which will predispose to recurrence.

Early in 1902 I gave up this operation. Since then several English and Continental surgeons have published papers in which they state their objections to Bassini's operation and describe the method they have adopted.

The points of the method I use are as follows:—The sac is obliterated as high as possible in such a way that no depression is left in the parietal peritoneum over the internal ring. The normal condition of the inguinal canal is restored by suturing the muscles to the deep portion of Poupart's ligament in front of the cord.

The usual oblique incision is made over the inguinal canal, commencing about one inch outside the situation of the internal ring. The aponeurosis of the external oblique muscle is then divided for the length of the wound in the skin. In this way the inguinal canal is opened and the origin of the muscles from the ligament exposed beyond the situation of the internal ring. The edge of the internal oblique and transversalis muscles is then freed from the sac and cord, the origin of the cremaster muscle being cut through in doing this. The sac is then dissected from the front of the cord without lifting the latter from its bed; the sac is opened and any contents reduced, the finger passed in and the neck of the sac explored for adherent omentum, which is sometimes found in this situation, particularly when a truss has been worn. If found the omentum should be ligatured and the adhesion cut through. The sac is cut off

and the opening into the peritoneal cavity sutured in such a way as to avoid any depression of peritoneum being formed on its inner aspect. Tying the neck of the sac leaves such a depression, and I would again emphasise that it should never be done. In some cases I suture the cut edges of peritoneum with a continuous suture or three or four Halstead sutures, in other cases Kocher's new method of invaginating the sac is useful. In cases of complete congenital hernia the lower part of the sac is ligatured and left to form the tunica vaginalis. In suturing the peritoneum the muscles are retracted well from the region of the internal ring in order to expose the neck of the sac. Without opening the inguinal canal an exposure of this portion of the sac obliteration of its abdominal opening, is difficult, if not impossible, except by Kocher's method; the weak point in Kocher's method of radical cure is that the canal is not opened to deal with the muscles.

After the peritoneum has been sutured or the sac invaginated, the muscles are sutured to the deep part of Poupart's ligament *in front of* the cord, the external oblique sutured and then the wound in the skin closed without drainage. In this way the normal condition of the inguinal canal is restored.

Difference of opinion exists with regard to the best suture material. An ideal suture should remain in the tissues until they have consolidated and then be absorbed, it should be unirritating and easy to work with. In the first series of cases I used silk. It is by no means an ideal suture, but it gave no trouble and no case of late suppuration around a stitch resulted from its use. In my opinion it is running an unnecessary risk to use silk.

Kangaroo tendon is used and praised by many surgeons, but it is difficult to obtain a sufficient supply of suitable pieces, difficult to effectively sterilise and often leads to late suppuration and consequent weakness of the new inguinal canal. During the past year I have been using catgut prepared to remain in the tissues for 40 days before being absorbed; this I have found in every way satisfactory. At first I used an American chromic gut of this description, lately I have used catgut prepared after Miyake's method. After the usual preliminaries the catgut is hardened in a watery extract of Quebracho, soaked in 4% formalin solution and then boiled in water. It has answered admirably and will remain unabsorbed in the deep tissues at least 40 days.

After operation the patient should rest on his back for several weeks, if possible, to enable the tissues to consolidate. This is not essential, but in my opinion lessens the chance of recurrence. Kocher allows his patients to get up and leave hospital as soon as the wound is healed.

It is too early yet to speak of results of this form of radical cure; the immediate results are, however, most satisfactory.

SOME COMMON SENSE VIEWS ON PLAGUE,*

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(Continued from Page 12, Vol. II., No. 1.)

Treatment and Care of the Sick.

On the first signs of any suspicious symptoms, the patient should take to his bed, and send for a doctor. If he pronounces him to be suffering from plague, place him in a well-ventilated room, with plenty of light and air, remove from it all superfluous furniture, carpets, matting, hangings, &c., and, so far as circumstances permit, procure good nursing. Let the number of doctors and consultants, if required, be limited, otherwise a conflict of opinions bodes ill to the patient. And do not forget that the disease being of short duration and with symptoms of progressively increasing gravity, a multiplicity of doctors can neither check their progress, nor prevent their onset. Absolute rest in bed is essential, as plague kills at the heart—its poison having a special selective action for it. Spare, therefore, all movements to the patient; no sitting up in bed should be allowed, and if the patient gets unmanageable even physical restraint is indicated lest frequent movements exhaust the heart and bring

* Discussion at the Bombay Medical Union on Dr. Turner's Paper on the Serum Treatment of plague; June 1902.

about collapse. In those cases where the means of the patient are limited, adequate isolation impracticable, and proper medical aid or nursing not obtainable, as happens in 90 out of every 100 cases of plague, the best and safest course is removal to the hospital at the earliest possible stage of the disease. Home treatment under great difficulties for two or three days, followed by removal to the hospital, is not only useless, but prejudicial to the patients' best interests. I conceive that it hastens death and the hospitals come in for a great deal of unjust obloquy. I would therefore appeal to you, one and all, individually and collectively, to use your good offices to persuade the poor and those of moderate means to remove their sick to the hospitals, at as early a stage of the disease as practicable, in order to give the patients the best chance. Many a life now ignorantly and almost wantonly sacrificed would be saved thereby. It would take me too long to describe the manifold advantages of hospital treatment for the poor. A visit to one of our plague hospitals with their large, open, and well ventilated wards, clean bedding, regular medical attendance, skilled treatment, adequate nursing, the timely administration of nourishment and medicines and ready help in emergencies must convince any one as to the enormous differences between the conditions prevailing in our public hospitals and the homes of the poor.

As regards what line of treatment to adopt, what drugs to give or withhold, leave that entirely to the doctors. This much however would I say:—Firstly, refrain from dosing the patient with alcohol; and the more so, if nature rebels against its administration by rejecting it

no sooner it is given. Alcohol is not absolutely necessary for the treatment of plague, nor is its use desirable in many cases, on scientific and rational grounds. Secondly, do not resort to drugs like antipyrine or phenacetine to bring down the temperature, followed by quinine to prevent its rising again. And, thirdly, have no belief in germicidal remedies because of plague being a germ disease. It is possible you may be led away by alluring advertisements demonstrating their powers in the laboratory, but pray recollect, that the conditions existing in the laboratory and the human body are entirely different and vary very widely; our system is not like the test-tubes with which these experiments have been made.

I may give you here a concrete instance of germicidal treatment. Sometime ago the medical and lay papers announced that a cure for plague had been discovered at Hong-Kong and that it consisted in the use of large or heroic doses of pure carbolic acid. They administered the drug to the extent of 144 grains per day, *i.e.*, about 15 times the maximum dose prescribed by the British Pharmacopœia, and it was reported that the patients bore it well, that there were no poisonous effects, and that the mortality had been greatly reduced in the European and Japanese patients, and that amongst the Chinese, it had been reduced by nearly 33 *per cent.* or one-third. The acid was administered until all traces of plague germs had been removed from the blood, and it was noted that under its influence they rapidly disappeared. Whatever the nature of the plague those patients suffered from at Hong-Kong, our experience in Bombay lent no support to the fact that patients could recover under any line of treatment,

once the plague germs from their blood could be made to grow. For, during 1901 and 1902, we made a systematic study of the subject and we found that about 43 patients of every 100 that we received in our hospitals had plague germs circulating in their blood on the day of admission, and that almost all died, whatever the nature of the treatment adopted. Of the 617 patients admitted in this condition, only 4 recovered;—two of them were doubtful cases, and in the other two only a very few germs could be found. With experience such as this I was rather sceptical of the value of the treatment. However I essayed to give it a trial. The first thing noticed was that owing to various causes, such as troublesome vomiting, delirium, &c., it was not possible to get all the patients to take the medicine in full doses. Secondly, the Indian patients, with very rare exceptions, could not tolerate the enormous doses used at Hong-Kong, without serious danger, and hence the doses had to be considerably reduced. No influence on the course of the disease could be noticed; even the temperature was not appreciably effected, and only 16 patients recovered out of 71 so treated, which was equivalent to a mortality rate of 77·5 *per cent.*, or practically what has been the average under other lines of treatment. Similar has been our experience with other germicides also, and it is well you should know that although hosts of germicides have been discovered, and demonstrated to be efficacious in the laboratory, not one has hitherto been shown to be capable of curing any germ disease.

It is not wise to interfere with the medical treatment or suggest, or surreptitiously administer alleged specific remedies. In plague also, just as in other dis-

eases, nature is all powerful and a certain proportion of cases will recover whether treated or left to themselves. The proportion is however very small. Suppose for a moment that any much-vaunted specific happened to be used in such cases, what is the result? The alleged cures are loudly trumpeted about, and certified by gentlemen of known respectability who sadly lack the knowledge of medicine and of plague. No one knows the failures, and they are more than the successes, and least, those best entitled to know them. For let me assure you, there is no drug that has any specific effect against plague, and no so-called specific remedy will ever cure more genuine plague cases than what nature herself would, either unaided or with the help of any ordinary medical treatment. I would ask you therefore to look upon all such with suspicion.

Every thoughtful physician knows the limitations of his art, and he has recently been described—not inaptly I think—as for the most part simply a pilot waiting to give a useful turn to the wheel, if any opportunity presents itself. In the case of malignant or advanced plague, the ship is already on the rocks and is foundering fast; water is pouring into the stock-holds, the fires have become quenched, and no efforts of the pilot, however clever or capable, can prevent it from sinking. On the other hand, if he is at the wheel in time, he has many opportunities of proving useful. For instance, he may give a useful turn to the flagging heart in one case, or calm the perturbed nervous storm in another; or else he adjusts some part of our complicated mechanism, inclined to run riot, into harmonious action, or brings to bear his skill to procure that much-needed rest, nature's sweet restorer, sleep.

—gentle sleep—alas! by no means gentle in plague. Nor has his work ended here. Many an unknown shoal, rock or current—not marked on his charts—suddenly spring up in his course and bar his way, taxing his skill, resources and judgment to the utmost. It is indeed no easy task for him to steer his ship into a safe haven, in the midst of such unforeseen and unexpected difficulties. You will thus realise how anxious, how vigilant are the duties of a pilot-physician who has to steer the ship named—plague. Is not then the labourer worthy of his hire?

As I told you above, science has not yet discovered any specific drug against plague; but it has produced a remedy potent for good, if early applied, but yet not within reach of all. Need I say, I allude to the serum for the cure of plague. It so happens that my long and close association with this particular line of treatment, places me to-day in a rather delicate position, and I would fain have passed the subject by, were it not that other and higher considerations impel me to offer a few remarks. I have been called a faddist, a protagonist, an enthusiast, an advocate and also an impartial advocate in this regard. My friends and co-workers have been pleased to accept the last verdict as correct, coming as it does from a source not lightly to be discarded. But I beg leave to contend, that enthusiasm or advocacy in a good cause, provided it be honest and in conscientious belief for a worthy object, is no sin, and if you concede it, then I would willingly plead guilty to the charge. Apart, however, from any personal bearing, let us see how this subject affects the public weal. You know the yearly havoc plague makes in all India, and are pretty familiar with its ravages in Bombay. If you are assured,

as I can conscientiously and honestly assure you, that were a good serum available in sufficiently large quantities, and applied extensively to plague patients as early in the course of the disease as practicable, many more lives than hitherto could be saved, would you not consider it your duty as public citizens to demand it from the State and appeal to the powers that be to place it within your reach? The Bombay Sanitary Association may well make a beginning in this regard and request Government to devote, if not the same amount of money and interest, at any rate a modicum for it, as it has done for the prophylactic inoculation. For, I consider that it is as much incumbent upon the State to provide a curative remedy as a protective one, and if it be so situated, as it is at present in India, that the people would not take to the latter, then it is doubly incumbent. Let, therefore, a good and reliable serum be placed within the reach of all, and if the people will not go to it, let it be taken to their doors. Just see what is being done in other civilized countries in this regard. In New York and some other American cities, the State provides an antitoxic serum for diphtheria, and it is so lowly priced, that it is placed within the reach of the poorest. Should, however, a visiting doctor certify that a particular patient is too poor to pay for it it is issued free, and the doctor injects it, with or without a small fee. Now contrast this with our helpless and humiliating position in India! Whilst other countries whose interest in plague is but infinitesimal compared to that of India, have conducted researches, and in at least two countries a reliable serum against plague has been made and used, after seven years of plague, we must confess to our shame,

that we have no reliable serum at hand. One that we had, extensively tested and capable of improvement, was abandoned—I should say most prematurely abandoned—in a fit of parsimony, and at a most important stage in its development. You will have no hesitation therefore in endorsing the verdict of the *Times of India*, when it says, that “the abandonment in India of the Lustig experiments after so much preparatory work was done, and before conclusive results had been reached, cannot therefore be regarded as other than a loss to medical science.”

We are now living on the vicarious charity of investigators in France, Italy and Brazil for such small presents as they may be pleased to send us, and that for experimental purposes only. There exists, however, one reliable serum, manufactured by the Pasteur Institute at Paris, but it is limited in amount and prohibitive in cost for general use. Obtainable as it is in Bombay, the quantity required for one patient would cost from Rs. 50 to Rs. 100—which is practically beyond the reach of any but the wealthy. Is this as it should be? It is for you to judge. Firmly convinced as I am of the utility of the serum treatment, I would here repeat what I said elsewhere about two years ago:—

“Should those who are conversant with the application of the serum in plague be entrusted with 100 patients on the first day of illness—provided the cases are not septicæmic—they would be able to bring round at least 60, if not more, by the use either of Lustig's or Yersin-Roux's Serum of the strength that has been used in Bombay during the last two epidemics.”

Need I add that I still adhere to the above statement, and further experience has convinced me of its truth?

[Dr. Choksy concluded with a powerful appeal for more State aid to find out a curative treatment for plague.]

absorbed under treatment, and he was discharged from hospital apparently cured.

For the fourth and the last time he was admitted again for ‘Ascites’ on 2—11—04, on this occasion complicated with marked febrile phenomena. The fever was continuous and irregular with slight morning remissions and evening exacerbations, and the temperature mostly varied between 100 and 101. Liver diminished in size and there was slight pain over the hepatic region. Spleen enlarged slightly. Pulse irregular and occasionally intermitted every 2 or 3 beats. Heart dilated and action feeble. No murmur heard. Urine scanty and very high colored and gradually diminished in quantity from oz. 53 on 7—11—04 to oz. 5 on 26—11—04, and never contained albumen. General œdema present and markedly in the lower extremities; abdomen on the average about half-filled with fluid. Slight dry cough but no actual involvement of lungs. Gastric disturbances were marked throughout with indifferent appetite, impaired digestion and assimilation, occasional flatulence, abdominal tenderness, chiefly referred to the umbilicus, and spontaneous diarrhoea, with about 6 or 7 daily motions on the average. Malena first made its appearance on 11—11—04 and continued in varying quantities, and on the 26th. *idem* a large number of internal congested piles were discovered studded around the anus, which evidently had formed during the course of illness, and evacuations latterly contained large quantities of blood. Vision, which was slightly impaired already in both eyes, became more so during the course of the illness, and ophthalmoscopic examination of the right eye (by Major C. L. Williams, I. M. S.) revealed a very pallid optic disc with attenuated retinal

Cases and Comments.

A case of “Acute Multilobular Fatty Cirrhosis of the Liver,”

REPORTED BY

V. A. GNANADHIKAM PILLAY,
*Hospital Assistant, Central Jail,
Coimbatore.*

B. P., a very unhealthy looking subject of 47 years of age, with a previous history of malarial fever in his native place of Bisamkatak in the Jeypore Agencies, was admitted into the Coimbatore Jail by transfer from the Vizagapatam Jail on 3—5—03. Since admission he was treated as an inpatient first for ‘Dilatation of Heart, right side,’ with an intermittent action of heart, embarrassed circulation, and œdema of feet, from 27—10—03 to 30—11—03, a second time for bad ‘Dysentery’ complicated with intermittent fever, from 16—7—04 to 5—8—04, and a third time for ‘Ascites’ with dilatation of heart, from 30—8—04 to 23—9—04. On this third occasion it was noted that his liver was slightly enlarged, with pain over the hepatic region, and that the spleen was also enlarged. Febrile disturbances were almost *nil*, temperature going up to only 99 on three evenings on the whole, *viz.*, on 31—8—04, 7—9—04, and 8—9—04. The lower extremities were œdematous and the abdomen generally about half-filled with fluid, which, however, gradually got

vessels. Weakness progressed until on 29-11-04 exhaustion became very pronounced and the patient died the same day from cardiac failure.

Chief morbid appearances. (From the *Post-Mortem Register*.)

Lungs and Pleura: A few petechiæ hæmorrhages on the pleuræ. Lungs small and pale with a little œdema on section. *Heart and Pericardium:* Heart weighed oz. 11. A small milk patch on each aspect of right ventricle. Both auricles thin. Right ventricle empty and flabby; walls thin and pale; tricuspid valves markedly bile-stained. Left ventricle: walls pale; mitral valves competent, but contained a few recent hard vegetations. Slight degeneration of aorta above the valves. Blood both in heart and throughout body pale and watery fluid without clots anywhere. *Abdomen:* contained a large quantity of clear bile-stained ascitic fluid. (No peritonitis.) *Liver:* Small, rather hobnailed and much retracted under the ribs. Weighed lb. 1-15 oz. Surface roughened, brick red in color with one small subcapsular hæmorrhage. On section pale, deeply bile-stained, pale orange in color, firm and granular. *Inferior Vena Cava:* contained thin fluid blood. *Spleen:* slightly adherent to abdominal parietes, medium-sized, pale on surface, firm and very dark on section. *Kidneys:* small and pale. On section extremely pale, very fatty and in the left nearly all distinction between cortex and pyramids lost.

I reproduce also from the *Post-Mortem Register* an extract of a note by Major. C. L. Williams, I. M. S.,

"This case was particularly interesting as running a clinical course of 27 days only

with continuous fever throughout, and the condition appears to be one of an acute cirrhotic process. The capsule of the liver was reddened slightly as in an acute inflammation, and under the microscope rough sections shew the liver cells converted almost entirely into fat, with an increase of recent connective tissue. It was definitely, however, not a case of acute yellow atrophy but a rapid fatty cirrhosis with fever."

Remarks. As regards the ætiology of the disease in this man's case, in the light of modern pathological knowledge, it is quite possible that the actual exciting cause may have been an infective (?) irritant, probably from the intestinal tract with the chronic malaria and also the heart lesion as predisposing factors. Whether alcohol could have been in any way responsible is not accurately ascertainable, and although men from the Vizag Agency tracts are reputed to be addicted to toddy or arrack, the fact that the man was free from alcohol ingestion, at any rate for about 2 years since incarceration in jail, and that no abnormality about the liver was noticed until he was admitted for 'Ascites' on 30-8-04, seems to throw a certain amount of doubt. It appears also likely that the process of fibrous overgrowth and induration in the liver substance first started about this time, thus probably paving the way for the subsequent fatty cirrhosis.

Among the symptoms, the presence of continuous irregular fever without any semblance to malaria and not reacting to the exhibition of quinine, is noteworthy, as it is said that fever in cirrhosis of liver is not commonly met with. It may be also observed that the increased dimness of vision during the course of the illness

seems evidently to have resulted from defective nutrition and circulation.

(This case was under the care of Major C. L. Williams, M.D., M.R.C.S., D.P.H., I.M.S., in the Coimbatore Central Jail Hospital.)

Four Cases of Soft Fibrous (?) Polypi of the Nose.

Case No. 1.—Mr. T. G. Menon, a native of Cochin State, consulted me on the 23rd January 1904 for obstruction in the right nostril and repeated attacks of epistaxis from the same. He has had occasional bleeding from the nose since 1898. On examination I found the right nostril almost entirely blocked by a soft red mass. On closing the left nostril and blowing his nose the patient was able to bring out the growth, which projected out of the right nostril. As the growth completely filled the right nasal cavity I was unable to find its point of attachment without removing it, so after a free application of solution of adrenalin I removed the growth with a cold wire snare. Very profuse hæmorrhage followed, which was only controlled by the free application of adrenalin solution followed by the use of Cooper Rose's epistaxis plug. A couple of days after the removal of the bulk of the tumour I made a careful examination of the nasal cavity and found that the tumour was attached to the septum nasi by a stout pedicle. This was removed by the galvano cautery snare, which was also followed by very severe bleeding. The point of attachment was afterwards cauterized and the patient sent home with instructions to inform me of any recurrence of the

symptoms. I have not had any such information till now.

Case No. 2.—K. M., a law student, consulted me on 9th July 1904, for repeated attacks of epistaxis and obstruction to breathing, now in one nostril, and now in the other. On examination I discovered a polypus hanging down free in the naso-pharynx, with its attachment on the right middle turbinate body. I removed the growth with the cold wire snare. In appearance the growth resembled the one I have described in Case 1 above, and the hæmorrhage that followed was equally severe. The attachment to the middle turbinate bone was cauterized and till now there has been no recurrence of the growth.

Case No. 3.—R. V., a young B.A. student from Trivandrum, consulted me on 15th December last. His symptoms were also epistaxis and obstruction of one nostril. He could also bring out the red soft growth by blowing his nose. In this case there was also a history of the growth, or rather a portion of it, having been removed once before. I removed the growth as in the above two cases with the cold wire snare and had the same profuse hæmorrhage. The tumour in this case was found attached to the inferior turbinate body.

Case No. 4.—R., a young Brahmin lady, 15 years old, from Ernakullam, consulted me on 31st December last for epistaxis, nasal obstruction and a red tumour which she was able to bring out of her nostril by blowing. This tumour had also been partially removed at Ernakullam some months ago. The tumour was removed and was found to be growing from the floor of the nose in the inferior turbinate region. In this

case also there was considerable hæmorrhage. I also saw another similar case on the 1st December last. It was a Syrian Christian priest from the Cochin State who consulted me. The usual history of epistaxis and obstruction of the nose was present, as also was the tumour, which could be brought out at one nostril by blowing the nose. In this case the patient promised to come some other day to have the growth removed, but did not turn up. I am therefore unable to give the point of attachment of the tumour in this case.

REMARKS.—I publish the details of the above cases because I find that they present characters different from the ordinary mucous polypi one commonly meets with in the nose and naso-pharynx. During the last 8 years I have seen and treated in my private practice 53 cases of mucous polypi of the nose or nasopharynx. Their smooth and rounded outline, their translucent bluish-grey colour and their general attachment to the middle turbinate body are all quite characteristic and unmistakable. They are usually multiple and bilateral. But the cases I have reported above differ from the mucous polypi in most of these respects. These growths in the *first* place were all single. *Secondly* they were all unilateral. *Thirdly* they were all of a pink or red colour. *Fourthly* they had a papillary appearance on their surface. *Fifthly* the slightest touch produced marked hæmorrhage in all these cases, and their removal was followed by very profuse hæmorrhage, far more so than in any case of mucous polypus I have seen, and which was only controlled with great difficulty by repeated applications of adrenalin plugs. And *sixthly* and lastly, in 3 out of the 4 cases in which I removed the growths they were found attached to the inferior

turbinate body, the floor of the nose and the septum nasi, positions where one very rarely finds the attachment of mucous polypi. It is now generally recognized that mucous polypi as a rule have their attachment to the middle turbinate body. Therefore the attachment of these polypi to the inferior turbinate body, the septum nasi and the floor of the nose is quite a remarkable fact. Another very interesting feature common to all these cases was the absence of any purulent discharge from the nose, which sooner or later almost always occurs in cases of mucous polypi. The only two symptoms which were noticeable in these cases were frequent attacks of epistaxis and obstruction of the nose on the side on which the polypus was present. As to the nature of these growths I do not wish to give any definite opinion now. I have preserved all the growths removed in the above four cases and shall publish the results of their microscopic examination at some future date. For the present I suspect that they are simple soft fibroma. Whether I am right in my conjecture or not I must leave the microscope to decide. There is one fact in connection with all the 5 cases I have described above, which after all may be a mere coincidence, and may not be of any significance at all, and that is that all the 5 cases came from the West Coast. My other 53 cases of mucous polypi do not show any such restricted geographical distribution, but are scattered all over the Madras Presidency.

I want to add one word more about the method of removing these growths. In my first case I used the cold wire snare, following my usual practice in cases of mucous polypi of the nose. As the resulting hæmorrhage was rather alarming I used the galvano-cautery snare to

remove the root of the growth in that same case. To my great surprise I found that the use of the galvano-cautery snare made not the slightest difference to the hæmorrhage that followed. As the galvano-cautery snare unnecessarily frightens the patient and as I did not find any appreciable benefit from its use in my first case, I used the cold wire snare in all my subsequent cases and trusted to adrenalin and the epistaxis plug to control the bleeding. These growths as they project out of the nose look exceedingly tempting to be pulled out with a pair of polypus forceps or snipped off with a pair of scissors. I should like to warn my fellow medical men against such casual methods of dealing with these kind of growths. The hæmorrhage that follows is really alarming at times, and it will be wiser not to touch these growths until one has made all the necessary precautions for dealing with a severe case of hæmorrhage.

T. M. N.

EDITORIAL NOTICE.

The Editor will always be pleased to receive communications on matters of importance to the profession for publication in the 'Antiseptic.'

Articles, letters, and all communications intended for publication, and books for review, should be addressed to the Editor, Lady Napier Villa, Egmore.

All communications relating to advertisements, subscriptions, and other business matters to be addressed to the Manager, 323, Thumbu Chetty Street, B. T., Madras.

THE ANTISEPTIC.

FEBRUARY 1905.

THE TREATMENT OF ENTERIC FEVER.

THE above is the subject of the Bradshaw Lecture delivered before the Royal College of Physicians of London, by Dr. Foord Caiger, on 15th November last, which is fully reported in the *Lancet* of 26th November 1904. At the conclusion of the lecture Dr. Caiger expressed his regret "at having been able to adduce so little that is new and still less that is original." After a careful perusal of the lecture we felt that there was no necessity for such an apology. For although it is true that the learned lecturer did not give out anything that was new or original, for the simple reason that at the present time there is very little that is new with regard to the treatment of enteric fever, yet, amid the pursuit of novelties, a little pause to take stock of what has already been attained, and to measure the amount of work to be done in the future, is not altogether a profitless proceeding. And when the stock-taking is a masterly, systematic, and lucid analysis of all the different methods of treatment that have been used and are being used in combating that dreadful disease, enteric fever, as has been presented by Dr. Caiger, the

process becomes very interesting and instructive.

Dr. Caiger deals with the treatment of enteric fever under three broad classes, namely:—

- (1) The specific
- (2) The antipyretic
- (3) The antiseptic.

First as to specific treatment.—The serum treatment of typhoid fever by means of an antitoxic serum prepared on the same lines as those of diphtheria has not been a success. "In the case of typhoid fever," says Dr. Caiger, "the serum of a horse after repeated inoculations with the virus, though possessed of antibacterial properties, is found to be practically devoid of any antitoxic value, and consequently useless as a curative serum." But the treatment by a 'vaccine' of the attenuated cultures of the typhoid bacillus, which was initiated by Dr. Wright of Netley, is said to have been of some benefit.

For this 'vaccine' it is claimed that among 15,384 British soldiers in India who were inoculated the incidence of enteric fever was only 0·8 per cent. as against 1·5 per cent. among the uninoculated; and amongst 2,260 attacks of enteric fever the mortality among the inoculated was 15·6 per cent. as against 26·6 per cent. among the uninoculated. No doubt these figures indicate a substantial benefit conferred by the typhoid

vaccine. Further investigations are now being undertaken, we are told, with the object of effecting an improvement in the vaccine. For the present, we must, however, look to other measures for the successful treatment of enteric fever. Coming next to the antipyretic treatment of enteric fever, Dr. Caiger mentions a number of antipyretic drugs such as quinine, antipyrine, phenacetine, salicylates of sodium and quinine, resorcin, kairin, thallin, &c., only to brush them aside with the remark, "for my part I do not favour the use of antipyretic drugs." The pyrexia of typhoid fever when within safe limits does not call for any special antipyretic treatment at all, for such pyrexia Dr. Caiger believes, and rightly believes, to be a natural element of defence against bacterial invasion, and that it would be unsound practice to check it. And in case of hyperpyrexia, which undoubtedly calls for prompt measures to check it, the learned lecturer prefers to do it by the application of cold, preferably by means of the cold bath.

Detailed descriptions are given of the various methods of the application of cold in the treatment of enteric fever, by means of "the cold bath," "the graduated bath," "the continuous tepid bath," "the ice cradle," "the ice poultice," "the wet pack," and "the cold sponging." For a description of these as well as for statistics in support of the great efficacy of this

method of treatment we refer our readers to Dr. Caiger's lecture published in the *Lancet*. For our part we quite admit the usefulness of the treatment in cases of hyperpyrexia, but we cannot accept it as a routine treatment in all cases of enteric fever as advocated by some enthusiastic supporters of this treatment on the continent of Europe. Further we would point out the great difficulty of carrying out the cold bath treatment in private practice. So far as this Presidency of Madras is concerned we doubt whether many patients would willingly undergo the treatment even if strongly recommended by the medical attendant. The prejudice against the use of ice, cold water, or anything cold by a patient who is suffering from any kind of fever whatever, is so strong that in a large majority of cases where medical men insist on the cold bath treatment there is a greater likelihood of a change of medical attendant than of the treatment being followed as prescribed by the doctor. The most that we are likely to accomplish in this direction, here in Madras, is the application of cold sponging or even the wet pack. Beyond that we are not likely to advance, at all events, for some time to come. And we are disposed to believe, that that is sufficient for ordinary purposes. The number of cases where hyperpyrexia in typhoid fever cannot be checked by the judicious use of the wet pack or cold sponging coupled

with the internal administration of quinine must be very small. We quite agree with Dr. Caiger in his condemnation of antipyretic drugs like antipyrine, antifebrine, phenacetine and others. We must confess that we are not prejudiced in favor of these drugs and make it a rule to avoid their use as far as possible.

The third and last heading under which the treatment of enteric fever is discussed is "the antiseptic treatment." The old idea was to destroy the typhoid bacilli by the internal administration of antiseptic drugs. Every one is now convinced of the futility of such attempts. But, says Dr. Caiger, "without claiming for a moment that antiseptic drugs are competent to exert a direct germicidal effect on organisms present in the intestine, blood, or tissues, it is not unreasonable to expect that even when given in relatively small and harmless doses they might be capable of exerting some restricting influence on the multiplication of bacteria in the mucus membrane and contents of the bowel, whether specific or otherwise." Dr. Caiger then goes on to enumerate a number of drugs used for their antiseptic properties in the treatment of enteric fever. The list is a fairly large one and comprises the following well known antiseptics:—Perchloride and biniodide of mercury, sulphate of quinine, chlorine, sulphurous acid, carbolic acid, boric acid, salicylic acid, salicylates of bismuth, sodium, and qui-

nine, beta naphthol, salol, thymol, eucalyptol, turpentine, terebene, camphor, chloroform water, are among the chief drugs which have done duty in the antiseptic treatment of enteric fever. From among this large list Dr. Caiger selects some for special mention. 20 or 30 minims of sulphurous acid in an ounce of chloroform water with 15 minims of the syrup of lemons administered every two or three hours is strongly recommended for checking the fermentative changes in the bowels and consequently preventing diarrhoea and meteorism. Oil of turpentine is another remedy which is specially mentioned, but care must be taken to ascertain the absence of albuminuria or vesical catarrh before this drug is administered. Yet another combination that is highly mentioned is that of quinine and nascent chlorine, and the method of preparing the mixture is thus described: "40 minims of strong hydrochloric acid are poured on to 30 grains of powdered chlorate of potash in a 12-ounce bottle, which is filled up gradually with water, the mixture being frequently shaken as the water is being added, so as to absorb the gas as it is evolved. To the solution when made 24 grains of the sulphate of quinine are added and of this mixture an ounce is given every two or three hours."

But the drug that Dr. Caiger recommends in the treatment of cases of enteric fever is the essential oil of cinnamon.

"To obtain the full effect of cinnamon," says Dr. Caiger, "a dose of two and a half to five minims of the essential oil should be given every two hours from the time the case comes under treatment until the temperature has fallen to the normal." He also recommends the addition of 1 gr. of sulphate of quinine to each dose of the oil of cinnamon in special cases. Dr. Caiger gives long and detailed accounts of his experience of the use of this drug as well as the experimental results he obtained with it, and ends by strongly recommending its use in the treatment of cases of enteric fever. It will be interesting to observe the results from the use of this drug, and before long we hope to hear from some of our readers their experience of the use of this drug in the treatment of enteric fever.

Into the details of Dr. Caiger's lucid exposition of the "expectant" treatment of enteric fever and of the several means of meeting unfavourable symptoms such as toxemia, diarrhoea, cardiac failure, perforation of the intestine, sleeplessness, meteorism, etc., we will not enter here. Dr. Caiger's method of treating these cases does not differ from the generally recognized and well known lines upon which they are usually treated. It is interesting to observe that, like the wise physician that he is, Dr. Caiger recommends early operations in cases of intestinal perforation except when the patient is in a moribund condition.

The lecture on the whole is interesting and well worth careful study.

CORRESPONDENCE.

Methylene Blue in Hysteria.

To
THE EDITOR,
"THE ANTISEPTIC,"
MADRAS.

SIR,

In the January issue of "The Antiseptic" Mr. U. Rama Rao reports a case which he believes goes to prove the therapeutical value of methylene blue in hysteria. As the case is not incidentally quoted as one of simple clinical importance but is avowedly presented to the readers as being of considerable clinical value, tending to establish a therapeutical finality, I think it should possess indubitable features leading to an indisputable diagnosis. The history of the case can be summed up as follows:—The patient, a young girl belonging to good society, was treated first for neuralgia without success. The case passed hands and was treated for malaria with quinine with marked improvement at the beginning. On pushing on the quinine the symptoms became aggravated and the patient was again entrusted in the hands of the first medical attendant. Two days the patient was without treatment or, following the thread of the history, without quinine, and the patient became worse. By a mere accident the mother of the patient was found to have been suffering from hysteria in her childhood. Considering the complicated nature of the case and the invul-

nerability it presented to the action of quinine Mr. Rama Rao rightly thought it could be a case of hysteria and treated it with methylene blue with success.

Before arriving at similar conclusions I beg to suggest a few elucidative facts both as regards malaria and methylene blue, to enable my colleagues to be in touch with them in the course of their observations.

Every one who has studied malaria carefully will bear testimony as to the multifarious ways in which it shows itself on its victim. From the sudden and horrid symptoms allied to a malignant case of cholera to one of passing malaise we have every grade of indisposition depicted before us one time or other. Even as far as the action of quinine is considered we cannot be certain in all cases as to its uniformity. In some cases quinine acts satisfactorily at the commencement, and later on, besides proving futile, aggravates the symptoms to the disgust of both the patient and the doctor. The aggravated symptoms can be traced to two main causes. The first of them physical in nature, either acquired by the patient herself by a gradual dislike to quinine, or by the ideas infused into her by a quack *vythian* with a view to underestimate the qualifications of the qualified practitioner, or with a view to neglect the logical use of quinine to introduce his own nostrum.

Idiosyncrasy.—In the above cases governed prejudiced minds and notions quinine acts very indifferently, and if insisted on leads to numerous perplexing symptoms. There is then the second cause, idiosyncrasy, vertigo, tinnitus aurum, temporary or permanent, quinine amblyopia, obstinate vomiting, enuresis, nervous tremors, insomnia and hallucinations accompanied even by apparent:

collapse often follows the smallest dose of quinine.

In several such cases the administration of quinine with large doses of any one of the three bromides, according to the state of the patient, brings on satisfactory results. There are, however, some who would not tolerate quinine in any form. Are we to be perplexed and look foolish? No, we have in methylene blue our next best support.

Before we enter, however, into the subject of its efficacy in malaria we shall run over a few of its other known features. Loe-menthal in 1895 after elaborate observations proved it to be a sure diuretic. It had been for long repeatedly proved, as pointed out by the Editor, to be a reliable nervine sedative. In America it has its advocates in insanity, to produce sleep. It had also been proved to be a powerful microbicide and used in some parts of Europe in purulent otitis. Finally, Professor Celli says not only we have in methylene blue an anti-malarial drug only next to quinine in its promptness of action, but also one with greater practical immunising power. It could also be said in its favour that hardly any untoward symptoms have been noticed to follow its use. In conclusion, could it not be safely said that in cases intolerant to quinine we have in methylene blue a reliable remedy, especially when we take into consideration, besides the antimalarial properties, its sedative, diuretic and microbicidal qualities? Could it not be also said from the above observations that the case in question being intolerant to quinine yielded as an appropriate case to the action of methylene blue.

JAMES HARRIS,
L. M. & S.

Our Contemporaries. MEDICINE.

Treatment of Typhoid Fever,

BY
ROBERT M. STERRETT, M.D.,
NEW YORK.

To speak of the treatment of so complicated a disease as that represented by typhoid fever, in any concise, specific way, is scarcely proper; and to present a definite, comprehensive line of therapy in a few words is not possible.

At the same time, as our knowledge of the etiology and pathology of disease is perfected, our comprehension and scientific application of remedial measures is more definite and precise, we can successfully cope with heretofore exceedingly difficult problems in medicine to the great saving of life and to the honor and satisfaction of the physician.

In mapping out a line of treatment for typhoid fever with all its symptoms, its stages of onset, progress and decline, its complications and sequelæ, it is of the greatest importance that we comprehend early in the campaign the causes, locale, and mode of development of the infection.

That this disease is always associated with the propagation of the typhoid bacillus, and that the small intestine is the place where the bacillary development occurs, is agreed by all physicians worthy the name.

That there are other factors in the full development of typhoid fever than the bacilli is shown from the fact that under certain conditions unfavourable to the bacilli, but unfavourable to the host, the former are disposed of by the natural physiological processes resident in the normal healthy individual, and the disease does not become manifest.

If, on the other hand, the invasion of the microbic army is of such force and numbers,

and the condition of the host such that the natural powers are enfeebled, the disease processes are set up which, unless interfered with, pursue the usual cycles of typhoid fever, of greater or less severity.

It is the province of the physician to "interfere" with these disease processes whenever it is possible, otherwise a good nurse is all a patient suffering with typhoid or any other disease requires to go through the ordeal—and, unfortunately, this is what some patients get, plus the regular visits of the doctor who "looks in" every day to see how the sick man is progressing.

The way some of our dogmas do possess us is amazing. When we once get the idea that a person infected with a colony of bacteria *must* pass through all the stages of disease resulting from the birth, growth and death of any number of these bacteria, we don't care, some of us, to interfere, but stand by and note the *laws established* by the enemy who are sworn to conquer, as they affect the charges we have undertaken to defend. And, too, because we would rather *wait* until we see the enemy in our backyard before we decide whether he is really a foe or a friend; in other words, until we can be sure of our diagnosis—until the thing has gone so far we are sure of it. Then, if the patient dies, we *know* he died of typhoid fever; if he gets well, we are *sure* he got well of typhoid fever, and we're very glad and proud of, what? Our diagnosis! How about doing something to reduce the force and numbers of bacilli in the very beginning—when we, from experience and observation, realize the chances are that the invasion is in its incipiency, and there is yet an opportunity to do something to check it?

Here is where we can sum up—concentrate. We know that the principal lesions are in the intestinal tract; that the bacilli swarm there; that they increase the power

of putrefactive bacilli there also, and which in turn reciprocate; that if we can even render the intestines less *fit* for bacillary propagation, we can do some good, and, striking at the "main issue of the campaign," we can reduce the total of damage likely to occur, and prevent complications and sequelæ.

Intestinal antisepsis is the keynote to the situation. The sulphocarbolates are, in my opinion and practice, the safest, most efficient and reliable, when used boldly and in sufficient dosage to render the stools inodorous—no matter what amount may be required in any given case.

If there is little diarrhoea, the sulphocarbolates of sodium are indicated; if the discharges are excessive, the zinc salt is used; if there has been much emaciation or a cachexia, the sulphocarbolate of lime is of great service. That these salts do render the bowels decidedly antiseptic is without a doubt, as evidenced by the reduction of temperature; the changes in the character and the frequency of the dejecta; and the general shortening of the time of the disease, when they are used early in the attack.

The various symptoms, headache, delirium, etc., are greatly relieved when the intestinal tract is cleaned out and kept clean by the administration of calomel and mild salines early in the treatment, and these followed by the free use of the sulphocarbolates.

The dose is anywhere from five to ten grains of either of the salts, or a tablet of the three combined—five grains daily until the desired results are obtained. In children the dose may be from one to three grains and given every two to four hours, until the bowels become aseptic, the tympanites disappear, and there is general improvement manifest.

This line of treatment brings good results; all theories of the impracticability of render-

ing the *prima via aseptica* to the contrary notwithstanding. It is safe—if the sulphocarbolates are pure—and to any members of the cult who would prefer to see their typhoid fever cases get well, even if they do not show all the classic evidences of the disease as laid down in the books, I would say—unless you know some better way, try this. If you do, let us have it, by all means.

[(*Texas Medical Journal*.) *California Medical Journal*.]

Renal Retinitis in the Young,

BY

E. NETTLESHIP, F.R.C.S.

Mr. E. Nettleship has collected 80 cases of interstitial nephritis in patients not above the age of 21 years, including 9 under his own care. In addition there were 3 cases in which the nephritis was associated with calculus in the kidney or bladder. Sixty-two cases were known to be fatal, and in 60 of these a necropsy was made. For purposes of comparison he examined the notes of 149 cases diagnosed as parenchymatous nephritis at the Hospital for Sick Children, Great Ormond street. Out of the 80 cases of interstitial nephritis retinitis or multiple retinal hæmorrhage was observed in 31 and it also occurred in 2 out of the 3 cases associated with calculus. In 10 the eyes were examined and found to be normal. In the remaining cases no ophthalmological examination appears to have been made. Out of the 149 cases of parenchymatous nephritis definite retinitis was found in 7, and doubtful appearances, such as slight haziness of the discs, in several others. In about 43 cases the eyes were examined and found to be normal, and in the remaining cases no examination appears to have been made. Of the 40 cases of retinitis in both groups both retinæ were detached in 3 cases, abundant hæmorrhage was a feature in 2 or 3 and exudation and swelling were excessive in 3 or 4 others.

The earliest age at which renal retinitis has been recorded is 5 years (in a girl). In the 40 cases (interstitial and parenchymatous) the age of 2 patients was 7; of 3, 8; of 2, 9; of 3, 10; of 2, 11; and of 5, 12 years. Of the 40 patients suffering from retinitis, 24 died at a known period after the retinitis was discovered. The interval was $3\frac{1}{2}$ years in one case, between 12 and 15 months in 4 cases, between 4 and 7 months in 3 cases, and less than 4 months in 16 cases. Hence the prognosis of chronic renal disease with retinal changes in the young is not less grave, perhaps more grave, than in adults. Chronic renal disease below the age of 21 was found to be commoner in females than males, the reverse of the rule in adults. The females amounted to 64 and the males to 36 per cent. of the total. In interstitial nephritis the preponderance of females was still greater (70 per cent.). In parenchymatous nephritis, on the contrary, the males were slightly in excess of the females. But in the parenchymatous nephritis of adults the excess is much greater (according to Dickinson more than twice as many cases occur in males than females).

As to the causation of interstitial nephritis in the young, out of 45 cases in which the previous history was complete, scarlet fever occurred before the onset of the renal symptoms in 16, the interval never being less than 2 years, and often much more. In at least 6 cases scarlet fever was definitely denied. Measles, either alone or in conjunction with chicken-pox, seemed to be the most probable cause in 8 cases. In 2 cases there was a history of chronic infantile eczema; in 2 of severe infantile diarrhoea; and in 1 or 2 of rickets with subsequent arrest of growth and failure of intelligence. In 3 there was a history of stone in the kidney and bladder. In 3 cases alcohol presumably was the cause, 2 of the patients being lads who drank heavily and one a barmaid who owned to taking "neat" brandy before breakfast. Heredi-

tary syphilis was proved in 6 cases and was highly probable in several others. It was also certainly the cause in 4 of the parenchymatous cases. Thus the specific fevers accounted for about $\frac{3}{4}$ of the interstitial cases. They were evidently the cause of $\frac{1}{3}$ of the parenchymatous cases, but this proportion was probably short of the true one.—*Royal London Ophthalmic Hospital Reports*, Vol. XVI., part. 1.

Quinquaud's Sign of Alcoholism,

BY

MARIDORT.

The "sign of Quinquaud" is important and reliable in the diagnosis of alcoholism. To demonstrate it the patient is asked to separate and extend the fingers of one hand and then to press them firmly perpendicularly on the palm of the observer. For the first few seconds nothing may be noticed, but soon slight shocks are produced as if the bones of each finger repelled each other and struck the observer's palm. The writer found this sign present in all cases of alcoholism tested by him.

Aubry (*Archives de Neurologie*, June, 1901), has further studied the sign in asylum practice. He finds it varies in different individuals from a rubbing sensation to one resembling crepitation. It is more marked in men than in women. He recommends that moderate pressure should be exercised as the sensation is marked by fatigue. The patients examined were all inmates of an asylum and not recently exposed to alcohol. In 52 epileptic women 1 only gave a positive reaction, and she was found to have had access to wine while in the asylum. In 20 of non-alcoholic general paralytics the sign was absent, but in 9 patients formerly addicted to alcohol it was twice noted. Of 42 patients suffering from mental troubles, the result of alcoholism, who had resided in the asylum at least 2½ years and no

longer presented symptoms of alcoholism, 3 gave the sign and were discovered later to have had access to drink. Of 19 cases admitted within 2 years 10 gave a positive result; 6 showed other signs of alcoholism; while the 3 others suffered from mental symptoms only. Of the 9 negative cases, 3 no longer exhibited tremor, but in 2 this symptom was well marked. Aubry states that only in persons addicted to alcohol is the sign found with frequency and regularity, that it is an early symptom passing off rapidly when alcohol is withheld, but its presence should be regarded as indicating existing drinking habits.

Furbringer (*Semaine Med. Allemande*, No. 27, 1904) has also studied this condition in 500 cases. Deducting 32, in which the result was doubtful; in 142 it was absent or very slight; in 241 it was present in a moderate degree; and in 85 it was well marked. Of these 468 patients 60 might be regarded as abstainers, 275 as temperate, 85 as moderate drinkers, and 48 as drunkards. He concludes that when the sign is absent the patient is rarely addicted to alcohol, and when it is but slightly marked the diagnosis is uncertain, and that its presence in a pronounced form generally indicates alcoholism. He points out that the crepitation is perceptible by the stethoscope if the patient presses his fingers on a soft surface. The mechanism by which the crepitation is produced is not understood.—*La Medecine Moderne*, Aug. 24, p. 267.

The Treatment of Pyo-Pneumothorax,

BY

SAMUEL WEST, M.D., F.R.C.P.

It is high time that a radical change in the treatment of pyo-pneumothorax should be made. In pneumothorax there are two factors—the sudden effusion of air into the

pluera and the gradual formation of fluid if the patient survives the shock of onset. The dangers due to the entrance of air into the pleura exist in the first few hours after the occurrence of pneumothorax, and are due to the embarrassment of the heart and respiration consequent upon the sudden collapse of one lung and the partial collapse of the other. The embarrassment is sufficient in many cases to lead to death rapidly and with great suffering from suffocation, ending in overdistention and paralysis of the right heart. These results are as much mechanical as physiological, and may be rapidly obviated by the removal of the air by paracentesis repeated if necessary.

Pneumothorax would not be so fatal if these simple conditions were recognized and more wisely and more promptly treated. Even if nothing be done and the patient survive, the lungs and heart gradually adjust themselves to the altered conditions and all urgent symptoms pass off. When the urgent symptoms have subsided, or in those peculiar cases in which the pneumothorax has developed without initial urgent symptoms, the distress is not great nor in any way greater than, if so great as, in a large pleuritic effusion. If no effusion take place into the pleura the air is gradually (sometimes rapidly) absorbed and recovery is complete. If effusion develop it may be serous, sero-purulent, or purulent, in about equal proportions. When the effusion is serous, *i.e.*, hydro-pneumothorax, the air may be absorbed, and the case be gradually transformed into one of serous effusion. This may then be absorbed spontaneously or after treatment of the usual kind. In pyo-pneumothorax the air itself no longer produces any symptoms; the fever which is usual, is attributed to the tuberculous disease, which has been the cause of the pneumothorax, and consequently is regarded as requiring no special treatment. Yet the fever is due in most cases to the retained pus, as in simple empye-

mata. This is proved by its disappearance or diminution as soon as the pus is evacuated. If the pus be left long in the chest, the condition is that of a neglected empyema, and the results cannot be expected to be better. The writer has for many years advocated the treatment of pyo-pneumothorax on general surgical principles by the evacuation of pus and free drainage and has shown the success of such treatment, even in neglected cases when the pus has been allowed to remain in the pleura for months.

A man in middle life had been deliberately left for months with pyo-pneumothorax untreated, and condemned to death. Unfavourable as the case was, the writer incised, washed out, and drained the side. The patient recovered with a sinus about a $\frac{1}{4}$ in. in diameter, but several inches long, extending towards the root of the lung, where a tuberculous focus existed. Though he had to bear a tube he became well and strong, returned to work, and continued in light occupation for 2 or 3 years, when the phthisis became active again and killed him.

The writer gives the following general rules: 1. In the early stage of pneumothorax when suffocation threatens, the air should be removed and the pressure relieved by paracentesis, repeated if necessary; if this be not sufficient it is justifiable even to lay the side fully open rather than to lose the patient. 2. In the later stage when effusion forms its nature should be at once ascertained. 3. If the effusion be serous the case should be treated on the general lines of serous effusion. 4. If it be purulent evacuation at once by free incision should be carried out. A piece of rib should not be excised, for it is rarely necessary. If it be necessary no more should be removed than is required to get free drainage. 6. An aspirator should never be used in pneumothorax; it is unnecessary and dangerous.—*Lancet*, Oct. 22, p. 1144.

SURGERY.

Drainage of the Pericardium,

BY

HERBERT S. PENDLEBURY, M.A., M.B., F.R.C.S.

Since the writer's contribution with Dr. Arthur Latham ("REVIEW," Vol. VI., p. 416), in which he describes how the operation suggested by Dr. Cyril Ogle and Mr. Herbert Allingham had been performed by him with slight modifications, 2 other cases have increased his experience. He thinks that the operation, with such slight modifications as may be necessary in individual cases, should become the routine method for drainage of the pericardium. It is simple, of short duration, and affords excellent drainage from the lowest available spot of the pericardial cavity.

Incision.—The incision is vertical; some $4\frac{1}{2}$ in. long, and is made 1 in. from the left border of the sternum with its centre at the lower border of the 7th costal cartilage (*loc. cit.*). This gives convenient access to the pericardium without unduly interfering with the attachments of the rectus abdominis. It enables the operator to proceed at once to the removal of the sixth costal cartilage if this be necessary to insure a more careful and extensive examination of the pericardial contents.

Seventh costal cartilage.—The writer strongly advises the removal of this cartilage in all cases except in small children or infants.

Internal Mammary and Superior Epigastric Vessels.—These are pushed towards the middle line or divided, and the cellular interval—"costo-xiphoid space"—between the seventh cartilage, ensiform cartilage, and the attachment of the diaphragm is broken into. The triangularis sterni, with the intercostal membrane and muscle,

is divided in the line of the incision up to the sixth costal cartilage.

Incision into the Pericardium.—

Carefully pushing aside both the right and the left pleura (*vide* Case 2) the operator, in order to avoid all danger of opening the peritoneal cavity, should incise the pericardium just above the level of the base of the ensiform cartilage and with his fingers enlarge this incision downwards into the costo-xiphoid space.

Drainage.—The writer has used an empyema tube as thick as the forefinger. His operations have all been performed for simple effusion, and in these it seems unnecessary to leave the tube in for more than 3 or 4 days. In 1 case the patient complained of a little pain which, he said, was relieved by removing the tube, but in no case, so far as could be seen, was the heart embarrassed by the tube.

Severity and duration of the operation.—None of the patients, though each in an almost desperate condition, seems to have been any worse for the operation, indeed, 2 were distinctly less distressed immediately after it. No ill, but rather good, effects were produced upon the circulation by manipulation of the heart. About 20 minutes should suffice in ordinary cases to complete the operation.

Case I.—A man, aged 31, was seized with pneumonia on May 11, 1901. On the 14th he was admitted into St. George's Hospital under the care of Dr. F. G. Penrose. The left lung was chiefly involved. On June 2 the notes read: "The temperature remains high; there is considerable cyanosis and dyspnoea; cardiac dulness exists 4 finger-breadths to the right of the sternum; the heart sounds are muffled." After a consultation between Dr. Penrose, Dr. H. D. Rolleston, and Dr. Ogle, the writer was asked to explore the pericardium. He reached

the pericardium by the method described above, but removed a portion of the sixth as well as the seventh costal cartilage. Only 3 or 4 oz. of fluid were withdrawn. The right heart was bound down by rather firm adhesions to the parietal pericardium, both laterally and on the diaphragm. The left heart was free. Many of the adhesions were broken down and a tube was inserted. The operation lasted 20 minutes. The patient recovered slowly and steadily from the day of the operation. What part, if any, the breaking down of adhesions played in the improvement, cannot be said. The tube was removed on the 6th and the stitches on the 9th.

CASE 2.—A boy, aged 12, was admitted into St. George's Hospital on July 4, also under Dr. Penrose. He had all the signs of pericardial effusion, with marked cyanosis and dyspnoea. There was a history of rheumatic fever with heart troubles. On the 6th the writer operated with the incision described. He found it necessary to remove the seventh costal cartilage only. After pushing aside the left pleura he incised the pericardium, but in doing so wounded the right pleura. The patient was no worse for the wound, which was evidently small, and the pneumothorax disappeared within two days. The fluid in the pericardium was under pressure and rapidly escaped. A tube was introduced and kept in until the 8th. The operation lasted 15 minutes, during the last 5 of which oxygen was administered. The patient seemed little better for the operation and dyspnoea and exhaustion increased till death on the 11th.

NECROPSY.—The wound of the pericardium was not recognisable and the parietal and visceral pericardium were adherent. There was much endocarditis with valvular verrucosities. The right pleura projected beyond the left side of the sternum to the level of the seventh costal cartilage.

It is not common for the right pleura to extend so far towards the left side at this level, but the case shows that the operator must be careful to push aside the right pleura as well as the left. Thorough exploration of the pericardial cavity and the heart was remarkably easy, and the finger could reach even to the back of the heart.—*Medical Review.*

Fracture-Dislocation of the Cervical Vertebrae,

BY

ERNEST RINGROSE, L. R. C. P., M. R. C. S.

The following case shows that extensive injury of the lower cervical vertebrae may produce only few and transient symptoms, the converse of what is usual, *viz.*, slight injury with serious and permanent symptoms. Moreover, the case shows that it was excusable not to diagnose fracture-dislocation of the cervical vertebrae in the pre-Röntgen-ray days.

A boy, aged 14, was admitted to hospital on June 28, 1894. Whilst diving into the river he collided with a man who was swimming by at the time. He was partially stunned but managed to reach the bank and was then taken out of the water and carried to the hospital. He never lost consciousness but felt "queer in his head."

On admission he complained of headache and pain at the lower part of his neck. There was no loss of power or of sensation. The neck was rigid and slightly tender. There was no bruising and no deformity was to be seen. He was put to bed and his head and shoulders were fixed with sandbags and a saline aperient was given. He had a fairly good night and in the morning said that he felt quite himself again. He was, however, unable to move his head except to a limited extent, the side-to-side movement and ex-

tension being much more restricted than flexion. There were still considerable rigidity of the neck muscles and some tenderness. He refused to stay in the hospital for more than 3 days and returned home, no further symptoms having developed. The diagnosis was slight cerebral concussion and strain of the muscles and tissues of the neck.

The writer saw the lad several times afterwards at his home and found that he was in the habit of holding his head with his right hand under the right side of the lower jaw when walking about. He continued to hold his head steady in that manner for 6 months. Recently he joined the militia, having been passed as sound by the surgeon. He appeared to be well set-up, but he carried his head rather stiffly. He was persuaded to be skiagraphed. The screen showed a forward displacement in the lower cervical region, the centre of the body of the fifth cervical vertebra resting on the anterior superior edge of the body of the sixth. The bodies of the fifth and sixth vertebrae appeared small and wedge-shaped. The body of the fourth was almost directly anterior to the fifth. The sixth and seventh cervical and first dorsal vertebrae were pushed backwards.—*Lancet*, Oct. 15, p. 1076.

OPHTHALMOLOGY.

Stereoscopic Treatment of Squint,

BY

A. FREELAND FERGUS, GLASGOW.

The subject of binocular vision cannot but be of great interest to the physiologist; moreover, it is of great practical importance to the ophthalmic surgeon. On the intuitive development of binocular vision in the infant depends the prevention of squint and the retention of useful vision in both eyes. The careful training of this function is very important in dealing with many cases of concomitant squint, and is also of value in the

treatment of paresis of ocular muscles and of the various forms of heterophoria.

In his excellent monograph which appeared about eighteen months ago Mr. Worth laid great stress on functional training. Prior to his time authors have called attention to the value of stereoscopic exercises, and stereoscopes have been employed by ophthalmic surgeons for a period of at least twenty or thirty years. The best and fullest description, however, of the functional treatment of squint with which I am acquainted is undoubtedly that of Mr. Worth.

Concomitant convergent squint may begin in very early childhood, but on the other hand may not be present till after the lapse of some years. In the first group of cases the amblyopia of the squinting eye is usually very profound, but as a rule when the squint has not developed till a later period of life then, generally speaking, both eyes have fair vision. A young child, say of about two years of age, begins to squint. At first the affection may be alternating, *i.e.*, at one time one eye is obviously the squinting eye, at another the other; but before long the affection is manifested only by one eye. Under such circumstances the little patient may be taken to a medical man who, to its guardians' satisfaction, if not to his own, associates the condition with teething or with some gastric disturbance, and assures the relatives that the child will outgrow it. At this early period such a course of action as a rule seals the doom of the eye, and in after life when the patient comes to have the deformity removed it will be found that the eye which was thus neglected when the cortical functions were being established is hopelessly and considerably amblyopic. No training of any kind in such circumstances is of much avail, and the most that can be done is to attempt to remove by operation an unsightly deformity. Had proper steps been taken when the strabismus first appeared then the

patient almost certainly would have had two useful eyes instead of one. It is beyond the limit of the present communication to discuss the treatment recommended by Mr. Worth; suffice it to say that it chiefly consists in educating the form sense in both eyes. We have tried it now for a period of fully a year, and when intelligently carried out by the patient's guardians we have found it to be entirely satisfactory. In the treatment of such cases at so early a period of life the use of stereoscopes or of Mr. Worth's ingenious amblyoscope can in the nature of things play little or no part. It is to be remarked, however, that certain of Mr. Worth's figures, particularly the cage and the bird, are quite available for children of about three or four years of age. Mr. Worth also finds that his figures consisting of circles can be used with advantage. When these are viewed through his instrument the observer has the idea that he is looking either at the outside or inside of a tube, and Mr. Worth's experience is that even a very young child with binocular vision can indicate which of the two he is looking at.

Coming now to speak of persons at a more advanced period of life, one curious fact is to be noted, *viz.*, that it is possible for a person to have two excellent eyes and, although there be no squint, still not have binocular vision in so far as he has no perception of the third dimension. This probably explains an interesting observation which I have occasionally made. Suppose we are testing a patient's form sense by means of Snellen's distance types. Let us further suppose that we are testing the right eye and that a blinder is in front of the left. The patient may be able to see all the letters with the right eye. It sometimes happens that on removing the covering and placing it in front of the eye which has just been examined the patient forthwith states that he is unable to see any of the letters and that his right eye is now quite blind. He is once more able

to read the letters on his attention being called to the fact that he can do so with his left eye. This will happen notwithstanding that the left eye is open and that its vision is excellent as measured by Snellen's scale. In other words, some persons seem to have the power of being conscious of impressions coming from one eye. They appear to have the power, where both eyes are good, of disassociating the vision due to one from that of the other. The truth is that cases of this kind undoubtedly occur in which there is no squint; probably they are to be explained by the absence or diminution of the power of fusion and by a parallel anatomical position of rest.

Patients who are improved by stereoscopic exercises, are, firstly, all young children who are capable of recognising such test objects as are supplied with the amblyoscope. Careful exercise with the proper use of a bandage, so far as my experience goes, invariably puts such cases right. Should the squint be alternating then each eye must be alternately excluded from the act of vision for a space of about three or four hours daily. If, however, it has already been established in one eye, then the eye which is habitually used for fixation should be carefully bandaged for several hours each day. Secondly, the stereoscope is of great use where the squint has not appeared till a rather later age. I am not sure that here it gives such brilliant results as it does in early childhood, but still it has a marked effect. It certainly is of great use as an adjunct to operative interference, although for that purpose I prefer the plastograms to be described presently. Lastly, the stereoscopic exercises are of immense value in treating the various forms of lateral heterophoria. It seems to me that it is much to be desired that we had a stereoscope for vertical heterophorias.

The stereoscopes which I have hitherto employed have been the convenient forms of Doyne and Landolt, and more recently I

have made use of Mr. Worth's amblyoscope. They are all serviceable implements and have this feature in common that the two half images, one belonging to each eye, are combined to form one whole. Most of the exercises with these instruments show only a flat surface, which is a very different thing from stereoscopic vision. Some of Mr. Worth's figures, however, as already indicated, afford admirable examples of stereoscopic vision.

The ordinary picture stereoscope is not available, because when the patient looks through it the examiner has no guarantee that the patient has the sense of perspective and distance. I have found those coloured pictures called plastograms to be superior to anything else as a test of binocular vision and as a training in stereoscopic exercises. The plastogram is constructed as follows:—Two nearly similar pictures are printed on the same piece of paper with only a slight space intervening between them. One of the pictures is of a reddish and the other of a greenish colour. A piece of red glass is put in front of one eye and a piece of green glass in front of the other. If a person have binocular vision the two pictures are at once combined into one and a stereoscopic effect is obtained. If a person who has binocular vision, and has got on trial this stereoscopic impression, then moves his head or his body from side to side, he will at once find that the objects in the foreground of the picture also move from side to side relatively to those in the background. If the movement be present the patient has binocular vision, if it be absent he has not. An ordinary stereoscope shows somewhat similar movements, but the advantage of the colour stereoscope is that it enables us at once to ascertain which eye the patient habitually employs for purposes of fixation. I have for several months back in my practice used this simple and cheap instrument in cases both of divergent squint and of convergent

squint and of heterophoria, and that with the most satisfactory results. The patients are directed to use the apparatus for a period of twenty minutes at least twice daily.

In viewing any of the plastograms which are hitherto seen, stereoscopic effect is only obtained when the red glass is held in front of the right eye and the green before the left. The views may be obtained from Mr. Bauermeister, Gordon Street, Glasgow, and are also on sale in many "fancy goods" shops.—*The Ophthalmic Review*.

OBSTETRICS.

Case of Puerperal Eclampsia treated by Thyroid Extract dissolved in Saline and given subcutaneously,

BY

JAMES C. G. MACNAB, M.B., F.R.C.S., EDIN.,

AND

DAVID S.E. MACNAB, L.R.C.P. and S., EDIN.,
ETC.

We were called at 8 A.M., on Sunday, 20th December, 1903, to see Mrs. N., primipara, æt. 27, in an eclamptic seizure. She was evidently about 8 months pregnant, and had complained the previous week of nothing more than slight swelling of the legs. On the previous day she had partaken heartily of Scotch broth and potatoes, and in the evening had taken one of the usual two-penny baker's pies. She had been restless during the night, and when we saw her she was in her fifth fit. A hypodermic of morphia (gr. ss.) was administered, and hot bottles and blankets were kept round her as far as possible. A little urine was removed by the catheter, and found albuminous, 1/6 by volume. The morphia had a very slight effect in allaying the frequency of the fits, and at 10 A.M., another half grain was administered. At 3 P.M. there was little or no improvement in her condition; as she was

taking the fits as frequently as before, and perspiring profusely; so another $\frac{1}{4}$ grain morphia was given. At 6 P.M., croton oil (m. 3) was placed on the tongue, but as that had not acted by 12 o'clock midnight, it was supplemented with calomel grs. v. and Pulv. Scammon Co. grs. xxx. The fits were still continuing, and at 3 A.M., the following day Chloral grs. xl. and Potassium Bromide $\frac{3}{4}$ ii were given by the rectum, and half that dose was repeated at 8 A.M., without in any way modifying the frequency of the fits, although to a very slight extent lessening their severity. At 10 A.M. two pints of saline solution having been prepared, 15 tabloids of Extract of Thyroid (5 grains in each tabloid, B. W. and Co.) were dissolved in the saline, and injected below each breast. Within an hour and a half there was a decided improvement, both in the frequency and severity of the fits, and in another hour the bowels moved and labour began. Under chloroform the labour was terminated with forceps with as little delay as possible, and on the removal of the placenta, bleeding was freely encouraged. The child was dead. The fits numbered 37, so far as could be counted. From this time onward the fits ceased. She remained semi-conscious for 48 hours, when she developed a right basal pneumonia with a crisis seven days later, after which she made a rapid recovery. The urine was examined three weeks afterwards and found to contain only a trace of albumen.

As we have not heard of the thyroid being used in this manner previously, we thought it interesting to report this case.—*The Journal of Obstetrics and Gynaecology*.

* The Influence of Hysteropexy on Pregnancy.

In a discussion upon this subject at the Congress at Rome in 1902 Pinard used the following words: "I take advantage of this interesting communication of our colleagues to once again raise my voice against all methods and all procedures which aim at fixing the uterus in women during the child-bearing period of life. I am not going to discuss vaginal or abdominal hysteropexy or any other means of fixation, I content myself with saying that the more the object is attained and the better the result the more is the woman exposed to danger in future pregnancies and confinements." In view of these grave words Jacob has collected and analysed his own cases. Between 1890 and 1897 he performed abdominal hysteropexy seventy times; he then abandoned this operation for vaginal hysteropexy, which he performed 21 times, finally giving this up also to practice suture of the uterus to the pelvic peritoneum by the vaginal route.

1. *Abdominal Hysteropexy.* The method employed has been to fix the anterior wall of the uterus to the anterior wall of the abdomen by two or three silk sutures passed through the muscles up to the superficial aponeurosis. In these seventy cases twenty-nine pregnancies are reported, twenty-six of the women had borne children previously, three had not. In eighteen cases the labours were normal, one delivery was accomplished by forceps, one by version, there was one case of placenta prævia, and eight miscarriages.

The striking feature is the number of miscarriages; these must to a great extent be caused by the irregular development of the uterus where the fundus has been fixed, particularly when fixed low down. During

* JACOBS (C.). *Bulletin de la Soc. Belge de Gynecol. et d'Obstet.*
Tome xv., No. 2.

the first six months of pregnancy it is the fundus which develops most, in the last three months the lower segment; and in cases of ventral fixation it is the posterior wall only which is capable of normal development; this is proved by the facts that when Caesarean section has been performed in these cases the incision is on the posterior wall, and when rupture occurs it is this wall which gives way.

2. *Vaginal Hysteropexy.* The operative procedure has been to fix the upper part of the anterior wall or even the fundus of the uterus to the vaginal wall by means of two or three silk sutures. In the twenty-one cases operated upon pregnancy followed eight times; there were two miscarriages, one case of placenta prævia and five normal labours.

The result of this operation is to bring about an exaggerated degree of ante flexion. This gave rise to difficulty in one case, the cervix was prevented from rising, and having caught behind the bulging anterior wall of the vagina could be reached only with the greatest difficulty. In this series there is again noticed the great liability to miscarriage.

3. *Suture of Uterus to the Pelvic Peritoneum.* "The operative procedure consists in opening the anterior pouch of peritoneum after a transverse section through the anterior vaginal fornix; isolating a strip of the peritoneum which covers the bladder, fixing the anterior wall of the uterus towards its upper third to this strip by means of two buried sutures, closing the breach in the peritoneum, and finally suturing the vaginal wall." The great advantage of this procedure is that by suturing serous membrane to serous membrane adhesions are formed which allow of great mobility and do not prevent the physiological development of the uterus during pregnancy.

This operation Jacob has performed sixty-nine times; pregnancy has followed twenty-one times, and in each instance has advanced to full term; there was no case of dystocia.

"If we compare these results with those of other operations for correcting uterine deviations we can only deduce that vaginal hysteropexy, as we practice it to-day, is an operation devoid of any injurious consequences during pregnancy; that vaginal fixation and abdominal hysteropexy, on the contrary, are operations which should never be performed upon a woman during the child-bearing period of life.—*The Journal of Obstetrics and Gynaecology*.

* A Case of Rupture of the Uterus associated with Placenta Prævia at Seven Months,

BY

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Rupture of the uterus during labour is an accident of such gravity and comparative rarity as to render it desirable that each case should be fully recorded.

The patient was admitted to the Manchester Maternity Hospital, on September 17th, 1904, on account of severe hæmorrhage occurring at the end of seven months' gestation.

She had had three previous pregnancies. The first child was born at eight months, and died shortly after delivery. The second child was born alive at seven months, and

* Read at a meeting of the North of England Obstetrical and Gynaecological Society, October 21, 1904.

died in a few days. The third child, also a seven months, was still-born. Her general health had always been good.

The evening before admission, a sudden painless, profuse hæmorrhage took place. This recurred a few hours later; the vagina was then plugged by a midwife, and the patient was sent to hospital.

On admission she was somewhat pale; the pulse was 104 per minute. The uterus was the size of seven months' pregnancy. The foetal head lay above the brim of the pelvis. No foetal movements were recognised and the heart-sounds could not be detected.

Per Vaginem. The cervix was high up, the os readily admitting one finger. The placenta lay in the lower uterine segment, partially detached. There was slight continuous hæmorrhage, but no uterine contraction. At 2-30 p.m. Champetier de Ribes' bag was introduced by the house surgeon without any difficulty. There was no further hæmorrhage, but no uterine contraction was observed. The patient was quite comfortable until about 6-30 p.m. She then became restless, and then pulse went up to 124 per minute. At this time I saw the patient, and removed the bag. This was followed by slight hæmorrhage. The cervix was soft, admitting three fingers. The placenta lay loose in the lower uterine segment, and the membranes were unruptured. It was decided to perform version. Chloroform was given, and version was readily performed by the bipolar method, the hand *not* being introduced into the uterine cavity. A macerated seven months' foetus was extracted without difficulty. The placenta was expelled and the uterus contracted firmly. The pulse, however, remained at 134 and slight hæmorrhage continued. Examination revealed a deep tear in the left side of the cervix. Two silkworm gut sutures were inserted. All bleeding soon ceased, and the patient was put back to bed. A quarter of a

grain of morphia was given, and a saline enema with brandy administered. She expressed herself as feeling quite easy, but the pulse remained at 130. Half an hour later the patient suddenly became blanched; the pulse failed altogether, and she died in five minutes. The uterus was apparently firmly contracted. There was no external hæmorrhage.

Autopsy 12 hours later. On opening the abdomen, the peritoneal cavity contained a large quantity of fluid blood, estimated at a pint. This was found to have escaped through a linear rent in the posterior layer of the left broad ligament, which was distended by a large hæmatoma extending to the side of the pelvis and into the cellular tissue of the left iliac fossa.

On removal of the uterus a longitudinal tear was seen in the left of the lower segment between the layers of the broad ligament. It was 2½ inches in length, the edges being thinned and irregular, and had resulted in the formation of a large hæmatoma between the layers of the broad ligament, which had ruptured through a linear rent into the peritoneal cavity.

The cervix showed a tear to the left side which was not directly continuous with the ruptured lower segment.

The uterine muscle was pale throughout, peculiarly soft and flabby. The rupture had occurred at the placental site, and in this area the wall was considerably thinner than over the remainder of the uterus. There was no evidence of the formation of a retraction ring. Microscopic sections were made of the uterine wall in the region of the placental site. There was no excess of fibrous tissue; the muscle nuclei stained feebly, but compared with other sections of normal puerperal uteri, no characteristic lesions could be detected.

This case presents several points of interest. There is every probability that the patient

had syphilis, although no definite history could be obtained. The previous children were all born prematurely, and died before or shortly after birth. The child in this pregnancy was macerated, and had evidently been dead some days. The uterine muscle was pale and friable, apparently degenerated, though the microscopic evidence is not convincing upon this point.

The rupture occurred at the placental site, which was situated in the lower uterine segment. There was no evidence of a retraction ring but the uterine wall was thinner on the area of placental attachment.

The rupture probably occurred spontaneously, whilst the de Ribes' bag was lying in the lower uterine segment. The bag was introduced without any difficulty, and was slowly distended with the fluid. The patient was quite satisfactory; for three or four hours there was no hæmorrhage, and few uterine pains. At the end of this time, however, the patient became restless, and the pulse ran up to 126. If the uterine wall had given way to some extent under pressure of the bag, the delivery of the child would undoubtedly tend to increase the laceration.

It seems probable that several factors contributed to produce the rupture of the uterus in this case:—

1. Degeneration of uterine muscle, probably the result of syphilis.
2. The implantation of the placenta in the lower uterine segment.
3. The pressure of de Ribes' bag continued for four hours.
4. Delivery by version and extraction.

There can be little doubt that morbid conditions of the uterine muscle must have a great effect in predisposing to rupture of the uterus, although in many cases it is difficult to estimate this precisely. In this instance microscopic section of the uterine wall did

not show any characteristic lesions beyond undue thinning of the lower segment, due to the placenta prævia.

It is quite conceivable that the pressure of a hydrostatic dilator may have a very direct influence in causing a rupture. I am not aware, however, of any cases recorded in which the bag was considered to be responsible for this accident.

It is usually supposed that there is no danger of rupture of the uterus so long as membranes are intact. In this instance the membranes were only ruptured after version had been carried out, and just before delivery.

The rupture was incomplete at first, resulting in the formation of a hæmatoma of the left broad ligament. Death was brought about by sudden rupture of the posterior layer of the peritoneum, and free bleeding into the peritoneal cavity.

The *symptoms* of incomplete rupture of the uterus are often obscure, and many cases escape recognition. In this case there was an absence of all characteristic pain. No hæmorrhage took place after introduction of the bag. There was no recession of the presenting part of the foetus, and delivery was effected with ease, the hand not being introduced beyond the cervix.

If the rupture occurred, as I believe, whilst the bag was in the uterus, the sole symptom was the increase of pulse-rate up to 124 per minute, and this, owing to the previous hæmorrhage, had not sufficient stress laid upon it. After delivery the rupture would have been recognised if the hand had been introduced into the uterus, but as the uterus contracted well, and there was only slight hæmorrhage, no intra-uterine exploration was made.

If the rupture had been diagnosed immediately after delivery probably careful pack-

ing of the rent in the uterine wall with sterilised gauze would have mechanically prevented the further loss of blood. In this way the secondary intra-peritoneal rupture which proved so rapidly fatal, might have been avoided.—(*Journal of Obstetrics and Gynaecology*).

A Case of Concealed Accidental Hæmorrhage,

BY

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MRS. K., æt. 45 years, 10-para, full-time, was seen at her own home by a nurse, who found her very collapsed and almost pulseless. The nurse at once diagnosed concealed accidental hæmorrhage and called the house surgeon. He stimulated the patient freely and had her removed to the hospital as quickly as possible.

Previous history. The patient's first five pregnancies had been normal, but the last four had all been accompanied by hæmorrhage. At the sixth and ninth confinements she had had severe post-partum hæmorrhage, whilst the seventh and eighth pregnancies had ended in abortions with such profuse hæmorrhage that she says she "nearly bled to death." On the evening of the day before admission labour began, and she had ordinary pains during the night. She got up early in the morning, and while walking across the floor she was seized with sudden acute pain in the abdomen and fell down in a faint.

Condition on Admission. The patient was bathed in a cold, clammy sweat, the pulse averaged 136, and the temperature was 97° F. She was extremely pallid. On palpation the uterus was found to be more oval in outline than normal. The foetal parts

could be felt with some difficulty; There was no marked pain on manipulation, but she complained of a dull continuous pain in the upper and left quadrant of the uterus, and in her back. The foetal heart could not be heard. The fundus was near the ensiform cartilage. A vaginal examination revealed that the os was one-third dilated, the membranes intact, and the head movable at the brim. There was no blood coming away neither was there any serum.

The patient was given more stimulants—strychnine and brandy—and when I saw her shortly afterwards I found her pulse was 120 and of fair volume. The uterus had now commenced to contract and the foetal parts could not be palpated. When I examined vaginally I found the membranes had just ruptured and the head was being pressed into the brim. There was absolutely no bleeding, not even when I pushed the head up out of the brim.

A saline infusion of a couple of pints was given, and preparations were made for a Porro's operation, but I decided to wait and watch the patient closely, stimulating her freely. The internal bleeding had evidently ceased, and I felt that the best chance for the patient was to allow her to rally before proceeding to operate. Four hours later, I found that she was having strong expulsive pains, and a dead child was quickly expelled. After the birth of the child, no blood escaped from the vagina. On palpation the uterus was felt to be large, soft, and bulging towards the anterior abdominal wall. I introduced my hand, and found the placenta completely separated, and lying among a large mass of clots. The uterus was cleared out and a hot douche given; it retracted well. There was no post-partum hæmorrhage. Three pints more of saline solution were infused. After delivery, the patient was really in a better condition than she had been at the time of admission. She died, however, three days later. During

these three days there was no bleeding from the uterus, and her pulse ranged from 130 to 140, with a fair amount of volume. On the second day the pallor became of a greenish-yellow tinge. Her blood-glands, apparently, did not perform their functions, so that the condition was one of pernicious anæmia. Both the patient and her friends stated that, for a considerable time, her colour had been very bad. The amount of clot I had removed from the uterus was not at all excessive, and, if the woman had not been very anæmic prior to the bleeding, I am quite sure it would not have affected her seriously. The placenta weighed two pounds, and showed a number of fibrous infarcts.

At the *post-mortem* examination all the organs were found extremely pale, and the endometrium in a very unhealthy condition.—(*Journal of Obstetrics and Gynaecology*).

* An Unusual Case of Fibroma of the Uterus, removed by Supravaginal Hysterectomy,

BY

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The following brief particulars—from notes by Dr. Clifford, house surgeon to St. Mary's Hospital, Manchester—of a case of supravaginal hysterectomy for fibroma uteri, appear worthy of record. The case was specially interesting because of the discovery, and continued growth of the tumour some years after an unusually early climacteric in a nulliparous woman; also because of the operation vicissitudes of the patient; and further, inasmuch as a considerable portion of the tumour occupied a large ventral hernia, and had increased in size whilst in that position.

Read at a meeting of the North of England Obstetrical and Gynaecological Society, October 21, 1904.

The patient, M.M., aged 44 years, a charwoman, was admitted to St. Mary's Hospital, Manchester, on July 20th, 1904. She had been married 20 years, had never been pregnant, and her last period was nine years before.

She noticed a large lump in the lower abdomen some six years ago. About five years since she states she was operated upon; there was a second operation six weeks later, and a third four weeks after that. She remained in hospital twelve months. From her description, the first operation would appear to have been an abdominal section, whilst the other two were for the relief of abscesses.

During the last five years the tumour had grown considerably, and it had come much more forward. About two months ago the skin over it became ulcerated in patches, with a large amount of purulent discharge. At that time she came under the care of Dr. Higginson, of Bolton, with whom Dr. Walls first saw the case in consultation.

On examination the abdomen was found considerably and irregularly enlarged. At the lower part was a large ventral hernia about the size of a boy's head. The skin over it was brownish, indurated, and scarred. In three places there were ulcerated patches about 3 × 1½ inches in size. Filling the hernia was a firm, rounded mass, attached posteriorly to a larger tumour in the abdomen, which gave rise to some prominence on each side of the rupture, and extended from the pubes to the umbilicus. This was dull on percussion and possessed of only a little mobility from side to side.

P.V.—The vagina was very elongated, and the cervix drawn upwards and only indefinitely to be felt. The lower aspect of the tumour was reached on each side, and the uterus appeared to be involved in the mass. There was a fistula-in-ano.

August 27th, 1904. *Operation.* The hernial sac was opened by a vertical incision extending its whole length, and the tumour found to consist of multiple fibromata of the uterus. Both broad ligaments seemed involved, the omentum was adherent behind, as was the abdominal wall in front on the left side. The disposition of the fibroids and the almost complete fixation of the whole mass were such that whilst the left tube and ovary were at length made out, the right broad ligament could not be felt at all. An incision was then made into the most prominent part of the tumour, and fourteen fibroids varying in size from that of a hen's egg to that of an orange, were enucleated, after which the uterus and remaining fibroids were removed by ligaturing the broad ligaments from above downwards, pulling up such of the fibroids as invaded them, and making a stump of the cervix in the usual way, covering it over with peritoneum. The right ovary was found adherent to the antero-lateral pelvic wall, and it was left there, the ligatures being applied between it and the uterus. The left appendages were removed.

A good deal of hernial sac was taken away, and the abdominal wound closed in two layers, but owing to the woman being rather collapsed it appeared inadvisable to prolong the operation by performing a radical cure of the hernia, as had been intended. This was unfortunate, as the unhealthy condition of the skin led to some stitches giving way on September 6th, *i.e.*, ten days after operation, and bowel appeared in the wound, necessitating further suturing to cover it. Otherwise the after progress was perfectly satisfactory, and the patient left hospital on October 22nd, 1904.

The uterus and tumours weighed 11 lbs
—*Journal of Obstetrics and Gynaecology.*

Eclampsia in Molar Pregnancy without Foetus,

BY

F. HITSCHMANN.

The following case is probably unique:—

A girl first menstruated at 13, and at 14½ had a full term child. At 18 she was admitted to hospital on Sept. 26, 1903, the last menstrual period having been on May 17, 1903. Two months before admission there had been metrorrhagia; subsequently the feet became swollen and there was frequent vomiting.

She was anæmic with a puffy face. There was impaired resonance at both apices with bronchial breathing. The heart was normal. The urine contained 0.7 per cent. albumin and a considerable number of casts. The uterus reached 3 finger-breadths above the umbilicus, thus corresponding to that of a 7 months' pregnancy, though from the last menstruation it should have corresponded to one of 4½ months' duration. It was hard and inelastic; foetal parts were not palpable, and foetal heart was not audible. The external os admitted the tip of the finger; the internal os was closed. The history of early hæmorrhage, combined with the large size of the uterus and the absence of signs of a foetus, was suggestive of the presence of a hydatidiform mole. She was kept in bed on a milk diet. Three days after admission—at 3 p. m. on Sept. 29—labour pains began. The cervical canal admitted a finger. Only membranes were felt. The pulse was 88 and incompressible. At 5 p. m. she was suddenly seized with eclampsia and became unconscious. There was extreme cyanosis. The urine obtained by catheterism contained a large quantity of albumin. She recovered consciousness at 7 p. m., but at 8 there was a second attack of eclampsia of 3 minutes' duration. A bag was, therefore, introduced into the uterus and filled with lysol. Traction was made on the bag, until

10 minutes later it fell out of the uterus. The os then admitted 3 fingers. Two fingers of the left hand were introduced into the uterus and the membranes were ruptured. Some vesicles at once presented. The mole was removed, partly digitally and partly by pressure on the uterus from without. There was moderate hæmorrhage, which yielded to hot lysol injections and plugging with iodoform gauze. There were no further fits. The albumin rapidly diminished from 0.9 per cent. immediately after the fits to 0.4 per cent 24 hours later; on the 7th day the urine was normal. The puerperium was uneventful.

The hydatidiform mole consisted of vesicles varying in size from that of a pea to that of a cherry, interspersed with decidual shreds and old and recent coagula. There was no trace of normal placental tissue or of a foetus. If a foetus had ever been present it must have perished and been absorbed at an early stage.

The case is of interest for two reasons. Firstly, eclampsia before the sixth month of pregnancy is exceedingly rare. Of 134,345 labours collected by Schauta, eclampsia occurred in 342. Of these 312 cases only 9 occurred as early as the sixth month. Fehling found only 5 cases of eclampsia recorded before the fifth month in a total of 516 cases. The second and chief point of interest is that eclampsia occurred without a foetus. This proves that the theory as to the origin of eclampsia in toxic products of foetal metabolism, which has recently been widely adopted, is not applicable to all cases, and that there must be other sources for the formation of toxins, such as the placental cells.

The only case remotely resembling the writer's is reported by Meye, of Olshausen's clinic:—In a woman, aged 34, who had Bright's disease, the first pregnancy terminated in abortion at the fourth month. On Feb. 24, 1865, there was hæmorrhage from the vagina, which was followed by labour

pains. At 2 p. m. she began to lose consciousness, and between 3 and 5 there were 3 attacks of eclampsia. The urine contained a quantity of albumin and fibrinous casts. The coma continued, and on Feb. 25, at 4.30 a. m. the fourth fit occurred. Between 9 and 10 a. m. a four-month old foetus was extruded. The placenta could only partially be removed, the uterus being distended with oedematous degenerated chorionic villi. The patient recovered. The eclampsia occurred with hydatidiform degeneration of the chorion. But this was only partial, and enough healthy placenta was preserved for the nutrition of the foetus.—*Zentralbl. of Gym.*, Sept. 17, p. 1089.

DERMATOLOGY.

Unusual Eruption from Antipyrine,

BY

MALHERBE.

A man, aged 30, in good health though suffering from recent syphilis, was subject to attacks of migraine which were readily relieved by antipyrine. He was seized with a severe headache about midday, and following his custom took about 23 gr. of antipyrine. The headache quickly passed off and he resumed his usual occupation. About 6 p. m. when about to micturate he discovered a large black patch on the glans penis. Thinking this to be commencing gangrene due to syphilis he hurried to the writer, who found a large bluish black discolouration on the glans. No similar lesion was found elsewhere. The patient was certain the discolouration had been produced during the day.

Among eruptions the result of antipyrine Brocq has noted a rare form in which spots appear which are at first red but soon become black. These are reproduced in the same situation by each dose, and though they may increase in number they do not become

generalized. Fournier has in 1899 reported cases in which a black discolouration appeared on the penis within a few hours of the administration of antipyrine. The black spots sometimes were accompanied by redness and swelling and preceded by pruritis or they occurred alone with slight diffuse redness and were always accompanied by isolated dark red spots on other parts of the body. These black patches are extremely slow in resolution. They may appear in a patient who has frequently taken antipyrine without inconvenience, and the future use of the drug does not always cause their reappearance.—*Journal de Medecine et de Chirurgie Pratiques*, Aug. 10, p. 586.

Some General Principles of Treatment in Dermatology.

Lecture II.—Local Treatment,

BY

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Having considered the action of the various drugs which are in common use in the treatment of skin affections, we pass on now to the equally important subject, namely, the *methods of applying the drugs*. It frequently happens in the therapeutics of the skin that it is not so much the drug which is being used that may be aggravating a case, but rather it is the manner in which it is being applied which is harmful. For example, a drug prescribed in the form of an ointment in a case of a moist erythematous eczema will almost certainly irritate the lesion, while the same drug in a lotion may have the most beneficial effects.

Before referring to the more special methods of applying drugs, such as ointments, pastes, lotions, and the like, it will

be advisable to consider briefly the action of *water* on the skin and the utility of baths in skin affections. Water has on the skin a complex action which is both chemical and physical. It has a cleansing action, removing dirt, scales, crusts, &c.; it dissolves the various salts of the sweat which get deposited on the skin; it makes the horn-cells swell up and macerates those of the most superficial layer; and it has a special action according to its temperature—cold water causing vascular contraction and cardiac stimulation, warm water having the opposite effect, while very hot water causes a constriction of the skin vessels, followed by a dilatation.

Consequently the various forms of baths are in great demand in the treatment of many skin diseases. The baths may be simple or medicated, and the patient may be wholly or partially immersed in them. Rain water should be employed for them where obtainable, and the warm bath at about 100° F. is the most serviceable.

Medicated baths are specially serviceable. These may be palliative or curative.

Palliative baths are used to allay irritation in cases of pruritus and urticaria. These consist of baths containing bran, starch, gelatine, 1 to 2 lbs. of each to the 30 gallons of water. Where the skin is thickened as well as irritated, alkaline baths give better results; and these may be made by adding to the warm bath three ounces of borax or sodium carbonate, or half a pound of soft soap.

Curative baths are employed in the case of parasitic complaints, such as scabies and pediculosis. In the case of scabies, sulphur baths are specially indicated. These are made by the addition of 3 ounces of potassium sulphide. This, unfortunately, stains the bath, especially if it be made of metal, and, as a substitute, a cleaner preparation has been introduced, known as "sulphaqua," which obviates this difficulty.

Tar baths are extensively employed in the treatment of psoriasis. These can be made by adding oil of cade to the bath, or a more powerful effect may be obtained by painting the patient over with oil of cade or *pix liquida*, and then rubbing him down in a bath with soft soap.

The natural medicated baths of the various spas have all got their special indications for use, and the efficacy of these is greatly enhanced by the *regime* to which the patient is subjected while undergoing a course. As a general rule, baths should be avoided whenever there is marked hyperæmia or weeping of the skin, as they will be harmful. With regard to sea baths, they are an excellent tonic to a healthy skin, but extremely irritating to a diseased one.

The discussion of the subject of baths leads us naturally to the question of *soaps*. Soaps owe their power of cleansing the skin and removing grease from it to the fact that they break up with water and liberate an alkali which saponifies the grease and macerates the superficial horn-cells, and so cleanses the dirty and stained surface of the skin. The more alkaline the soap the stronger will this action be. The soft soaps are made from olive oil and potash, and are much more powerful than the hard soaps, which are made from a soda lye. But it is necessary to avoid an excess of alkali in a soap, for, though pleasant at the time it is used, its action may be too powerful, and it may have a subsequent irritant effect. To avoid this, there are prepared by various firms superfatted soaps which contain an excess of fat, more than sufficient to neutralise any free alkali which may be present. These are made by adding to a neutral soap an excess of fat (about 4 per cent. of olive oil). These superfatted soaps, though bland to use, are not good cleansing soaps, and, for practical purposes, unless on unusually sensitive skins, good neutral soaps may be safely used,

provided they are not made from rancid fats, which are responsible for the irritant properties of several of the cheaper scented soaps.

Medicated soaps have come into fashion within recent years, but they have not come up to one's expectations. In the form of cakes or powders they are certainly a clean method of applying remedies to the skin, but they are not so reliable, penetrating, and excipient as lanoline. These soaps may be rubbed into the skin, or lathered on and allowed to dry in, or washed off. There is a large variety of them, and those containing sulphur and camphor are among the most useful. On very sensitive skins, especially that of the face, it is sometimes advisable to avoid using soap altogether, and to substitute for it a small muslin bag containing bran; in any case, it is advisable to wash the face with soap only in the evening and at bed time, as it allows time to recover from the action of the soap before exposure to sun and wind or rain next day.

For the removal of crusts and scales, even, soft soap and water may be scarcely sufficient, and we may have to resort to a previous soaking in oil or to the employment of *poultices* for their removal. Of these, starch poultices, rendered aseptic by boric acid, are the most useful, and these should contain 3 i of boric acid to 3 ii of cold water starch in a pint of water. Ordinary poultices made of linseed-meal are not only dirty preparations to use, but are harmful and apt to spread infection, as they form such an excellent medium for the growth of micro-organisms.

Remedies may be applied to the skin in the form of *powders*. Powders act according to their capacity for taking up moisture; in this way they lead to a cooling of the skin, and reduce hyperæmia and oedema, as well as exercising a protective action. The greater the capacity of a powder to soak

up water the greater its efficacy. One of the most powerful absorbents of water is a mineral powder known as "terra silicea;" it can take up about one-fifth of its own weight of water. Of the others, zinc oxide, starch, oleate of zinc, talc, and carbonate of magnesium are the most useful; a certain percentage of boric acid should be added to the powders to keep them aseptic. Powders may be applied by simply dusting them on or by enclosing them in muslin bags, or by wearing them between two pairs of stockings or drawers.

Like powders, *lotions* also have a drying effect on the skin from evaporation. This effect may sometimes be a disadvantage, and it can be reduced by the addition of small quantities of glycerine (about 10 drops to the ounce), but much glycerine is irritating. There are various types of lotions, such as antiseptic, stimulating, astringent, and antipruritic lotions. The astringent lotions contain tannic acid or alum in varying quantities; the stimulating lotions have tar in them; the antiseptic lotions are made with mercury, carbolic or boric acid; and the sedative and antipruritic lotions contain lead, liq. calcis, hydrocyanic acid, and various other soothing drugs.

Liniments have a restricted field of utility in skin affections. They are used for stimulating hair-growth, but there is some doubt as to their efficacy, and rubefacient liniments containing cantharides, turpentine, and acetic acid, though popular with the laity and of great value to the vendors of patent hair lotions, are of comparatively little service.

There is a preparation which comes in between the liquid preparations and the ointments which, on account of its soothing properties, is of great value. I refer to "Carron oil." It consists of equal parts of olive oil and lime water, and if 10 per cent. of zinc oxide or prepared calamine be added to it a

very soothing cream may be in this way prepared.

We have now to consider the most commonly employed of all the preparations for skin affections, namely, the *ointments*. These have as their bases various fats, such as benzoated lard, vaseline, lanoline, and compounds such as paraffin wax and spermaceti. These fats act as vehicles for the carrying of various remedies to the deeper parts of the skin. Some of them have a greater power of penetration than others, and the most powerful of them is lanoline. Vaseline is slightly more irritating than lard, but it is said to have a greater facility of giving up the drugs incorporated with it after penetrating the skin.

In many diseased states of the skin there is a lack of fat in the horn-cells, and the fat in an ointment makes up for this deficiency by being absorbed. The fat causes the horn-cells to swell up and prevents the fluid of the skin from reaching the surface and evaporating, and in this way may cause a certain amount of oedema. Should the fats in ointments get in the least degree rancid the ointments have a singularly irritating action on the skin. They are specially indicated therefore, where the deep action of a drug is required, where the skin is dry and defective in fat, as in ichthyosis, or as a protective covering to the skin. According to the ingredients contained in them, we have astringent, antiseptic, stimulating and sedative ointments, and to get the proper effect of these they should be rubbed in two or three times a day.

The most soothing types of ointments are those known as *cold creams*. These contain a certain proportion of water which in evaporating causes a refrigeration of the skin. The ung. aq. rosæ of the B.P. is one of the best known. Others contain lanoline, vaseline or spermaceti, and aqua rosæ or liquor calcis. The addition of water to the lanoline is said to increase its power of penetration.

Where a drying action is demanded, and deep penetration is not required, instead of ointments, preparations known as *pastes* give better results. These contain about equal parts of powder and grease. The most commonly used of these is that introduced by Lassar, of Berlin. It contains equal parts of zinc oxide, starch, lanoline and vaseline, with the addition of 10 grs. of salicylic acid to the ounce. Numerous modifications of this have been employed since.

Ointments or pastes may be rubbed in or spread on lint and continuously applied. The ointment should be spread on the woven side of the lint. Unna has invented several preparations more elegant than ointments or pastes spread on lint in his *salve muslins* and *plaster-mulls*. The plaster-mulls are adhesive preparations, and are clean and give excellent results, while the salve muslins, composed of benzoated mutton fat and wax spread on muslin, with the addition of different medicaments, though expensive, are a great advance on ordinary ointments.

There is another method of applying medicaments over limited areas, namely, the making of them up in the form of *salve sticks* or *paste pencils*. A pencil is made of cacao butter 2, wax 1, lanoline $\frac{1}{2}$, and to this is added a percentage of chrysarobin. The paste pencils are made of tragacanth, acacia, and starch.

It is sometimes desirable to avoid evaporation and to form a protective coating on the skin. For this purpose various varnishes and protective dressings have been invented. One of the earliest of these was the "Lini-mentum exsiccans" of Pick (tragacanth 5, glycerine 5, water 100). Then came Unna's gelanthum, containing gelatine, tragacanth, glycerine, and thymol, and, far more useful, his glyco-gelatins, with which any medicinal may be incorporated. These glyco-gelatins form a most important addition to

our list of local applications, as drugs incorporated with them act fairly satisfactorily on the skin, and they form an excellent protective covering, and many intractable chronic eczemas and leg ulcers will heal up under them in an astonishing way. A useful formula is:—

R
Gelatin . . . 3 ii.
Zinci oxidi . . 3 iii.
Glycerini . . 3 iv.
Aquæ . . . 3 i.

Calamine may be partly substituted for the zinc oxide, and a preparation more the colour of the skin is thus produced. Various other drugs may be added as required. In this group we must also place traumaticus (guttapercha 3 i, dissolved in chloroform 3 i) and collodion, as these form a useful method of exhibiting chrysarobin and salicylic acid.

Besides the numerous methods of treatment by applying local remedies, containing drugs, to the skin, we have also various physical forces which are of extreme value; of these the most useful are electrolysis, the actual cautery, the X-rays, Finsen light and radio-active substances.

This is a large subject, and I can only touch upon it now. For the removal of hairs electrolysis properly done is our most reliable method at present. A series of exposures to the X-rays will certainly cause a defluvium of hairs, but they almost certainly grow again. Electrolysis is also of value in destroying the small telangiectatic nævi known as spider nævi. These can also be destroyed by a fine-pointed Pacquelin cautery, but the latter method is more likely to leave a scar. With regard to the port wine stain—the diffuse reddish purple nævi—we have at present no satisfactory treatment. Electrolysis is inadequate, and to destroy them by the X-rays requires the greatest care, as it is necessary to produce a reaction, and the scar

which is liable to result might readily be more unsightly than the disease. X-rays are now used with excellent effect in the treatment of rodent ulcer, lupus vulgaris, xanthoma, indurated acne, sycosis barbæ, and in some cases of superficial epitheliomata, and occasionally in lupus erythematosus. Finsen light still maintains its place as a reliable method of removing a lupus patch on the face with the production of the least disfiguring scar. Its chief drawback is its slow action, but it is a safer means of treatment than the X-rays.

With regard to radium, its chief field of action is in the treatment of small rodent ulcers, and lupus affecting the inside of the nose. In both of these it is extremely valuable.

High frequency currents have been much vaunted of late in the treatment of skin affections, but they are a poor substitute for the X-rays. Light baths and heat baths, though much advertised, are of even less value in the treatment of skin diseases than high frequency currents, except as a means of imposing upon a too credulous public and of giving a livelihood to the promoters of electro-therapeutic establishments.

In conclusion, gentlemen, it is better to stick to the old well-proven remedies than to rush blindly into the employment of new ones before they have been thoroughly tested. In treating skin affections locally it is necessary to lead through the "weak to the strong," to begin with mild applications, to consider carefully the best method of applying your remedy in each individual case, and to avoid overtreatment.—*The Polyclinic*.

OTOLOGY.

BY RICHD. LAKE, F.R.C.S.

Case of Middle Ear Disease.

Case 1.—The patient was a young man on whom a very extensive mastoid operation had been performed, a large portion of the petrous bone having been removed on account of deep-seated disease, which necessitated the exposure of both the posterior and external semi-circular canals. Subsequent skin grafting had been employed, but, on account of the depth of the wound in the petrous, healing was not completed for four weeks after the skin grafting. He was able to hear with that ear certain words, such as "nine," at five or six yards, but he was only able to recognise and repeat words with certainty spoken in an ordinary voice at about five feet. He was unable to hear the lower tuning forks, but from C upwards his hearing was almost perfect by air conduction. The wound itself was dry, and over the whole of the petrous bone there was a thin and well-glazed cicatrix.

Case 2.—This was a patient showing a perforation in the upper and posterior quadrant, with a small granulation polypus appearing in this situation. It was explained that the pus, which came from the antrum, flowed over the drum membrane, and that the reason it did not find its way within the cavity of the middle ear was on account of the adhesion of the edges of the perforation to the inner wall of the tympanum. At the same time, attention was directed to the fact that the drum membrane was in close apposition to the inner wall of the tympanum.

Case 3.—The patient was a man of about 40 years of age, who said that he had always been deaf, but that this condition had become markedly worse within the last few months. On examination of the tympanum, the handle of the malleus was seen to be embedded, as it were, in a large, almost cir-

cular, calcareous plaque. This calcareous degeneration of the membrane was stated frequently to be found in a membrane which had been the seat of a perforation. Enquiry elicited from the patient the reply that he had suffered from a discharge from his ear as a child. The line of treatment suggested was that the effect of inflation should be tried, and that, if this failed, the only alternative method was that of removal of the calcareous patch. This would necessitate removal of part of the malleus, and hence was not to be recommended.

Other cases were examples of (1) adhesive catarrh of the middle ear, and (2) nasal spur.—*The Polyclinic*.

THERAPEUTICS.

The Dietetic Treatment of Pernicious Anaemia,

BY

PROF. E. GRAWITZ.

Prof. E. Grawitz has long contended that many cases of apparently primary or essential pernicious anaemia depend on severe secondary degeneration of the red-corpuscles, with great regenerative activity of the bone-marrow. This degeneration is due to toxic substances, such as lead, CO₂, arsenic, morphine, etc., which may be introduced from without, but in most cases are formed in the intestinal tract. Such intestinal toxins result either from abnormal catabolism of the albuminous molecule or the agency of bacteria, and when absorbed they act in predisposed subjects as specific blood-poisons. If this theory is true, it should be possible in many cases of pernicious anaemia to arrest the degeneration of the erythrocytes and so restore normal blood-formation by treatment directed to the gastro-intestinal tract. Absence of free HCl, defective and

carious teeth, and motor weakness of the stomach are frequent factors in the production of intestinal toxins and pernicious anaemia. The writer's treatment consists in frequent and thorough cleansing of the buccal cavity, and the administration of vegetable food chiefly in the form of *purée*—mashed potatoes, spinach, ground rice, gruel, fruit juices, anchovy-paste sandwiches, and similar appetisers. Further, to prevent fermentation, the stomach and large intestine are washed out daily with tepid normal saline solution. Lemonade and small doses of hydrochloric acid are administered. The necessary amount of animal albuminous material is at first introduced in enemata. Arsenic is given, if at all, only during convalescence. Five cases which were in hospital during 1903 are reported in support of the method. Improvement followed rapidly, and in some cases a complete cure was effected in 3 weeks. This applied both to the condition of the blood and severe general symptoms, such as hæmorrhages, oedema, ascites, albuminuria, pyrexia, and cachexia. Two cases are mentioned in which no relapse had occurred since recovery from pernicious anaemia 5 years previously. The treatment produces not only remissions but genuine cures.—*Deutsche Med. Woch.*, July 21, p. 1092, and July 28, p. 1135.

Aspirin in Inoperable Carcinoma,

BY

J. RUHEMANN.

Aspirin is one of the most useful remedies for the pain of cancer and may advantageously replace preparations of opium. The writer has prescribed it in 5 cases, with the result that morphine became unnecessary. In 1 case of mammary carcinoma there was secondary growth in the lumbar vertebræ, which was followed by spontaneous fracture and compression-myelitis. The pain was in-

tense, but peaceful sleep was obtained with 15 gr. of aspirin at bedtime, until death occurred 9 months later. Even in cases in which morphine failed to relieve aspirin was successful. It was seldom necessary to exceed a total dose of 30 gr. in the 24 hours. Equally good results have been obtained by others, at least 60 cases of cancer, in which aspirin alleviated the pain, having been reported. Its analgesic action, therefore, is indisputable. See *Review*, Vol III., p. 227.—*Deutsche Med. Woch.*, June 2, p. 849).

BACTERIOLOGY.

The Pollution of the Air of Rooms by Saliva during Speaking.

In a previous issue we have called attention to the usually overlooked source of infection of operation wounds—the droplets of saliva ejected by the operator and his assistants while speaking (“*REVIEW*,” p. 322). The recently issued report of the medical officer of the Local Government Board contains an account of some important experiments performed by Dr. M. H. Gordon on the pollution of the air of rooms due to the same cause. Flügge and his school showed that not only in coughing and sneezing but also in loud speaking fine droplets of mucus or saliva are sprayed into the air, in which they float, and may be wafted by the air currents which prevail in rooms an almost incredible distance. But experiments by Engelmann and Haymann with patients suffering from phthisis have proved that while droplets of mucus containing virulent tubercle bacilli are thrown out in coughing they do not appear to spread more than 1 metre. It has also been shown that the droplets may remain suspended in the air of a room for a considerable time—according to Flügge for 4 to 6 hours. Viewing the problem of air-borne infection from the point of view of the recipient, Nenninger showed that if animals

were made to inhale a spray of an emulsion of the bacillus prodigiosus the organism penetrated to the finest bronchi. In wool sorters’ disease, the site of inoculation, according to Greenfield, is the lower part of the trachea and the larger bronchi. Guinea pigs exposed close to the mouths of coughing phthisical patients have developed the disease, and Klein has shown that these animals became infected when kept in the ventilating shaft of the Brompton Hospital.

Dr. Gordon has found that the microbes, most characteristic of saliva, by their constant presence and abundance, are streptococci. He never found them in fewer numbers than 10,000,000 per c.c., and in some cases they amounted to 100,000,000. Four types were exhibited in broth at 37° C.,—*s. brevis*, *medius*, *longus*, and *conglomeratus*. The one which from its abundance and constancy was the most characteristic was the *s. brevis*. It was present to the extent of at least 10,000,000 per c.c., and sometimes amounted to 100,000,000. Dr. Gordon therefore used it as a test by which extremely small amounts of saliva—one ten-millionth to one hundred-millionth of a c.c.—could be detected. Of the 4 streptococci it alone changes the colour of “neutral red broth” to canary yellow, thereby giving a test by which very minute droplets of saliva may be detected.

The extent to which droplets of saliva are disseminated in speaking was investigated by exposing 40 broth culture-plates in a large room in which a person spoke loudly for 1 hour, and allowing them to remain uncovered for half an hour afterwards. Forty control plates were exposed for 2 hours before the experiment. Four of these showed streptococci, but in 3 the organism was the air streptococcus, and in only 1 was it morphologically identical with the *s. brevis* of saliva. On the other hand, of the 40 plates exposed to speaking, 31 showed streptococci, of which 3 contained only the air strepto-

cocci, and 28 streptococci characteristic of saliva. Four out of 5 plates placed as far from the speaker as 40 ft. were infected. Plates placed 12 ft. behind the speaker were also found infected. In contrast to this experiment, a person who read for an hour in clear but quiet tones so that his voice could be heard at 45 ft. quite failed to disseminate particles of saliva through the room. A similar negative result was obtained from ordinary quiet conversation.—*Medical Review*.

conscious but aphonic. He lay on the sofa with a wound in his throat. It had been self-inflicted, but had necessitated more than one gash to cause it, judging from the ragged ends. The entire larynx with the hyoid bone was conspicuous by its absence. The trachea had been completely severed, but the oesophagus was intact. On the floor was the entire larynx with the hyoid bone. The patient was very blanched and in *extremis*. The great vessels had escaped. He died a few minutes after the writer’s arrival.

The deed was done with a blunt penknife. There was an indentation in the cricoid where the knife had struck it. The intrinsic muscles were intact, but those attached to neighbouring parts had been severed with the knife. The patient had been drinking heavily for some 10 days.—*Lancet*, Oct. 22, p. 1145.

MEDICAL JURISPRUDENCE.

Extraordinary Case of Suicidal Cut-Throat.

W. MACALISTER BROWN, M.B. CH.B., was called to a man who had attempted suicide by cutting his throat. He was quite

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Original Articles.

*The Gynaecological Significance of the Wandering Spleen,

BY

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London.*

IN response to the Editor's request for an article for "The Antiseptic" I have chosen some anomalous enlargements of the spleen, partly because some interesting cases of this description have recently been investigated by myself and partly because it may be a matter of much interest to practitioners in India, on account of the great prevalence of splenic enlargements in that country, such prevalence having caused a recent writer to assert that "India is the land of the enlarged spleen."

Those cases in which the enlarged spleen merely forms an abdominal tumour are not likely to come within the ken of the Gynaecologist, but where the splenic enlargement causes a tumour-mass to occupy the pelvis, either as an abdomino-pelvic, or, as happens less frequently, as a purely pelvic swelling, and such occurs in a

woman, then it could readily happen that the enlarged and displaced spleen might easily be mistaken for a solid or cystic tumour arising either from the ovary or the uterus.

This is the class of cases which I now intend to consider, as I have recently shown* the specimens removed from two such cases before the Obstetrical Society of London.

In one of these the wandering spleen was completely contained within the pelvis, and lying in front of the body of the uterus caused a retro-displacement of that organ.

I propose therefore to narrate first the cases which I have mentioned where the enlarged spleen has been mistaken for uterine or ovarian tumour and briefly to record similar cases which I can find scattered about in gynaecological and surgical literature, and then to deal in a similar manner with those cases, very few in number, in which the spleen occupying the pelvis has mechanically produced a retro-displacement of the uterus.

Case 1. E. B.—A married woman, aged 32, was admitted into Chelsea Hospital for Women under the care of Dr. W.H. Fenton, on January 1st, 1904, complaining of pain in the left side accompanied by sickness and diarrhoea.

* Specially contributed to "The Antiseptic."

* Shewn at Obstet Soc., London, May 1904.

She had had two children, the last fifteen months prior to admission to the hospital. At this confinement she was kept in bed for six weeks on account of "septic fever." Whilst then lying in bed she first noticed a lump in the right iliac region and she experienced a great deal of pain in the same situation. In September 1903 she attended as an out-patient and was then found to have a hard mass in the right iliac region extending inwards as far as the middle line of the abdomen and up to the umbilicus. She was recommended to become an in-patient, but refused to do so.

From this time till admission in January last she had had a good deal of sickness and diarrhoea, having had two severe attacks on Christmas eve and New Year's eve, and these she called "Bilious Attacks."

The Catamenia were regular, lasting seven days out of every twenty-eight, and the loss was fairly profuse and was unaccompanied by pain or clots. Between the periods there was some creamy white vaginal discharge. Micturition was normal throughout. On physical examination the heart and lungs were found to be normal. The surface of the abdomen was dark in colour and there was some intestinal distention in the umbilical region. Below the level of the umbilicus and chiefly on the right side but also extending across the middle line towards the left was a hard firm-mass rising up in the right flank almost to the level of the umbilicus which was extremely tender on deep palpation. Its surface was smooth and uniform. It presented a well defined edge in which no notch could be felt neither could any movement be elicited.

Per Vaginam a hard mass was felt occupying the anterior fornix; it also extended

to the left, forming a very large tumour. It was very tender and only very slight movement could be induced. The uterus occupied the pouch of Douglas behind the tumour, with which it had no connection. The history of the case, the apparent origin of the swelling during a septic puerperium, and the presence of a hard mass in the pelvis suggested the diagnosis of parametritis. The definiteness of the swelling and the presence of slight mobility entirely negatived this view. *The fact that the tumour occupied the pelvis and was free from the uterus caused it to be diagnosed as an ovarian tumour.* The patient's general condition was so bad that operation was deferred until February 19th. In the interval she was kept in bed and with skilful nursing and appropriate treatment she improved very considerably.

On February 19th Dr. Fenton opened the abdomen through a sub-umbilical median incision, and found the tumour to be an enlarged spleen embedded in the right side of the pelvis and extending up into the right iliac region. After separating the adhesions, the pedicle of the spleen was found to be twisted through two and a half complete turns. The tail of the pancreas was contained in the pedicle, and extended to within two inches of the spleen. The portion of the pedicle intervening between the tip of the tail of the pancreas and the spleen was ligatured by transfixion and cut through, the spleen being then removed. The abdominal wound was sewn up in three layers.

Except that for a couple of days after operation the patient was somewhat restless, recovery was uneventful, the temperature never reaching beyond 99.8° F and only touching this figure once on the day following operation. The wound

1905.]

THE ANTISEPTIC.

healed *per primam* throughout and the stitches were removed on the eighth day.

The patient left the hospital perfectly well on March 18th, that is twenty days after the splenectomy.

Examination of the specimen removed showed it to be a uniformly enlarged spleen measuring 8½ inches in length, 5½ inches in breadth and 3 inches in thickness; it weighs forty-one ounces.

It was softish and elastic in consistence and dark purple in colour. Its peritoneal surface was smooth and glistening and free from adhesions. It was hardened whole in formalin. On being dissected it presented a striking appearance. The whole of the central part of the tumour, forming the major portion of it, was seen to be composed of a large hæmorrhagic mass, bright red in colour. Round this a thin layer of splenic tissue of a dark brown hue was spread out, with larger accumulations at each end. The capsule of the spleen was also thickened.

The changes observed on microscopic examination are the presence of a large central hæmorrhagic mass in which no trace of splenic tissue is discernible, which is surrounded by splenic tissue with increased trabecular connective tissue and thickening of the connective tissue capsule.

Case 2.—Dr. W. H. Fenton kindly informs me that the above is the second case of enlarged wandering spleen occupying the pelvis and simulating an ovarian tumour which has been observed and submitted to operation by him.

The first occurred about twelve years ago in his private practice, and he has kindly supplied me with the following

notes from memory, to incorporate with this article:—

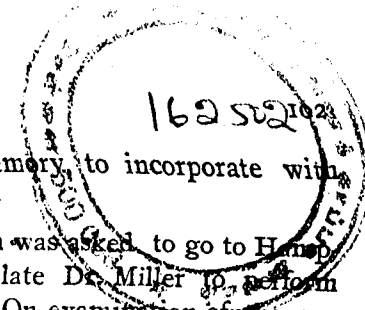
Dr. Fenton was asked to go to Hampstead by the late Dr. Miller to perform ovariectomy. On examination of the patient Dr. Fenton found a large mass in the pelvis independent of the uterus. *This he agreed was a solid ovarian tumour associated with ascites.*

The patient's general condition was very bad; she was very weak and wasted and there were many petechiæ all over the body.

Sub-umbilical median cœliotomy was performed. In the peritoneal cavity much ascitic fluid was found, which was removed by sponging. The tumour was then found to be an enlarged and displaced spleen. It was noticed that the spleen was adherent to as much of the abdominal contents as it came in contact with; so much so that it seemed a serious matter to attempt to separate these adhesions, especially in view of the capillary degeneration shewn by the presence of petechiæ in the skin, in the adhesions, and on the surface of the spleen. No attempt was accordingly made at their separation, or at removal of the enlarged spleen. The wound was sewn up in three layers.

Shortly after the operation blood began to ooze from the abdominal wound, and continued in spite of all treatment until the patient died the next day from a combination of shock and hæmorrhage. There can be little doubt that this was a case of leucocythæmia, although direct proof in the shape of a blood examination is lacking.

Case 3.—Dr. H. Gray Croly has recorded a case of misplaced and rotated spleen which simulated an ovarian tumour, in the



Transactions of the Royal Academy of Medicine in Ireland for 1896.

The patient was a nullipara, aged 40, and was operated upon on Dec. 7th 1895. During the previous Summer she had noticed a swelling in the left side, and this swelling gradually extended over to the right side. It was not painful. The patient had lost flesh and her features had become changed.

On palpation the tumour was firm and gave the sensation of fluctuation. Though larger on the left side the tumour crossed well over to the right side. It could not be moved either upwards or downwards.

No history of malaria could be obtained. Vaginal and abdominal examinations were made by the Master of the Rotunda Hospital and other skilled gynaecologists, and the *unanimous opinion was expressed that the swelling was an ovarian tumour*. In accordance with this view laparotomy was performed. A large solid fleshy mass with superficial purpuric mottling was exposed. The small intestines were adherent to the mass, but were easily detached. The mass was firmly fixed in the pelvis and could not be moved. No pedicle could be found in the usual position. The wound was therefore extended upwards to the left of the umbilicus, when a funis-like pedicle was discovered passing beneath the left costal margin. This was secured by a double silk ligature and divided. The tumour was then removed.

On passing the hand along the pedicle the splenic space was found to be empty. At the operation there was no hæmorrhage.

The patient bore both anæsthetic and operation well, and went on favourably

for some days, when uncontrollable vomiting set in and death followed with symptoms of collapse. An autopsy was not performed.

Case 4. This case is recorded by Pozzi in the *Bulletin Et Memoires de la Societe de Chirurgie de Paris* for 1903.

A girl aged 20 a native of Jaffa was admitted into the Hospital Broca at the end of December 1901. She then presented an abdominal swelling *which was considered to be a uterine tumour, probably fibromyomatous*. At the operation it was found that this tumour was adherent to the uterus, with which it had been confounded.

The patient had previously been under treatment for malarial splenomegaly. A month previously she had presented febrile phenomena and signs of pelvic peritonitis.

An exploratory laparotomy was performed on January 9th, 1902, when a mass of indefinite nature resembling a large kidney was found adherent to the uterus and the bladder, and capped by the epiploon, which was intimately adherent to it and formed a pedicle of scanty vascularity. After having detached the tumour both ovaries were found to be riddled with large follicular cysts. They were also surrounded by adhesions which contained many large blebs of serous fluid, as a result of Peri-Metro-Salpingitis. Both appendages were accordingly removed. Recovery was without incident.

The examination of the specimen shewed it to be a spleen, the seat of an old infarct in which no Malpighian corpuscles could be found. The spleen was increased in size and measured 12 c. in. in length, 8c. in. in breadth and 7½ c.in. in thickness.

It weighed 430 grns. Some days after her discharge from hospital this patient returned with signs of intestinal perforation. Laparotomy failed to save her. At the autopsy the absence of spleen was confirmed.

Case 5. In *American Gynaecology* for 1902 Ashby records the case of a single woman, aged 22, who on May 4, 1900, was seized with severe intra-abdominal pelvic pains. Her doctor found a large mass in the left inguinal region extending above the pubic symphysis. The temperature was 104° F. and a diagnosis of intra-abdominal inflammation was diagnosed.

On admission into hospital a week later the temperature was still 104° and a large mass was felt filling the pelvis and extending well above the symphysis. It was soft, compressible, and presented all the physical signs of a large cystic accumulation. On examination under ether the intra-pelvic mass was felt with greater precision. Ashby came to the conclusion *that the tumour was either an ovarian cyst or a soft uterine myoma*. It was slightly movable in the pelvis, but could not be pushed out of its position.

On opening the abdomen the tumour was found to be an enlarged spleen which had sagged down from its normal position and had become wedged in the pelvis. The spleen, which was about three times its normal size and attached by a pedicle eight inches in length, was then removed. The uterus and other pelvic organs were normal. During convalescence the temperature remained high, reaching as high as 106° with rigors.

Microscopic examination failed to detect malarial parasites, although the patient had suffered from repeated attacks of

malarial fever. On the sixth day the blood serum gave a typical vidal reaction, and there was leucopenia, the leucocytes only numbering 6500. From that time the condition was regarded and treated as typhoid fever, which ran its regular course.

The abdominal section presented no unusual features, and since her recovery the patient's health has been better than prior to the attack of typhoid fever.

Case 6. In the *Progres Medical* for 1903 Richelot records the case of a woman aged 27 who had had several attacks of pelvic peritonitis and who had a tumour in the right iliac fossa *which appeared to be a pedunculated fibromyoma of the uterus*. Laparotomy was performed, when it was discovered that the tumour was a hypertrophied spleen which had dropped into the pelvis, dragging with it the tail of the pancreas. Removal, except for the presence of extensive adhesions to the omentum vermiform appendix, was easy. Five months later the patient was in perfect health.

Case 7. Lieut.-Col. Sturmer's case is the only case reported from India with which I am acquainted. Probably Indian literature contains many such cases, or, at any rate, if unrecorded, many practitioners in India have probably met with this condition, on account of the great prevalence of splenic disorders in India. His patient was a well nourished ii para aged 25, native christian, married ten years, last child born November 1902. Admitted to the Government Maternity Hospital, Madras, on June 30th, complaining of a painless swelling filling the abdomen, of sixteen months' duration. There has been amenorrhoea for years and 4 months. States she has been getting thinner lately. Has often

had fever. She lives at Chudderghaut, Secunderabad, where malaria is very prevalent.

Abdomen. Considerable enlargement; a large irregular tumour is found occupying the right iliac and lumbar regions and encroaching on the left side, extending from the pubes to three fingers' breadth below the ribs. It fills more of the right side of the abdomen than the left. The umbilicus is flattened out. The tumour is hard, smooth, freely movable, especially towards the right side. A hard ridge is felt in the tumour through the left rectus muscle. An indistinct fluid thrill was felt on deep pressure in both flanks. There is dulness all over the tumour, but the flanks are tympanitic.

Per Vaginem. The uterus is small, os almost at outlet. Douglas's pouch is filled with a tumour which seems continuous with the tumour. In front the anterior vaginal wall is bulged down by a growth which seems to be a part of the tumour in the abdomen. The sound goes backward for 2½ inches.

An exploratory laparotomy revealed the tumour to be a spleen with a long pedicle. It was removed. It weighed 4 lbs. 3 oz. and was remarkable for the number of notches—three or four deep cuts at its edge near the usual notch.

During convalescence there was much fever, but patient was eventually discharged in good health.

In this case it is stated that the sound goes backward for 2½ in., but it is not distinctly stated whether this retroposition of the uterus was directly caused by the pressure of the enlarged spleen. A few cases in which this has happened have

been recorded. I have investigated one (Case 8.) myself. They are briefly as follows:—

Case 8.—A married woman aged 29 was admitted into the Chelsea Hospital for Women on Sept. 18, 1904. She complained of a more or less constant pain, of a dull aching character, in the left side, back and legs. This had been present on and off for several years and had several times caused her to seek medical advice. It was, however, always considered by her doctor to be due to indigestion and flatulence.

She had never been pregnant. Menstruation had always been regular until the last period, which appeared too early and was very profuse, lasting 15 days and being painful.

There was some resistance and tenderness on palpation in the left iliac fossa; otherwise abdominal examination was negative, there being neither abdominal swelling nor tumour present.

Per Vaginem. The cervix was felt lying low down and forwards, the uterus being retroverted, slightly tender and somewhat enlarged. In the left lateral and anterior vaginal fornices a softish tumour about the size of a hen's egg could be felt. It was tender on pressure.

These findings being confirmed under an anæsthetic the swelling was diagnosed as a cystic tumour of the left ovary lying in front of, and causing retroversion of the uterus.

On opening the abdomen on Sept. 27th Dr. Bonney found this tumour to be the slightly enlarged spleen, with a twisted pedicle. This was transfixed by a silk ligature and the spleen was removed. There were some adhesions round the left

ovary and tube, which were broken down. The uterus was freed and lifted up into position. Recovery was uneventful.

The removed spleen measured 6½ × 3 inches. Its peritoneal surface was rough and dragged from perisplenitis. The hilum was situated near one end of the spleen and was peculiar in its great depth, almost cutting off that end of the organ to form an accessory spleen. Section showed the spleen to be composed of normal splenic tissue.

Case 9.—Mr. Bland Sutton reported to the Clinical Society of London in 1901 the case of a woman aged 22, the mother of one child, on whom he had performed splenectomy for axial rotation of a wandering spleen. For three years following the operation this patient reported herself and allowed blood examinations to be made, but nothing noteworthy was detected. In 1895 she had an attack of right-sided pleurisy, and had suffered from menorrhagia; but this was satisfactorily explained by the condition of the uterus, namely acute retroflexion and thickened endometrium. The flexion of the uterus was caused in the first place by the heavy spleen tumbling on it. In 1898 she was in good health.

Case 10.—Webster records the case of a married Jewess, aged 38, who complained of pain in the pelvis and lower abdomen, generally of a dull aching character, varying in intensity, and radiating occasionally to different parts of the upper abdominal and thoracic regions. The pain was most marked in the right iliac region, where there was a swelling which varied in size and consistence.

On opening the abdomen the swelling proved to be the enlarged spleen, to which the omentum, intestines, abdominal wall,

bladder, right uterine appendage and uterus were adherent. The vermiform appendix was buried in adhesions on the posterior surface of the spleen. The pedicle was a rope-like structure twisted through two to three turns. The spleen was removed.

As regards diagnosis, the possibility that the tumour might have been a pedunculated uterine fibroid, a fibroma or dermoid of the ovary, or a right hydrosalpinx was considered, we are told, but only by conjecture.

Case 11.—Plucker's case relates to a lady, aged 33, who had been married five years, but only had three miscarriages. For three years she had complained of pains in the stomach and in the back.

On vaginal examination the uterus was found to be retroflexed, slightly enlarged and fixed. The right appendage was normal. The left ovary could not be felt but in its place was a hardish tumour, without a notch, the size of two fists. It was freely movable and completely filled the pelvis.

In arriving at a diagnosis a wandering kidney was certainly excluded, but a wandering spleen was considered. A consideration of the history and the result and the gynaecological examination lead to the diagnosis of a benign tumour of the left uterine appendage causing retroflexion of the uterus.

Laparotomy, was undertaken in the Trendelenburg position. The pelvic tumour was discovered to be an enlarged spleen. Splenopexy was performed, the spleen being placed in an extraperitoneal pouch beneath the ribs and fixed there by means of a series of silk sutures. Hystoropexy was performed at the same time. The patient made a good recovery.

Runge reports a similar case. A healthy, robust-looking woman, aged 21, nullipara, complained of swelling of the abdomen, with dragging abdominal pain increased on movement, and dyspepsia.

In the pelvis was a somewhat elongated tumour the size of two fists. *It pressed the uterus into a position of retroflexion*, but had no direct connection with the genital organs themselves.

The tumour was extremely mobile and could easily be pushed up into the epigastric region and under both costal margins. When this was done the uterus was released and righted itself. Blood examination shewed no increase of leucocytes.

The diagnosis was uncertain and lay between a wandering kidney and a wandering spleen. Laparotomy was necessary on account of the severity of the pain. The tumour was found to be an enlarged and engorged spleen with a long pedicle. This contained the tail of the pancreas and was twisted through one turn. The omentum was adherent to the spleen.

The removed spleen was 17.5 cm. long, 12 cm. broad, 6 cm. thick. It weighed 850 grns. The veins at the hilum were thrombosed, though the arteries were pervious.

On section the spleen was dark-red in colour and showed many large hæmorrhagic extravasations among the splenic tissues. Besides the extravasations there were evidences of chronic splenitis.

Convalescence was interrupted by an attack of acute bronchitis, but the patient eventually completely recovered.

The wandering spleen is of gynæcological interest from the fact that in addition to the above described conditions it has at

various times given rise to the impression that the swelling was a tumour of the uterine appendages, a hydrosalpinx, an ectopic gestation and even the pregnant uterus. In one case, that of Klein, an enlarged spleen was found in the pelvis of a woman of 63 who had died of some acute pulmonary disease. It was supported by a ring pessary in the vagina. Here evidently the enlarged spleen had been considered during life to have been the fundus of a retroflexed uterus.

In this article, the dangers which may arise from torsion of the pedicle in wandering spleens—and the pedicle must necessarily be a long one and very susceptible to torsion—have not been touched upon.

Lastly, the vast majority of the recorded cases of wandering spleen have occurred in women; a sexual preponderance which it shares with the wandering or movable kidney.

*DISEASES OF THE LIVER.,

BY

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It is indisputable that, although the literature of diseases of the liver, as they occur in India, is extensive and replete with important data, our knowledge of these maladies seems far from being well in advance, that is, in a great measure, due to the fact that hepatic physiology has not yet been fully embraced; but we think that the want in question is still more attributable to the circumstance that, in India, where the field of observation is so very extensive, few have per-

* Specially contributed to "The Antiseptic."

haps acted upon the good example set by Drs. Budd, Virchow, Frerichs and Harley, in making hepatic disorder a leading subject in the practical study of medicine. From the obscurity which still rests upon the functions of the liver, the progress of histological pathology has tended to make us better acquainted with the minute changes which occur in many diseases of the organ. The nature of fatty enlargement, of cirrhosis, and of the disintegration of cell texture following obstruction of the bile-ducts, is now understood, but much research is still necessary. A careful comparison of the structural changes observed in the liver after demise, with the clinical history and symptoms noticed during life, is what is greatly desired to advance our knowledge of hepatic diseases. This knowledge, however, can scarcely be hoped for, until medical men, and especially such as practice in the East, become efficient histologists. It is the application of therapeutics to these diseases, and a correct appreciation of the class of remedies called cholagogues, which, in the present state of medicine, require most to be determined. Such an investigation necessitates physiological, histological, and chemical knowledge, added to good powers of clinical observation. But of all the subjects of research now open to the young practitioner, we know of none in which patience and exactitude, based on a scientific rather than an empirical system of inquiry, is likely to yield more useful results. The liver is a large abdominal organ, occupying the whole of the right hypochondriac region, immediately under the diaphragm, and part of the epigastric region, with the gall-bladder, or receptacle for bile, lodged in a sulcus on the posterior surface of the right lobe. Above, it lies in direct contact with the

diaphragm, or division between the chest and abdomen. Below, it rests on the pyloric end of the stomach, the duodenum and upper extremity of the right kidney. Its substance or parenchyma (seen to be granular, when cut, by the naked eye) is composed of numerous minute lobules, or acini of some anatomists, connected together by cellular structure, penetrated by blood-vessels and lymphatics, and invested by the capsule of Glisson described as a cellulo-vascular membrane, and covered and retained in its position by a serous or peritoneal coat. The situation of the liver locally commences in a line immediately below the right nipple, while its lower or free border extends down as low as the margin of the ribs. The size of the organ in an adult varies a good deal in health, and in females from tight lacing it often becomes displaced, and occasionally in other persons it may come down an inch or two lower. In some cases, on the other hand, it occupies normally a higher position than usual and cannot be felt below the cartilages of the false ribs. The function of the liver is the secretion of bile, a fluid by which is effected the conversion of the food prepared by the stomach into material or 'chyle' required for the nourishment of the system. It also prepares materials which are destined to maintain animal heat by slow combustion which a portion of the blood undergoes in the lungs. A third purpose of the liver is to remove effete or noxious matter from the blood, to purify that fluid; and this effete matter is the main agent in the formation of the contents of the bowels into a suitable condition and consistence for their removal from the body without injury. It thus acts as a natural aperient and removes from the body super-

fluorous hydro-carbon, as well as it acts generally in the promotion of digestion.

In a tropical climate, a large number of the diseases encountered depend upon hepatic derangement, and it was at one time the fashion to refer nearly all diseases to the liver. This being manifestly erroneous, opinion set the other way, and disorders of the liver were for a long time scarcely regarded, as they were too trivial for notice. As usual, the truth lies between the two extremes. Very many disorders of health, both of the general system and of other particular organs closely related to the liver in function or sympathy, depend on primary trouble in the liver. The stomach and bowels, the kidneys, lungs, fauces, and brain, often present symptoms of disorder which a careful investigation will probably discover to have its seat and origin in the liver. There is great sympathy between the skin and liver, and the excessive perspiration which occurs in the tropics during Summer is accompanied by an increased flow of bile, followed after a time by drain and more or less torpor of the liver. Again, if more food and alcohol be habitually taken than the amount of practice justifies, greater strain is thereby thrown upon the organ, which may cause congestion, and, unchecked, run on to inflammation. The important object to keep in view is to preserve a proper balance between the capabilities of the liver and the function it has to perform; for it may happen that a too rich diet may overtax its powers, and render it unable to purify the blood of the elements of bile, and on the other hand, if it be over-active, more bile may be formed than can be naturally eliminated; hence biliousness or bilious attack may ensue. Disorders of the liver are far more common in tropical than in temperate regions, and there is little doubt

that over-indulgence in alcoholic stimulants, and too rich and highly seasoned diet, together with a high temperature and malaria, account for their greater frequency. With regard to the food supplied to people in India, two errors are committed; it is too much in quantity; and, in addition, there is a very large amount of condiments—spices and peppers—with it; articles which may be fitted for the cereal and the rice and vegetable diet of the Native, but are particularly objectionable for Europeans.

The liver is subject to a great number of diseases, and the most important of these as they occur in India are chiefly noticed:—

1. CONGESTION OF THE LIVER. This term implies a distension of some part, or of the whole, of the organ or sometimes the gall-bladder and cystic-ducts only are implicated. The causes are: overcrowding; a sedentary life; too much sleep, especially diurnal; excessive eating and drinking; rich and hotly seasoned food; stimulating liquors, especially those containing much saccharine matter; the sudden cessation of accustomed discharges from piles; repeated cold stages of intermittent or remittent fever, during which the blood is driven forcibly into internal organs, which thereby become distended. But the principal cause of congestion, inflammation, and abscess of the liver in the East is climatic. The liver is excited by more secreting work falling on it than in temperate climates, some of the effete material which would in temperate regions pass away by the lungs being removed from the system by an increased flow of bile. From solar exposure, heat and consequent perspiration, the skin is rendered irritable and weakened, and is therefore more susceptible to changes of

temperature, which, both seasonal and daily, are rapid and great. Hence, the surface of the body being easily chilled, the internal organs, especially the liver in its excited condition, suffer much in the same manner as in the cold stages of fever. The symptoms are coated tongue, bad taste in the mouth, depression of spirits, defective appetite, headache, bowels acting irregularly, stools dark, or sometimes light in colour, occasionally bilious diarrhoea but often constipation, nausea, a sense of weight and fulness in the right side, and pain or uneasiness in the top of the right shoulder, or in the shoulder-blade. Similar symptoms are sometimes spoken of as torpor of the liver. When such symptoms exist in a minor degree the person is regarded as bilious. Biliousness may, however, be evidenced by dyspeptic headache, or by bilious colic or by irritative bilious diarrhoea.

Treatment.—Restricted diet, iridin and leptandrin of each two grains in pill every second day, followed by saline aperients are the best internal remedies. In some cases, when indigestion is a marked symptom, the dilute aqua regia and quinine mixture may be useful. Mustard leaves applied to the region of the liver, and moderate exercise short of fatigue should be taken.

2. INFLAMMATION OF THE LIVER. The causes of inflammation of the liver are similar to those of congestion, especially chill. Congestion, if not checked, will often terminate in inflammation. It is also sometimes connected with attacks of dysentery, appearing then to arise from absorption of vitiated material, secreted in the diseased intestines, by the veins passing between the latter parts and the liver. Some are disposed to believe that the latter is not to be viewed as result and cause, as in prac-

tice it is found that those most prone to suffer from hepatic inflammation during dysenteric attacks are individuals who have suffered from some liver-malady previously, or who have been long resident in the tropics. The symptoms of inflammation of the liver are pain in the right side, increased by pressure under the ribs, by taking a long breath, by coughing, by lying on the left side. There is also pain in the right shoulder and often a dragging sensation at the scrobiculus cordis, the conjunctiva of the eyes may turn yellow, the urine is highly coloured, there is nausea or vomiting, there may be either costiveness or diarrhoea, and the stools may be dark or light in colour. The disease is generally marked by febrile symptoms, but in some cases there is little fever. Sometimes it may be distinctly made out that the liver is enlarged, but often this is not the case. When the pain is very acute, with much fever, the covering of the liver (Glisson's capsule) will be chiefly involved in the inflammation. If the bladder is irritable, and the pain more towards the loins, the under part of the liver is most affected. When vomiting is a prominent symptom, with perhaps hiccup, and pain at the pit of the stomach, that part of the liver nearest the former organ is most implicated. When difficulty of breathing, inability to draw a long breath, and cough are prominent symptoms, that portion of the liver, under the diaphragm, supporting the right lung, and probably the lung itself, are implicated.

Treatment.—Formerly venesection used to be employed, followed by the application of leeches over the region of the liver, and the administration of mercury, but such measures are not now esteemed need-

ful. For inflammation of the liver occurring in robust persons it will be desirable in the first instance to unload the gall-bladder and bowels by a saline aperient which may be repeated as necessary. One or two doses of calomel at the commencement, or occasionally during the progress of the disease, will produce all the good that can be effected by this agent, and the benefit results from the removal of acid bile contained in the ducts and gall-bladder, thus rendering the passage clear for the flow of newly secreted fluid, which even during inflammation is often copiously formed. For less robust persons chloride of ammonium, as advised by Dr. W. Stewart, A. M. D., may be given in 15 or 20 grain doses three times daily in peppermint water. As regards local counter-irritation, as hot fomentations, turpentine stupes, mustard leaves or emollient cataplasms, much benefit results from their use. If after the subsidence of the acute symptoms pain or tenderness continue, dilute aqua regia with a vegetable bitter infusion may be given, and iodine paint may be applied externally. Further treatment will consist in keeping the bowels free by some mineral water. Whatever treatment is adopted, rest in the recumbent posture should be enjoined, and no solid food or stimulants should be allowed.

3. CHRONIC INFLAMMATION OF THE LIVER, SYNONYM HYPERTROPHY. This may be a sequel of the acute form, or it may arise from repeated attacks of congestion, or it may come on so gradually from indigestion that it is often long unattended to. The first symptoms are a sensation of weight in the right side, or feeling as if a lump were there, occasional pains of a shooting character, with loss of appetite,

flatulence, and other dyspeptic symptoms. These symptoms are very similar to those of congestion, but instead of disappearing, as temporary congestion does, they become permanent. Then the liver in one form of the malady becomes enlarged, and may be felt below the ribs. From the pressure of the enlarged liver upwards, there is also cough, difficulty of taking a long breath, and pain in one or both shoulders. But in another form known as cirrhosis (interstitial hepatitis) brought on usually by the frequent use of spirituous liquors, the liver becomes atrophied or smaller than natural. In both forms the countenance becomes sallow, the skin dry, the patient desponding and debilitated, the stools, which may be loose or the reverse, are generally clay-coloured, while the urine is often high-coloured from bile. Sometimes the person becomes jaundiced. Discharge of the blood from the bowels and bleeding from the nose are also liable to occur.

Treatment.—Saline aperients and alkalies, good diet, and avoidance of alcoholic stimulants and fermented drinks, ammoniachloridum, ext. cascara sagrada, dilute aqua regia, succus taraxaci, podophylli, resina, and bromide of potassium internally, with tinct. jodi applied over the region of the liver, are all useful remedies to reduce the state of induration or enlargement of the organ. If the case be associated with malaria, quinine and other bitter tonics may be administered. But when the disease persists, as it probably will, change to a temperate climate should be taken. The functions of the liver are seldom interfered with in true hypertrophy, and its correct diagnosis is most important, lest active or injudicious measures should be improperly used.

4. ABSCESS OF THE LIVER.—This may be a development of inflammation, or originate as below:—(1) *suddenly during an attack of congestion or acute inflammation.*—If during such conditions rigor occurs, followed by cold sweats, obstinately furred tongue, scanty and high-coloured urine, depositing much sediment, fever increased at night, and diarrhoea, there will be every reason to fear formation of abscess. (2) *Gradually, or during chronic inflammation.* The most frequent manner, however, in which abscess manifests itself is after the prominent symptoms of acute inflammation have been relieved. The patient does not recover health, remains weak and languid, and after a variable period experiences occasional chills, with feverishness towards evening. This soon assumes a hectic character, and is accompanied by a tongue furred in the centre, red at the tip and edges. Weight and uneasiness are experienced in the right side, and the palms of the hands are dry. (3) *Insidiously, or without previous inflammation.*—But liver abscess sometimes occurs without any previous decided symptoms, or there may be simply loss of flesh, or a vague sense of uneasiness or obtuse dull pain, or feeling of weight in the side, with perhaps slight cough. These anomalous feelings are signs often scarcely appreciable; or, if observed, are considered too trivial to induce application for medical advice. Often it is not until shivering and cold sweats, with swelling of the liver, appear, that the serious nature of the disease is recognized. (4) *During the progress of dysentery.* If the languor, the emaciation, and even- ing fever are greater than can be accounted for by the severity of the dysentery or bloody flux, if the tongue becomes furred in the centre and red at the tip and edges

and there is uneasiness and weight in the right side, there will be little doubt that abscess has occurred. A fit of shivering in addition would render the presence of matter certain.

When abscess forms it may appear as a swelling in the side or near the pit of the stomach, when it is said to point externally; or it may burst into the stomach and be emptied by vomiting; or into the bowels, and the matter may pass away with the stools; or into the lungs, when the contents may be coughed up; or otherwise into the cavities of the chest and abdomen, from which there is no escape.

If the abscess points externally, a surgical operation is in most cases absolutely necessary, although nature often cures liver abscess more effectually by absorption. Consequently, in order to give fair play, our treatment ought, to a very limited extent, to be expectant. Still, we must not stand passively by until the disease has become hopelessly extensive and the patient has lost all reparative power. Abscess of the liver is most generally found in tropical climates, especially after attacks of dysentery.

*Hints on the treatment of Cases of Piroplasmosis, Kalazar and other fevers,

BY

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MUCH has of late been written on the causation, clinical features and symptoms of the various chronic irregular fevers known as kalazar, Black Town fever, chronic malarial cachexia, &c., which

* Specially contributed to "The Antiseptic."

have for long defied medical treatment. The discovery by Major Donovan of the invariable existence, in the spleen, of certain peculiar parasites called piroplasma in many of the fatal varieties of what is locally known as Black Town fever or malarial cachexia with enlargement of spleen, by Dr. C. A. Bentley, of Assam of similar bodies in kalazar patients, has led many others to work in the same direction and come to the conclusion that the abovementioned maladies are traceable to those parasites. A collection of contributions towards the discussion on the Leshman-Donovan body by different workers in this field is published in the *British Medical Journal* of September 17, 1904, and contains a resumé of all that has been done till recently towards determining the causes of these fatal diseases. The importance and the value of the discovery can never be overrated and great credit is certainly due the discoverers for their pains. But when one tries to look into that collection for any effective remedy for the relief or cure of the disease, one cannot but feel disappointed when one finds that in the whole collection of the abovementioned contributions, very little of any value is found to assist a practitioner in treating such cases; on the other hand, a sad note is struck when the question of remedy is considered. Major Donovan himself reporting on the progress of 72 cases admitted into his wards says—(Vide page 651 *B. M. J.*, Sept. 17, 1904). "As to the mortality 22 died, 7 were removed moribund, and with the exception of 3 still in the hospital, the remainder were discharged at their own request invariably in a much worse condition than on admission; indeed few of them had any prospect of surviving more than a month or two;" and as to the drugs employed he further

states:—"Quinine has been given by mouth, hypodermically, and intra-muscularly with no appreciable result." The same may be said of other less suitable drugs—that is, arsenic, salicylate of sodium, carbolic acid, creosote, tincture of iodine, &c. The disease is very common in Madras, especially in Black Town, and generally speaking all cases of that convenient disease "*chronic malaria*" or "*malaria cachexia*" are nothing but piroplasmosis." A happy exception is however noticed in the suggestion made by Dr. Leonard Rogers of Calcutta as to the use of red medulla tabloids or fresh uncooked bone-marrow in the treatment of kalazar, but even in this he says that it acts but indirectly, by increasing the resisting power of the patient and is by itself not powerful enough to reduce the fever or bring about a cure.

Further, it is very sad to notice that very few of the well-known medical journals pay as much attention to the *treatment of diseases* as they ought to. Most of their pages are filled by the description, bacteriological examinations and determination of causation of diseases, of very easily tried but doubtful prophylactic treatment, geographical distribution of disease, tabulation of cases as to age, sex, temperament, &c., while the most important portion, the question of medical treatment, receives but a brief notice of a paragraph or two towards the fag end of an article occupying 4 or 5 pages. Besides, ever since the science of bacteriology was begun to be studied theoretically and practically, it is unfortunate, that the clinical study of diseases has been much neglected and far too much attention has been paid towards determination of the bacteriological causation of diseases and

prophylactic measures. The discovery of the causes of any disease is certainly of great importance, but from the standpoint of the patient, whose only object is to get cured or relieved, it is in itself of little avail; for what matters to him whether his disease is caused by *piroplasma*, *trypanosoma* or *anchylostoma* so long as you have no means of curing him.

In the course of my limited private practice I have met with some success in the treatment of these fatal fevers with a synthetic compound of Guaiacol and Quinine called Guaiquin.* A brief account of some of the cases treated has already appeared in the December number of the *Indian Medical Gazette*. For the present I shall not go over the same ground or give notes of cases thus treated with guaiquin. Suffice it to say, that most of the cases I treated with this drug had all the characteristic symptoms, *viz.*, the low remittent type of fever, the wasted condition of the patient contrasting with the tumid belly, due to quick enlargement of the spleen, and to a less degree of the liver, accompanied by anæmia of variable but usually moderate degree, and in the later stages swelling of the feet, harsh skin, scabies and occasional hæmorrhages and hæmorrhagic ulcers, diarrhœa of dysenteric nature, &c. Out of eleven cases treated there were only two deaths, and in these cases the drug was not tolerated by the stomach and hence it could not be pushed to the extent of making an impression on the parasites, and the pure drug was not available for hypodermic injection.

The brief notes of some of the cases reported in the *Indian Medical Gazette* do

* A brief description and properties of the drug is published in another part of this journal.

not, I am conscious, go to establish, much less conclusively prove, the effect of guaiquin in piroplasmosis. For, in the first place, there has been no confirmation by examination of splenic blood that any of these cases were really cases of piroplasmosis. In some cases I tried to have the blood from the spleen examined, so as to make the diagnosis certain, but the patients would not agree to it, in spite of my persuasion and of my assurance of its harmlessness. I had therefore to give up the attempt, which shows what a deal of difference there is between private practice and hospital practice.

But, taking into consideration that most of these cases came from the Black Town part of Madras, where cases of piroplasmosis are found largely, as Major Donovan observes; that they all had the clinical features and symptoms described in true cases of piroplasmosis by Major Donovan, Lieut. Christopher and others; that they resisted quinine and arsenic in large doses, in some cases administered even from the very commencement; and seeing that such cases showed distinct improvement when placed on guaiquin treatment it is nothing but reasonable that a fair trial should be given to the drug in all cases of piroplasmosis, kalazar, &c., more especially as the drug itself is harmless. I have given it in doses of 12 grains four times a day without any bad result whatever. It was only in cases of irritable stomach it was found to disagree, and even in such instances there were no more serious results than nausea, vomiting or slight diarrhœa. This however might have been avoided by giving the drug hypodermically.

As regards treatment of cases of piroplasmosis the main points to attend to are (1)

the fever, (2) the splenic enlargement, (3) the extreme emaciation, anæmia and weakness, (4) complications and (5) diet.

(1). *The Fever*: it is generally of double remittent type, it rapidly yields to the coal tar antipyretics but as rapidly rises again, leaving the patient weaker and exhausted; hence no antipyretics should be given to bring down the fever. If fever is high and is unbearable, a tepid or cold sponge and innunction of *creosote* into the axilla are about the safest. The innunction of *creosote* into the axilla has been also of some use in changing the type of the fever from remittent into the intermittent variety, leaving the patient free from fever for several hours. This does not weaken the patient as much as the antipyretics, and the apyretic interval which follows the use of *creosote* will help the patient to sleep fairly and thus recoup his strength and vitality, besides giving an opportunity for the administration of quinine, which is generally found to act better when administered during the apyretic interval than when the fever is on. But the chief drug for the disease is guaiacuin. It must be given at least four times a day. From one grain to a child of one to two years to 12 grains a dose to adults, it may be given quite safely. Whether there is fever or not it should be given. By its use, the fever gradually lessens in severity and generally within 8 or 10 days the temperature reaches the normal. After that it should be continued in smaller doses three times a day for at least 2 months.

2. For the *splenic enlargement* external applications are of doubtful utility. Sometimes painting the splenic region with liniment of iodine or ointment of biniodide of mercury has produced some contraction. Internally I have found

tabloids of suprarenal glands of great use in contracting the spleen and in acting as a good cardiac tonic and hæmostatic. The hæmorrhages so common in this disease rarely happen while this drug is administered. 5 grains tabloids three or four times a day is thus a good additional remedy.

(3). In order to combat anæmia and weakness, iron preparations in any form have been found of little or no use. Arsenic is better, more especially in organic combination, as the disodic-methyl arseniate called arrhenal, in 1 grain doses for an adult after meals morning and evening. But by far the best is the freshly prepared extract of red marrow of bones. As has already been noticed above, the method of treatment of kalazar and other cachexial fevers with tabloids of red marrow has been employed by Dr. Leonard Rogers of the Calcutta Medical College Hospital with some success. It is found to effect a rapid renewal of leucocytes and thus increase the resisting power of the patient against the fatal secondary infections that generally occur in most cases towards the termination of the disease. About 8 years ago I successfully treated a case of enlarged spleen with malarial cachexia with freshly prepared extract of red marrow, which I continued for nearly two months with no more idea at the time of the virtues of the drug than that it would combat the patient's anæmia and help his nutrition. Along with this I had of course also given antimalarial remedies, to which I naturally enough attributed the eventual cure, while in fact I now believe that the extract of red marrow perseveringly administered was very probably principally instrumental in bringing about the needful termination of the disease. Judging from the special property it has of increasing the total

leucocytes and thus improving the general vitality, it is a useful adjunct to guaiacuin in the treatment of such fevers. In fact that combined treatment is certainly more efficacious than treatment with either of the drugs alone hardly requires to be demonstrated. For, whereas guaiacuin has a germicidal effect on the parasites, the red medulla fortifies and strengthens the general condition so as to render their ravages ineffective, so that both work towards the same end and co-operate with each other, the only difference in their action being that the former is aggressive while the latter acts on the defensive.

(4). As regards diet, milk and easily digested nutritive liquid preparations are the best. Brand's essence of chicken, Bovril, Lemco and freshly prepared chicken broth, &c., judiciously given will greatly keep up the strength and vitality of the patient.

(5). As for the complications they may be dealt with on general lines.

I have been induced to write down these imperfect and rough notes of my experience of guaiacuin and have ventured to invite the attention of the medical profession to it, in the hope that those who have better opportunities than myself of treating such cases, especially in hospitals, will give it a fair trial, if only to ascertain the exact claim of guaiacuin as a remedy in indisputable cases of piroplasmiasis confirmed by blood examination. It only remains to hope that further experiments with both guaiacuin and extract of red marrow will prove beyond all possibility of doubt that in these two preparations we have really found a specific for this dire disease so largely prevalent throughout the whole of India.

Cases and Comments.

A CASE OF CHOLELITHIASIS,

BY

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HYDERABAD.

THREE months ago, I saw in consultation a well-to-do Mahomedan lady of about fifty years of age with the following history.

Six months previous to my seeing her she suffered from what, according to her own description, was a severe attack of biliary colic with jaundice. The colic lasted for about ten days and then gradually subsided. The constipation that accompanied the colic soon gave place to a severe form of enteritis with blood and mucus in the motions which were accompanied with much griping and slight fever. After about two months of this, she one day passed by the bowel a dark, hard, stony mass without evident effort, and with this the jaundice gradually passed off. Since then, she has suffered off and on from attacks of dysentery alternating with constipation, which she puts down to irregularity of diet. She complains also of indigestion and loss of appetite, or rather "*the fear to eat*." This was the complaint for which she sought my aid, as also a dull aching pain in the right hypochondriac region, which increased on deep palpation. During the four months intervening between her passing the stone, and my seeing her, she has had no biliary colic or jaundice.

In spite of her long illness, and alleged emaciation she was still very obese, and the omental fat precluded all hope of discovering by palpation any indications of inflammation in the hepatic region. Beyond

a slight tenderness over that region, and an appreciable amount of enlargement of the liver, I could detect no signs of her illness.

The concretion was a typical gall stone of an irregularly oval shape and measured 3.1 metres in the long diameter. It was dark green in colour with patches of yellowish white crust, which evidently consisted of inspissated mucus, not from the gall-bladder itself, but from the seat of the inflammation set up by the stone. This dried mucus coating however was difficult to remove and gave the patches a certain amount of roughness. The stone also presented three shallow facets. The scrapings when examined chemically and microscopically yielded bile acids and cholesterol.

Besides a large number of Unani remedies, the patient had been given large doses of bicarbonate of soda, and olive oil.

The conclusions I drew from a consideration of all the available facts of the case were as follow:—

(1) That the sedentary habits and the luxurious (chiefly fatty) foods that the patient indulged in were the prominent predisposing causes of the formation of gall stones.

(2) That there were more gall stones present as evidenced by the facets.

(3) That the stone had not passed into the intestine by the common bile duct opening, but had ulcerated its way through the walls of the duct and the intestine, and had left a certain amount of ulceration of the bowel which was causing the dysenteric motions and the pain in the right hypochondrium. The bile-stained mucus

coating on the stone proper seemed to corroborate this view.

I put the patient on a non-oleaginous diet with a maximum of milk and lime water, and recommended systematic abdominal massage, and the greatest possible amount of exercise. In the form of medicine I prescribed 10 minims twice a day of Hewlett's concentrated hepatic mixture in an ounce of water by way of further stimulating the liver.

The motions became more regular and the pain over the liver region diminished. After twenty days of this treatment she passed another stone absolutely without any warning or inconvenience. This second stone was smaller (2.3 metres in its longest diameter), more irregular in shape, and presented three large and several smaller facets; but it was quite smooth and of a uniform dark green colour without any of the dirty white patches seen on the first stone. The characters of the second gall stone and its mode of exit, *i.e.*, absolutely without symptoms, confirmed my previous theories of the multiplicity of the stones and of an unnatural opening into the intestine. The ease with which the second stone was passed seemed to indicate that this artificial opening was not only still patent but was fairly large.

As the patient was in every way improving, I did not feel called upon to alter my previous plan of treatment. I advised the patient to continue the same diet, the massage and the liver drops. But she evidently got tired of the food prescribed, and further did not care for the waiting game I recommended. Anyhow she passed out of my hands and took to other treatment, with what result I have not been able to discover.

THE ANTISEPTIC.

MARCH, 1905.

Plague in Madras.

I should like to know if in this case there was anything more that could have been done. I believe not. I am of opinion that an operation even if permitted by the patient would have been uncalled for, and unjustifiable. In fact, nature had performed the operation for us, had made an opening of a nature and size that it would have been impossible for us to imitate. And this same opening, I think, to a large extent, safeguards the patient from all risk of complications such as cholecystitis, cancer, &c., so often met with in cases of gall stones. If only the further formation of gall stones could be prevented, I feel sure that in time those already formed—and there are no doubt several of them still in the bladder—will eventually be passed in the same simple manner as the second stone. Barring the fact that the age of the patient predisposes her to cancer, there is, so far as I can see, nothing to militate against a favourable prognosis if ordinary care be taken in managing the food and exercise of the patient, a matter, I admit, of no inconsiderable difficulty in dealing with patients of the class I have referred to.

EDITORIAL NOTICE.

The Editor will always be pleased to receive communications on matters of importance to the profession for publication in "The Antiseptic."

Articles, letters, and all communications intended for publication, and books for review, should be addressed to the Editor, "Lady Napier Villa," Egmore.

All communications relating to advertisements, subscriptions, and other business matters to be addressed to the Manager, 323, Thumbu Chetty Street, B T., Madras.

It is over eight years since bubonic plague made its appearance in Bombay, and from there spread to nearly every large town in India. Although Madras is one of the largest and dirtiest of Indian towns, and although it is freely connected by a good service of trains with populous plague-infected places like Bombay, Bangalore and Bellary it has so far practically escaped from the ravages of this fell disease. It was only a few days ago that some suspicious cases were detected at a small village, Kuppan, near Tondiarpett. The Sanitary and Municipal authorities promptly carried out all possible measures for checking the further growth and spreading of the epidemic, and it was hoped that they had succeeded in doing so. But now again we hear of the presence of dead rats in Kuppan, and the Sanitary and Municipal authorities are again taking most energetic measures to stamp out the outbreak, and we are confident that they will do all that is possible for them to do to prevent Madras sharing the fate of Bombay. But in the meantime it will be profitable for the public to interest themselves a little in the question of the channel by which plague has found its way to Madras. The outbreak at Kuppan has definitely been traced to

the cooly emigration depot, and we for our part absolutely accept the accuracy of the investigation which has traced the Kuppam plague to the cooly emigrants.

For a long time past we have been shipping cooly emigrants from Madras to Mauritius, Natal and some other British colonies. These coolies are recruited from different parts of the Presidency and are brought to Madras and then shipped to their destination. In Madras there is not only a central emigration depot but there are also scattered through the town various small recruiting depots. There cannot be a better medium for the spreading of plague and other epidemic diseases than these low class emigrants brought together from various parts of the country, plague-infected or otherwise. It is true that these emigrants are subjected to the Municipal plague regulations and are watched and passported like other arrivals from plague-infected localities. But in dealing with a very large number of low class coolies coming from plague-infected localities the passport system is strained to its utmost safe limits and gives room for "accidents." One such accident has happened and we have the Kuppam plague as its sequel. We feel compelled to ask, 'why go on with this dangerous traffic?' It is none of our business to supply coolies to Mauritius and to Natal at the risk of our public health. In Bombay the Mecca pilgrims are all segregated *outside* the Muni-

pal limits. In Madras, we remember, some years ago there was a public meeting, convened by the Sheriff of Madras to petition the Government to prevent Mecca pilgrims embarking from Madras. In the case of the Mecca pilgrims, at least, the Government had some difficulty in compulsorily stopping the religious rites of an important section of His Majesty's subjects in India. But in the case of the Mauritius and Natal coolies there is no such difficulty. The Indian emigrants to South Africa are treated in that country most shamefully, and all that we get for the trouble of sending these coolies to the different colonies is bubonic plague. We protest most emphatically against the coolie emigration from Madras, as it seriously endangers the public health of this city, and we hope that the public of this city will also raise their voice against this dangerous traffic. If ever Madras should become plague-infected the responsibility for all the human lives that may be lost from that disease will rest with those who are responsible for the continuance of the coolie emigration.

The Misonicotinist.

WE have had a temperance congress in Madras. We have also had a remarkable article published in a local review from the pen of an eminent misonicotinist. The crusade against the abuse of alcohol as well as against the

abuse of nicotine has our full sympathy. From a medical point of view there is very little to be said in support of the habitual use of either alcohol or tobacco. The most that can be said in favour of tobacco is, in the words of the late Sir Morell Mackenzie; "that most people can smoke in moderation without injury, and that to many tobacco acts as a useful nerve sedative." The evil effects of excessive tobacco smoking as manifested in general nervousness, in the peculiar condition of the heart, called tobacco heart, in amblyopia, in amblyphonia, if we may use such an expression, and in general relaxation of the muscular system are well known and generally recognized. Nor will any one deny that nicotine is an exceedingly powerful poison which cannot be misused with impunity. It is therefore necessary that votaries of 'my lady nicotine' have to be both careful and moderate in their use of tobacco in any shape or form. While saying that, we feel also bound to point out that if anti-nicotinists will be more moderate in their abuse of tobacco and its smokers they might succeed in attaining their objects better. Truculent sanitarians and well-meaning fanatics and literary misonicotinists have each in their turn denounced the practice of smoking in vigorous, trenchant and even in unparliamentary language. We even suspect that to this indiscriminating anathema the use of tobacco owes, to a certain extent, its present almost universal

popularity. Was it not a Frenchman who said of some innocent pleasure that it would be perfect if it were sinful? To the 'average sensual man' if anything was needed to make the seductive charms of tobacco perfect the abuse of the antinicotinits supplied that want. We recognise the evil effects of over use of tobacco. But we do not feel it our duty to stand at the feast of life, like Sancho's physician, to condemn everything on the table. Human beings are not physiological experiments, and physical well being is not the sole end of existence.

Mr. Frederic Harrison, one of the most eminent literary men now living, and a staunch and sincere friend of this country, calls smoking his 'pet abomination' and denounces the habit in strong language in the February number of the *Indian Review*. He calls the weed 'filthy,' and considers smoking 'a beastly disease to be shunned on grounds moral, social, æsthetic, medical and sexual.' If he had condemned smoking on spiritual grounds as well he would have made a greater impression on the minds of the Indian Vedantists. "The weed," says Mr. Harrison, "was first introduced into Europe at the Court of one of the most infamous women at an age of poisoners." We believe that it is to Queen Elizabeth that Mr. Harrison refers in such polite terms. Queen Elizabeth's moral character has had as much influence on the introduction of tobacco smoking into

England as it probably had on the production of Shakespeare's plays. But while Mr. Harrison is so strong against the "degrading appetite, loathsome to most women and decent men and unworthy of a gentleman," because he considers smoking to be "anti-social, anti-feminine and anti-human" he is good enough to concede that "the scent of a very fine Havannah in the open air on a frosty night, smoked by a pleasant friend a few yards off, is not offensive." What he objects to is to "the cheap cigarette, the stinking pipe, the rotten garbage of cheap stuff, the stale clammy reek where smoke has been every night. There we quite agree with Mr. Harrison. But all that is not the fault of tobacco. It is the high duty levied on tobacco in England and the perfectly unreasonable English climate which between them are responsible for the picture so graphically depicted by Mr. Frederic Harrison. On account of the high duty on tobacco in England good cigars are too costly for the ordinary man's pocket, while its peculiar climate necessitates smoking inside closed rooms, and hence the 'clammy reek where smoke has been every night.' If Mr. Harrison will try one of Spencer's Madras cigars, seated on a long arm chair on the verandah of a bungalow in Madras, we feel certain that if he does not forth with become a confirmed smoker, at all events he will denounce smoking in less vigorous language ever after. It is also worthy of remark that according to Sir

Morell Mackenzie "inhabitants of warm climates suffer less from the effects of tobacco than the dwellers in the temperate climate of England, and persons leading an outdoor life can smoke with much greater impunity than those who spend most of their time indoors." Mr. Harrison concludes his article with two quotations, one from William Morris and the other from Ruskin, both of course condemning the habit of smoking. The weight of three such eminent names in Literature as those of Ruskin, William Morris and Frederic Harrison is indeed very great. But can any student of English literature think of Tennyson or Carlyle without his pipe?

Our Contemporaries.

MEDICINE.

SMALL-POX,

BY

FREDERICK H. DILLINGHAM, M. D.,

Adjunct Professor of Dermatology, New York Polyclinic; Late Assistant Sanitary Superintendent, New York Health Department; Visiting Physician, St. Joseph's Hospital; Fellow of the Academy of Medicine; Member of the County Medical Society; Medical Association of Greater New York, Etc., Etc., New York City.

Small-pox is a subject of great interest to the medical profession, on account of the numerous types which have been prevalent over the United States for some years past, and the fact that, as a rule, the first cases have not been correctly diagnosed, and the true nature of the disease recognized only after it had made considerable headway.

During the twenty-two years that I was connected with the Department of Health in the city of New York, I saw nearly fifteen hundred cases of small-pox, and probably as many more which were incorrectly reported as such, and I can truly say it is often one of the most difficult diseases we have to diagnose, and sometimes a positive diagnosis is impossible.

Small-pox is one of the most contagious of the exanthemata, and few persons exposed to the disease escape unless protected by a previous attack or vaccination. The disease is common to all ages, and the contagion is present in the exhalations, secretions, and especially in the crusts. There is no danger of contagion during the period of incubation, before the prodromal symptoms appear. The period of incubation is usually about two weeks, although I have seen it vary from seven to twenty-one days.

Invasion is usually marked by chill, often convulsions in children, severe frontal headache, and pains in the back and limbs, and, as a rule, there is high temperature. The prodromal symptoms, however, will not always give an indication of the severity of the disease, especially in the milder cases. A rash resembling that of scarlet fever or measles sometimes appears before the true eruption, and is most frequently seen in the inguinal region and in the axillæ. Another form is the hæmorrhagic, in which petechiæ appear over the whole body, even on the mucous membranes, and the patient may die before the appearance of the true eruption, in which case a correct diagnosis is often not made until other members of the family are attacked with small-pox.

In a typical case of small-pox the eruption appears on the third or fourth day as small red spots, which, in a few hours, become papular, elevated, and "shotty" to the touch, and are usually seen first on the mucous membrane of the mouth, then on the forehead

and wrists, and extend gradually over the whole body.

With the appearance of the eruption the premonitory symptoms usually disappear, although they may continue for several days. The papules increase in size, and become vesicles with clear contents on the fifth or sixth day, often become umbilicated, and on the eighth day contents are yellowish in color, the umbilication disappears, and the form becomes globular. The pustules may dry quickly and become crusts. This process takes place first on the face, and follows the course of the eruption. The pustulation, fever and general symptoms return, but subside usually after two or three days, although they may continue longer. In confluent cases symptoms are more severe, and the lesions run together and coalesce. In mild or modified cases there may be no prodromal symptoms, and the eruption may be the first thing noticed; the lesions may be very small and develop quickly, some not advancing beyond the papular stage. Again, they may be superficial and become vesicular during the first twenty-four hours, and sometimes are seen first on the body instead of the face. I have seen a case where there were only six lesions on the body, and they entirely disappeared in seven days.

A few years ago the authorities all maintained that the lesions in small-pox never came out in successive crops, but I have seen a number of cases where papules, vesicles, pustules, and crusts were present in the same area.

The disease most likely to be confused with small-pox is chicken-pox. In typical cases there should be no difficulty in making the diagnosis, but those of the irregular type often present great difficulty even to those who have had a large experience. There is no symptom or character of the lesion that is found in chicken-pox that I have not seen in some degree in small-pox, and it is neces-

sary to carefully consider the early symptoms and character of the lesions. Some claim that chicken-pox does not occur in adults, but I have seen many such cases.

In making a diagnosis, the following points will be of value, although in the irregular cases the symptoms vary, and none of them can be depended upon. The invasion is more severe in small-pox, and lasts three or four days, while the eruption appears on the first day in chicken-pox, and there is no secondary fever. In some cases of small-pox the invasion may be slight or not noticed, and the secondary fever absent. The temperature in small-pox usually falls when the eruption appears, while it increases in chicken-pox during its development. In small-pox the eruption appears first on the mucous membrane of the mouth, then on the forehead, and wrists, while in chicken-pox it is first seen on the shoulders and chest, although it may be present in the mouth.

In small-pox the lesions are more uniform and deeply seated, and commence as small papules, not usually becoming vesicles before the second day, while in chicken-pox they appear as maculæ, which develop into vesicles in a few hours, and are very seldom shot-like, but superficial, flat, and of irregular shape. The vesicles usually have a firm base in small-pox, while they are superficial, and can be easily brushed off in chicken-pox. In small-pox the eruption usually follows a regular course over the body, and does not appear in successive crops as in chicken-pox. Umbilication may be seen in chicken-pox, but is not as general as in small-pox. The pustules in small-pox keep their form well for several days instead of becoming flattened and breaking down, as in chicken-pox. The secretion in chicken-pox is mostly transparent. The duration of an attack of chicken-pox is much shorter, and there are few scars.

In measles, the catarrhal symptoms are a great aid in the diagnosis, the temperature gradually increases, and reaches its height while the eruption is appearing over the body, but there is not the rapid fall seen in small-pox. The eruption spreads very rapidly, and the lesions are larger, crescentic, and more superficial, without the "shotty" character, and never become vesicles or pustules.

The hæmorrhagic form is sometimes mistaken for scarlet fever, but the constitutional symptoms are more severe, and the eruption does not disappear on pressure, and is of a more intense red colour. The absence of the crusts, the condition of the tongue and throat, hæmorrhages of the conjunctiva, should exclude scarlet fever. In syphilis, the history of the case and character of the lesions should enable one to make a diagnosis. I have seen persons suffering at the same time with small-pox and scarlet fever, small-pox and measles, small-pox and syphilis, and it should be remembered that this may occur.

Treatment.—All carpets and furniture should be removed, and the room should be well ventilated. Cleanliness of the patient is important, and the linen should be frequently changed. Everything that has been in contact with the patient must be disinfected. The treatment is mainly symptomatic. It is often necessary to give opium or one of the cold tar series to relieve the pain in the beginning. The diet must be light during the early stage of the disease, and it is well to rely upon milk and broths. Cold drinks may be freely given. The fever may be reduced by cold sponging or by wet pack. The lesions should be protected from the light, and lint soaked in a weak carbolic or bichloride solution can be applied to the face and hands. The body should be anointed with vaseline or some oil which relieves the itching, keeps the crusts moist, and prevents desquamation from flying in the air. If there are

many lesions on the scalp, the hair should be cut short. Particular attention should be paid to the condition of the eyes, mouth, throat and nose, and they should be cleaned and washed with an antiseptic solution several times a day. The patient must not be discharged until all the pocks have been removed, and the desquamation has ceased.—*The Medical Brief.*

MEDICAL CASES,

BY

LEONARD WILLIAMS, M.D., M.R.C.P.,
Congenital Absence of the Pectoralis Major Muscle.

Here is a little boy, aged 5, who came into the hospital some time ago, under the care of my colleague, Dr. Fürth, suffering from what subsequently proved to be bronchitis. In the course of an examination of his chest it was observed that he had no pectoralis major muscle on the left side. This naturally gave rise to the suspicion that he was the subject of myopathy. The form of myopathy which would be most likely to affect a lad of this age would be that which is known as Erb's juvenile form. The pseudo-hypertrophic form is out of the question. He has no pseudo-hypertrophy of any of the muscles. The Landouzy-Dejerine type is equally out of the question, because his face muscles are quite unaffected. If we now examine him for any evidences of the involvement of those muscles which in Erb's juvenile form we should expect to find affected, namely, the biceps, triceps, supinator longus, latissimus dorsi and trapezius, we find that all of them are perfectly sound on both sides of the body.

The serratus magnus is a muscle which is peculiarly prone to early degeneration in this type of myopathy, but there is no affection of it here, for you see that when he

pushes my hand away from him, his scapula remains firmly fixed to his side; that is to say, there is no "winging," and the serratus magnus is therefore intact. Having regard to these facts we can only come to one conclusion about the lad, and that is, that the absence of his pectoralis major is a congenital freak. Except that he is somewhat subject to "colds," he is otherwise in perfect health.

Friedreich's Ataxia in three sisters.

These three girls are members of one family. They show in varying degrees the signs of a disease which is known as Friedreich's ataxia. The two elder have the ataxy, abolition of the deep reflexes, nystagmus, pes cavus and the peculiar facies which characterise the disease; in the third, the knee-jerks are still present but her nystagmus and pes cavus show that she is nevertheless the subject of the complaint. Friedreich's ataxia, as you know, differs from locomotor ataxia in that it nearly always exhibits a family tendency, that it attacks young people and that some of the cardinal signs of tabes, such as the Argyll-Robertson pupil, lightning pains and sphincter trouble are always absent. It is said that primary optic atrophy, which is common in tabes, does sometimes occur in these cases, but it is certainly very rare. Some of the findings in Friedreich's disease, on the other hand, are rare in tabes. Nystagmus does occur in tabes, but it is usually a late manifestation and is certainly not a common one. Although in tabes there may be, as you know, considerable involvement of the joints known under the term "Charcot's joints," it is exceedingly uncommon to find anything which can be properly described as a pes cavus. The same may be said of any involvement of the vertebral column, scoliosis, being of course just as characteristic of Friedreich's disease as is pes cavus. But probably the most definite point of distinction between those two types of

ataxia is to be found in the fact that in the family disease there are often to be found some evidences of the involvement of the lateral columns of the cord. The sclerotic process commences, of course, in the posterior columns, much as it does in tabes; but as the cases advance, it nearly always spreads to the lateral columns, giving rise to some, at any rate, of the signs of ordinary spastic paraplegia; so that in addition to the absent knee-jerk, you will often find an extensor response to plantar irritation on one or both sides. The absent knee-jerk in two of these cases is quite evident even when tested with reinforcement. There is, in the third case, a fairly active knee-jerk on each side. I am afraid I cannot demonstrate to you the presence of Babinski's sign in any of these patients to-day, because their feet are all cold, and, as you know, the sign in such circumstances is exceedingly difficult to elicit. You must take it from me, however, that certainly two and, if I remember rightly, all three patients, show the extensor response in favourable circumstances. The combination of signs of paraplegia with those of ataxia naturally make one think of the disease which has been described as ataxic paraplegia. Now, how does this disease differ from Friedreich's ataxia? Well, first of all, there is the age of the patient. Ataxic paraplegia does not often, though it does sometimes, affect people as young as the patients before you, and it certainly never exhibits any family tendency. Moreover, the dominant note in ataxic paraplegia is the spasticity, as the dominant note in Friedreich's disease is the ataxia; so that the clinical picture which you obtain in the former is that of primary spastic paraplegia with ataxia superadded; whereas in the latter the picture is that of an ataxic condition in which, if the signs of spasticity are to be found at all, they must be carefully sought for.—*The Polyclinic.*

Diabetes Insipidus with Focal Cerebral Symptoms,

BY

DR. J. GROBER.

A man, aged 32, was, on Dec. 17, 1902, transferred from the eye department to the medical wards, as in addition to suffering from complete left ophthalmoplegia of unknown origin, there were cerebral symptoms. The history obtained from relatives was that he had always been healthy until April, 1902, when he fell off a bicycle on his head. He then began to suffer from headaches, especially on the left side. In Oct. he had typhoid fever. Early in Dec., though still feeling unwell, he resumed work as a postman. On Dec. 6 he was suddenly seized with violent left hemicrania, which resembled the headaches he had after the bicycle accident. At the same time the left eye began to swell, and became immobile, the upper lid could not be moved, and vision deteriorated. He, therefore, entered the eye ward, where at first he could walk about. After Dec. 15 he was unable to rise.

On Dec. 17 he was somnolent and lay quietly, but frequently gesticulated as though to ward off danger and put his hand to the head as though in pain. If questioned he answered only by inarticulate sounds. He could not even express himself by shaking or nodding the head. The left eyeball was not only motionless, but more prominent than the right, so that it was only half covered by the upper lid. The entire orbital contents appeared to be forced forwards. The lids were tender and attempts to obtain fluctuation were exceedingly painful. A gradually increasing pallor of the optic disc had been noted in the eye-ward; otherwise the retina was normal. There was optic atrophy but not a choked disc. The left pupil did not respond to light. The right eye was normal. The temperature was normal. Urine and fæces were passed involuntarily. The urine contained $\frac{1}{4}$ per mille

albumin, but no casts. The internal organs appeared to be normal.

The same evening there were symptoms of implication of the nervous structures at the base of the brain. There was bradycardia, the pulse-rate being 45 to 60. In addition to left hemicrania there was pain over the nape of the neck and the upper cervical vertebræ, which was most intense on movement of the head and pressure over the back of the neck. There was also paresis of the left facial nerve. The patellar reflexes were absent and there was no ankle clonus. Babinski's sign was negative. Sensibility and the motor functions could not be tested. It was thought that there was an inflammatory affection at the base of the brain, which had taken an unusual course—probably spreading along the meninges—from the optic foramen to the medulla oblongata. The usual source of infection in meningitis—the tonsils, cervical glands, nose, and ear—were normal. An ice-bag was applied to the left side of the head, andunction of 3 gm. of blue ointment was performed over the nape of the neck. On Dec. 18 he was less restless, and did not moan and cry out so much. There were intervals of consciousness, in which he gave a correct—though incomplete—history of his illness. But the left eyeball was even more prominent and tender, and the whiteness of the optic disc was more marked. The condition of the pupil was unaltered. Vision was blurred with the left eye, and there was diplopia. The paralysis of the third, sixth, and seventh nerves persisted. The rectal temperature did not exceed 99.5°. Sensibility and motility were normal. The urine was passed voluntarily. Albumin persisted till Dec. 23. The symptoms of basal meningitis gradually subsided. Within 3 days the pulse-rate became normal, the knee-jerks returned, and the periods of semiconsciousness were less frequent. He moved his limbs and could walk, though with a somewhat reeling gait.

There was no ataxy. The headache was less violent and occurred only at infrequent intervals.

During the first few days the urine was scanty and concentrated. But within 11 days it became extremely pale and dilute, and was passed in large quantities. Thus on Dec. 18 the amount for 24 hours was 7 oz., and the s.g. was 1030. On Dec. 23 the former had risen to over 31½ oz. and the latter had fallen to 1012. On Dec. 27 the figures were respectively 91½ and 1006, and on Jan. 2, 338 and 1005. This polyuria was combined with polydipsia and great thirst. The urine contained no sugar, albumin, nuclein, indican, diacetic acid, or acetone. On April 1, 1904, this condition was unaltered. The s.g. never exceeded 1006, and even with restriction of the liquid consumed (which was most difficult) the daily quantity excreted was 9 to 12½ pints. The biuret, diazo, and orcein reactions were negative. It was evidently a case of diabetes insipidus. He was in hospital till Feb. 16, 1903. The exophthalmos decreased but did not disappear. The facial paresis entirely disappeared, but the ophthalmoplegia persisted unchanged and the defective action of the upper lid resulted in chronic conjunctivitis, epiphora, and numerous styes. The pallor of the disc increased and the retinal arteries became narrow. The immobility of the pupil persisted. The sixth nerve was paretic, but the fourth nerve was normal. There was crossed diplopia, the image of the right eye being somewhat above that of the left. At first it was necessary to keep the eye covered so as to exclude the left image, but later he learned to disregard it. His general health was excellent, and no further symptoms of nervous disease developed. He resumed work as a postman.

No history of syphilis was obtainable and the man had 2 healthy children. What was the process? According to Gerhardt changes

in the brain or posterior cranial fossa have almost invariably been found at the necropsies in cases of diabetes insipidus. Kahler, who collected a number of such cases, distinguishes those with diffuse cerebral symptoms from those with focal symptoms. In the latter class paralysis of the sixth nerve appeared to be constant. Though he never observed paralysis of the third nerve he recorded several cases of paralysis of one or other of the cranial nerves, including the facial. It would be unsafe to deduce the site of the lesion in diabetes insipidus from these facts, as the great majority of cases of paralysis of cranial nerves are not complicated by polyuria, which further frequently occurs with lesions of the brain not involving the cranial nerves. Claude Bernard showed that, by a slight local modification, the "diabetic puncture" produced diabetes insipidus instead of mellitus. French authorities have subsequently held head injuries to be one of the chief causes of the disease. For long it was thought that only injuries involving the medulla oblongata could produce diabetes insipidus. But Kahler showed that this disorder might complicate any lesion—tumours, hæmorrhages, softening, and fractures of the base—situated in almost any part of the brain contained in the posterior cranial fossa. And a few cases have been published which show that the lesion is not necessarily limited to that part of the brain, so that polyuria appears to be a possible complication of any cerebral lesion. The study of the etiology of diabetes insipidus is further complicated by the fact that many cases apparently have no connection with the central nervous system. However this may be, it seems certain that in the writer's case the marked focal symptoms—paralysis of the oculomotor, abducens, and facial nerves—were in some way related to diabetes insipidus, and that both had a common origin, viz., a structural change in some part of the brain. The nature of this change

could only be surmised. There was no sign of tubercle or syphilis, and no reason to suspect a hæmorrhage. The two possible causes were typhoid fever and the fall on the head. Eichhorst reports a case in which diabetes insipidus followed typhoid fever, and Gerhardt states that it may follow or be caused by most infective diseases, especially in young subjects. But though paralysis of cranial nerves may occur in typhoid fever, the combination with severe cerebral symptoms renders it more probable that the fall was the common cause of the diabetes insipidus and the focal symptoms. Though somewhat remote in point of time he had since suffered from hemicrania. Kahler states that in 13 of his 26 cases of diabetes insipidus, which followed cranial injuries, fracture of the base occurred. That a lesion of the base had existed in this case for some time was proved by the fact that, when first examined in the ophthalmic ward and before the alarming condition of stupor supervened, the left optic disc was abnormally pale. Cases are not infrequent in which typical symptoms of diabetes insipidus have not appeared until some time after a head injury, and in some of these their appearance has coincided with or been followed by the onset of cerebral symptoms. The only symptoms in the writer's case which were not satisfactorily explicable, as the result of a fracture of the base were the exophthalmos and tenderness of the eyeballs, which at first raised the suspicion of a retro-bulbar orbital process. The subsidence of these symptoms without the occurrence of pyrexia rendered improbable the view that they were due to infection of the retro-bulbar tissue and, later, of the basilar meninges, which had become a *locus resistentiæ minoris* owing to a former fracture, with organisms which had gained access during the attack of typhoid fever. *Munch. Med. Woch.*, Sept. 13, p. 1633.

The Pathology of Angina Pectoris,

BY

PROF. WM. OSLER.

The association of disease of the coronary arteries with angina pectoris has not helped much to explain the mysterious nature of the pain of angina or the other phenomena of the paroxysm. In other parts arterial disease is also associated with pain. Thus in the head migraine is associated with arterial disease; severe and characteristic headache with high blood pressure; agonising pain, with some cases of cerebral embolism, and more rarely with thrombosis. In lesions of the mesenteric arteries there may be severe abdominal pain. But in sclerosis of the arteries of the limbs the most remarkable disturbances of sensation occur. There may be (1) simple paræsthesia (numbness and tingling), (2) painful cramps, usually slight and nocturnal or of great intensity and deserving the name of angina cruris more than that of intermittent claudication which Walton has applied to them, (3) paroxysms of pain with erythema and other symptoms (the arterio-sclerotic type of erythromelalgia). But the pain of angina pectoris is *sui generis*, and while its association with coronary sclerosis is unquestionable there must be some other factor. The writer distinguishes 4 groups of angina pectoris in relation to arterio-sclerosis. (1) The first is the neurotic in which young persons die with all the symptoms of angina and yet the necropsy shows normal coronary arteries and no arterial disease anywhere. For example, a man, aged 28, had for years had paroxysms of agonising cardiac pain and died suddenly in an attack. (2) The angina pectoris of young men associated with syphilitic disease, arteritis, aortic or coronary or both. This form usually occurs in men before the age of 35. There may be no general arterio-sclerosis but there is a lesion either at the root of the aorta, involving the

sigmoid valves, or confined to the coronary arteries. The paroxysms may be the initial symptoms of aortic aneurysm. The attacks are relieved and sometimes cured by iodides. (3) The pre-senile case forming the great majority in which there is coronary sclerosis, a part of widespread vascular degeneration. But there must be another factor, for in only a small proportion of the cases of coronary sclerosis does angina pectoris occur. (4) The senile group, after the age of 70, is not infrequent, being a sort of terminal event in cardio-vascular degeneration.—*Jour. American Med. Assoc.*, Sept. 17, p. 775.

Streptococcic Cellulitis,

BY

DR. DEHAVILLAND HALL.

A woman, aged 46, came to hospital on May 16, suffering from acute lacunar tonsillitis on the left side and herpes of the lips. She was treated with salicylate of sodium and in 10 days was apparently well. On the 30th she was admitted complaining of pain and a great swelling in the mouth, of 24 hours' duration, and a temperature of 103.5°. She could not protrude the tongue, which was pushed upwards by a large oedematous swelling. There was also some brawny swelling beneath the chin. The urine was of s.g. 1016 and contained much albumin, blood, and hyaline, granular, and cellular casts. She was ordered 3 pints of milk, 2 eggs, and 3 oz. of brandy in the 24 hours, and a mixture containing 5 grs. of carbonate of ammonium, $\frac{1}{2}$ dr. of tincture of cinchona, and 10 mm of tincture of nuxvomica every 4 hours. The sublingual swelling was incised but only serum was evacuated. A mouth-wash of borax and boric acid was ordered to be used every hour. Three and a half hours after admission the temperature rose to 105.4. She was then injected with 10 c.c. of antistreptococcic serum and this was repeated 4 hours later, when the

temperature had fallen to 102°. By 11 a.m. of the 31st the temperature had fallen to normal. She was much better and the swelling in the mouth had much diminished. The pulse was 80. On this day two more injections of serum were given. The urine, which for the first 2 days was very scanty and highly albuminous, rapidly increased in quantity; on the sixth day after admission she passed 60 oz. containing only a trace of albumin. She left the hospital a few days later quite well. A swab showed streptococci, staphylococci, and bacilli (2 kinds). Cultures showed streptococci, a large bacillus (Gram staining), and a thin bacillus (non-Gram staining).

The writer diagnosed a condition closely resembling angina Ludovici, and from the marked signs of septic intoxication gave an unfavourable prognosis. The immediate improvement which followed the injection of antistreptococcic serum was so striking that there can be little doubt that it was the result of the injection. The writer has seen similar cases in the pre-serum days run a rapidly fatal course. The result of the discussion at the Medical Society of London on Jan. 11 of this year, was to emphasise the necessity of the early administration of the serum so as to neutralise the toxins before irremediable lesions had occurred. The infection probably originated from decayed teeth.—*Lancet*, Sept 10, p. 763.

Syphilitic Uræmia,

BY

JOSEF BARABAS.

A man, aged 40, was admitted to hospital with mucous patches, and a universal papular and roseolous syphilitic eruption. He had acquired a chancre some months previously, but the sore throat with painful deglutition appeared only a week, and eruption 3 days before admission.

There was albuminuria. He was treated with inunctions of mercurial ointment. The following day there were malaise, nausea, vertigo, paræsthesia of the soles of the feet, and occasionally severe muscular spasms. The next day there were general convulsions, with brief losses of consciousness, amaurosis, and diarrhoea. The quantity of urine in the 24 hours was reduced to 280 c.c., it was dark, and contained albumin and bile pigments. The conjunctivæ and skin were slightly icteric. The inunctions were abandoned, and a tablespoonful of the following mixture was given hourly: sodii iodid. 5.0, iodi puri 0.05; aquæ 200. The next day the condition had improved, and 2,950 c.c. of urine were passed. Several days later he was in good health. The inunctions of mercury were resumed. The urine was examined at intervals during the following 6 months, but albumin was not again detected. It was uncertain whether the uræmia depended on chronic or syphilitic nephritis. But the beneficial action of iodine, and the disappearance of albuminuria favour the syphilitic theory. If it was due to chronic nephritis the albuminuria should have persisted. *Ungarische Med. Presse*, April 20, p. 194.

Two Cases of Infectious Splenic Anæmia in Childhood in a Family,

BY

DR. PITINI.

A boy, aged 3, came under observation. His sister, aged 4, died 3 years before from anæmia, accompanied by enlargement of the liver and spleen. The boy had measles a year before and then began to grow thin and had interrupted fever, which was higher in the evening. The abdomen swelled on left side and the feet and face were often oedematous.

He was very lean and pale. The glands were not enlarged. The gums were swollen

and easily bled; the internal surface of the left cheek, opposite the last molar teeth, showed a circular ulcer. The liver was enlarged; the spleen was swollen, hard, and indolent. Blood examination showed 38 per cent. of hæmoglobin, 2,225,000 red and 10,500 white blood cells. A virulent diplococcus was isolated from the blood.

CASE 2.—His brother, aged 8 months, had always been very thin and pale. There were no swollen glands. The liver and spleen were enlarged. Blood examination gave 40 per cent. hæmoglobin, 2,500,000 red, and 8,000 white blood cells.

In both cases the fever ranged from 100.4° to 101.4° in the morning to 102.2° to 103.1° in the evening. The history excluded syphilis; the blood examination, malaria, leukæmia, and pernicious anæmia. The only diagnosis was therefore splenic anæmia. The first child was in a desperate condition. Iron and arsenical treatment proved nearly useless. The second one died from relapsing gastro enteritis.—*Gazzetta Medica Lombarda*, March 28, p. 120.

Traumatic Aortic Incompetence,

BY

TREIRSANELLO.

A workman, aged 49, was admitted to hospital. There was nothing in his history to explain the presence of valvular disease. In his work he made intense muscular efforts and he was addicted to alcohol. Two months before admission he was struck on the right chest by a wagon. He lay unconscious for some time and had to take to bed for 10 days. When he resumed work he complained of palpitation and dyspnoea. He remained at home for a month but the dyspnoea and palpitation increased and vertigo and oedema of the legs developed. On examination aortic incompetence was found. The apex beat was in the sixth space about 2 in.

outside the nipple line. There were marked pulsation of the carotids and peripheral arteries, a diastolic murmur over the aortic area, and capillary pulsation in the nails. In hospital the symptoms became worse and effusion took place into the pleural and peritoneal cavities. Death resulted from cardiac failure. *Gazzetta Med. Lombarda*, Oct. 3, p. 378.

Abscess of the Spleen, following Broncho-Pneumonia,

BY

MUSCATELLO.

A woman, aged 32, suddenly became feverish and after 7 days was admitted to hospital. She complained of pain in the right chest and headache. The temperature ranged between 102° and 104°. On the following day broncho-pneumonia of the upper lobes of the right lung was diagnosed. The spleen was palpable and there was jaundice. The expectoration contained pneumococci. Widal's reaction was obtained and puncture of the spleen showed the presence of the typhoid bacillus. Three weeks after admission the exudation into the lung had nearly disappeared, when suddenly the patient was seized with sharp pain in the left hypochondrium and the temperature rose to 104°. Next day the spleen was greatly swollen. The swelling increased and extended nearly to the umbilicus. On the following days there seemed to be deep fluctuation. An abscess appeared in the lower third of the right thigh. A week later laparotomy was performed and a large sub-diaphragmatic abscess was opened containing slightly hæmorrhagic pus and necrotic pieces of spleen. The pus contained a lanceolate diplococcus but not the typhoid bacillus. The abscess in the thigh contained the pneumococcus. Two months later recovery was complete.—*Gazzetta Medica Italiana*, April 14.

Peritonitis from Excoriation of the Toe Simulating Appendicitis.

The following is the necropsy of the case described in the January number, p. 27. The necropsy given there refers to another case.

The retro-peritoneal tissue from the right Poupart's ligament to the diaphragm, with the posterior part of the perinephric fat on the right side was inflamed and, in places, purulent. The spleen was enlarged, but otherwise the abdominal and pelvic viscera were normal. The right inguinal glands were slightly enlarged; one, which was of the size of a hazel nut and of a greyish-red colour, contained a well-defined abscess of the size of a pea. This was evidently secondary to an excoriation on the outer side of the right little toe. It was covered with a crust, and though its edges were reddened, showed no signs of inflammation, and was evidently healing. The pus in the glandular abscess and the retro-peritoneal cellulitis contained pure cultures of the staphylococcus pyogenes aureus.

Under the anæsthetic a swelling was felt in the right iliac fossa, which, before the incision was made, appeared to render the diagnosis of appendicitis practically certain.—*The Medical Review.*

SURGERY.

The Wounded Russians.

An interesting letter, dated Liao-yang, Aug. 1, from Prof. Zoege von Manteuffel, one of the surgeons with General Kuropatkin's army, appears in No. 38 of Sept. 18 *St. Petersburger Medicinische Wochenschrift*. His experience confirms generally that of the Boer war as to the comparatively humane effect of modern small-bore rifles. In Kharbin and Mukden he saw a number of perforating abdominal, thoracic, and cranial wounds, which healed almost without excep-

tion. At Liao-yang he found that these injuries were not always so harmless, and that peritonitis with fæcal fistulæ, pyopneumothorax, and meningitis were not uncommon. Nevertheless, the majority of the injured recovered and were soon discharged convalescent. Of special interest is the fact that the Japanese rifle appears to have but little "stopping" power. The unusually small bore was adopted, on the advice of a Japanese military surgeon, who supposed that serious hæmorrhage with consequent temporary disablement would be a common result of the wounds inflicted. According to the letter under review this is not the case. After perforating thoracic wounds a piece of strapping was applied in front and behind, and the wounded men usually continued to march. Officers continued to command with bullets through the leg, abdomen, thorax, or neck, until struck a second time. Those who fell on the field of battle included a certain number who received wounds of the chest (in these cases the aorta, pulmonary artery, or heart were probably injured) or the head. But the majority had a number of lesions.

Though perforating cranial wounds, whether oblique, longitudinal, or diagonal, usually healed, the symptoms produced were of great interest. All forms of paralysis, whether circumscribed as in central paralysis of the facial nerve, or diffused, and every variety of aphasia and agraphia were observed. The symptoms often disappeared completely within 4 days of the injury; if they persisted longer improvement was slow and uncertain. Bullet wounds through the base of the brain, even if they divided the optic nerve and produced prolapse of the eye ball, seldom produced any symptoms except those of concussion. Abdominal wounds were followed by peritonitis, chiefly when the exigencies of war necessitated early removal in springless ambulance waggons. Transport on stretchers was less dangerous. Circumscribed peritonitis often ended in recovery;

diffuse, was almost invariably fatal. Some of the younger surgeons performed laparotomy in these cases, but the results were so bad that the practice was discontinued. Hæmothorax was not tapped for some weeks unless there was pyrexia, in which case aspiration was advantageously employed after the first week. Of wounds of the heart the writer saw 5. The hæmorrhage was so slight that an operation was never indicated.

Prof. von Manteuffel's evidence negatives the charge brought by a Russian General against the Japanese of using explosive or dum-dum bullets. The capsule of the regulation Japanese bullet is extremely hard and thick, especially at the apex, and scarcely ever becomes distorted or flattened out. If it strikes metal or stone full, it falls into a number of splinters and does not become flattened. Consequently if it strikes a long bone, unless the distance is less than 30 paces, the aperture of exit is no larger than that of entry. The cranial wounds seen by Prof. von Manteuffel were all inflicted at distances of over 800 metres, and there was no sign of explosive action. Less clean wounds were made by the bullet of the Mauser rifle, with which some of General Kuroki's reserves were armed. It was these injuries which suggested that dum-dum bullets were employed.

The wounds inflicted in different battles were often characteristic. Thus at Wa-fan-gou head injuries predominated, because the men were fighting in a mountainous region under good cover, and at Taschizao vertical wounds through the thorax, arms, and legs were common, because the men were lying down insufficiently protected by low hills. Cavalry were wounded chiefly in the legs. The most severe injuries—compound fractures and fatal arterial lesions—were produced by shrapnel. Traumatic aneurysms from incomplete division of vessels were extremely common. Of great military importance is the slight effect produced by the Japanese

shells. They are filled with an explosive—according to Prof. von Manteuffel lyddite—of such violence that, strange as it may appear, they are comparatively harmless. They make a most alarming detonation and an abominable smell, but break into splinters of such powdery fineness as to possess but slight penetrative power. Unless the entire shell strikes the body, the effect is limited to the nasal mucosa and the membrana tympani.—*The Medical Review.*

Suture of Wounds of the Heart,

BY

FRANCIS T. STEWART, M. D.

A man, aged 20, was stabbed with a long rusty knife. He felt severe pain but was able to walk to hospital, a distance of "one and a half squares." Then he began to feel weak and was found crawling up the steps. There was a small wound above the third rib about 1 in. to the left of the sternum. It was surrounded by an emphysematous swelling and bled continuously, the stream being accelerated by each expiration. The temperature was 97° and the pulse was 80, weak, and irregular in volume and rhythm. He had been sick once. He was sweating and very pale, and lay on his right side breathing 40 times to the minute in a very short jerky manner. At times he complained of a little pain and a severe dyspnoea. The whole of the chest was tympanitic except a small area around the wound. On auscultation the heart sounds were heard indistinctly.

Under ether an operation was begun 45 minutes after the infliction of the wound. An incision was made along the second rib for 4 in. to the sternum, down the left margin of the sternum to the fourth rib, and outwards along the fourth rib for 4 in. The musculo-cutaneous flap so formed was dissected back and an opening in the chest was found between the third and fourth ribs, the knife having descended in its passage.

The exposure was made more complete by continuing the sternal incision downward for 2 in., and the triangular flap thus formed was retracted. The third and fourth ribs were severed and forcibly turned towards the right, fracturing the costal cartilages near the sternum. The knife was found to have passed through the pleural cavity and wounded the anterior edge of the left lung. The lung had collapsed into the vertebral groove and the pleural cavity contained a large quantity of clotted and fluid blood. An opening into the pericardium, measuring $\frac{3}{8}$ in., was easily found by the spurting of blood with each pulsation. It was enlarged in the axis of the heart and a penetrating wound of the anterior wall of the left ventricle was found. It was parallel to the axis of the heart and measured about $\frac{3}{8}$ in., being thus larger than the cutaneous pleural, or pericardial wounds. Bleeding from this wound was free and continuous. The heart looked like a quivering mass of muscle and was beating so rapidly that it could not be said at what period of its cycle the hæmorrhage was greatest. The wound was closed with 6 stitches of continuous silk suture. During the suturing the coronary artery was punctured by the needle, causing profuse hæmorrhage, which was controlled by an additional suture. The pericardial and pleural cavities were cleared of blood. The pericardial wound was closed with a continuous silk suture, a small opening being left for the passage of a gauze drain. The lung, which was not bleeding, and the parietal pleura were not sutured. A gauze drain was also placed in the pleural cavity. The severed ribs were approximated and the soft parts were sutured with silk-worm gut. During the operation 24 oz. of saline solution, containing adrenalin, were injected into the circulation and stychnine and atropine were injected subcutaneously.

Next day he was delirious with a temperature of 103.4° , a pulse of 130, and respiration of 56. During the following fortnight he

was very ill and suppuration took place beneath the flap. Then convalescence proceeded. The ribs united firmly with little callus formation. On the fifty-sixth day the patient was discharged; the pulse varied between 80 and 90; the left chest expanded little on inspiration and the breathing was slightly harsh.

In 1895 Rosenthal successfully sutured an experimental wound of the canine heart. In 1866 two unsuccessful attempts to suture wounds of the human heart were made, and in 1897 Rehn published the first successful case. Up to the present 60 cases of cardiac suture have been recorded with a recovery-rate of 38 per cent. Five of the cases were gun shot wounds and in 2 of these recovery took place.

The symptoms of wound of the heart vary. If the pleura is wounded and blood escapes into the pleural cavity there are anæmia and the signs of pneumo-hæmothorax. A splashing sound indicates pneumo-hæmopericardium; in some cases a friction sound is heard. If there is external hæmorrhage the stream may be continuous or in jets. If the blood is confined to the pericardium the pulse is very feeble and death may result from pressure on the heart. The diagnosis of wound of the heart may be difficult or impossible. The position of the external wound is not a safe guide. In doubtful cases the surgeon should enlarge the wound in order to ascertain whether it penetrates the chest wall, and if there be symptoms of hæmorrhage or of pressure on the heart he should operate.—*American Jour. of Medical Sciences*, Sept., p. 431.

Collateral Paralysis in Cerebral Lesions,

BY

J. H. PRINGLE, M. B., F. R. C. S.

The term "collateral" is applied to cases of paralysis due to a cerebral lesion apparently on the same side. The condition is of great importance to the operating surgeon.

A comatose man, aged 58, was brought to the Glasgow Royal Infirmary. No history of injury could be obtained. He went to work as usual in the morning at 5 a.m., but after $1\frac{1}{2}$ hours he left saying he did not feel well. He went home by tram, and on arrival had a 'dazed look,' was put to bed, and became unconscious. During this process his right limbs became "stiff."

Examination showed a transverse gutter-like depression of the skull near the occipital protuberance, and slight bruising of the right eyelids. There was no subconjunctival hæmorrhage or proptosis. The right pupil was small and its reaction doubtful. The left eyeball was shrunken and functionless from an old injury. Respiration was slow and stertorous, with puffing of the cheeks. The pulse was slow and full. The arteries were very atheromatous. The right limbs were slightly rigid; the left were not. When stimulated by pinching he moved the left limbs but never the right. He was never seen to move spontaneously any limb. The facial muscles were not apparently involved. The urine drawn off with the catheter contained albumin, with granular and hyaline casts.

The writer thought that the occipital depression was an old fracture, and diagnosed cerebral hæmorrhage in the left hemisphere. It was subsequently ascertained that he was treated 20 years before for fracture of the skull. He never recovered consciousness and died on the following day.

Necropsy.—There were consolidation of the lower lobe of the right lung and atheroma

of the mitral and aortic curtains and coronary vessels. The kidneys were granular. There was a fissured fracture of the skull which commenced just anterior to the right parietal eminence, ran downwards and forwards, bifurcating into 2 limbs, one ending in the middle fossa at the sphenoidal fissure, the other in the anterior fossa in the orbital roof. In the brain the only lesion was an extensive laceration of the right frontal and temporo-sphenoidal lobes, with a large effusion of blood in the right middle and anterior fossæ which extended well upwards over the surface of the right cerebral hemisphere. The gutter-like depression in the occipital bone was found to be due to an old fracture. Examination of the medulla did not show any obvious abnormality of the decussation.

Mr. Mansell Moullin recorded the following case (*Lancet*, 1893., vol. xi. p. 1251): A stevedore, aged 41, received a blow on the right side of the head, but continued work for 3 hours. Then he became faint and ultimately comatose, and was admitted to the London Hospital. He had paralysis of the right facial muscles, and the right limbs were rigid; a week later he was trephined over the left side, but without any lesion being found. He died on the following day, and post mortem a subarachnoid clot was found covering the right hemisphere. There was no fracture.

Prof. Ledderhose has published a valuable paper on collateral paralysis (*Archiv f. Klin. Chir.*, vol. ii., p. 316). He had under care a case of head injury in which there was paralysis of the right facial muscles and of the right limbs. He trephined on the left side but found nothing. Death occurred 54 hours later and a large subdural clot was found on the right side. He collected 42 cases of collateral paralysis. Twenty-five were due to spontaneous hæmorrhage, 6 to abscess, 8 to tumours, and 3 to recent traumatic intracranial hæmorrhage. In one case Dr. Lauenstein, of Hamburg, diagnosed right

meningeal hæmorrhage in a case of left hemiplegia due to a fall. He trephined over the right side without finding hæmorrhage. The patient died, and post mortem an extra-dural clot was found on the left side 8 by 1½ cm. In only one other case was the hæmorrhage extra-dural recorded by Bauchet (*Bull. de la Soc. Anat. de Paris*, 1852, p. 452).

The explanation of these cases is not clear. Possibly, as was suggested by Morgagni, they may be due to absence of the usual decussation of the pyramidal tracts. Some support has been given to this theory by Flechsig, who showed that the number of the fibres of these tracts which decussate is very variable, but Sir William Gowers says "there is strong reason to believe that when the paths do not decussate in the medulla they cross lower down the spinal cord." It must be remembered that occasionally a patient dies with typical signs of hemiplegia yet after death no lesion to account for the symptoms is found. In the discussion of Bauchet's case, Cruveilhier suggested that blood effused on one side of the brain might cause so much pressure on the opposite hemisphere against the skull as to produce paralysis. No doubt paralysis may be thus produced, but it seems probable that both hemispheres would suffer and that the paralysis would be bilateral. Ledderhose quotes Goltz's experiments on dogs showing that while all the muscles of the body are represented in each hemisphere, the paths for the muscles of the opposite side are easier than for those of the same side: and suggests that some people may have direct motor paths easier to use than the indirect, and that in them a brain lesion would cause collateral paralysis.

Whatever be the explanation of these cases the patient almost invariably dies unless the effused blood is removed by operation. If, therefore, the surgeon trephines on the side

indicated by the paralysis and finds no cause for it he should explore the opposite side of the brain. *Scottish Med and Surg. Jour.*, p. 394.

GYNÆCOLOGY AND OBSTETRICS.

The Opérative Treatment of Chronic Puerperal Inversion,

BY

H. THOMPSON.

The patient was aged 21 years, and a I-para. At her confinement the placenta was retained for three hours after the birth of the child. It was then allowed to come away of itself. This resulted in much hæmorrhage, and the pain was extreme. Nine days later on account of pain, fever, and hæmorrhage, medical aid was sought and a piece of placenta removed, after which the hæmorrhage ceased. It, however, returned two months later, and from February until May, 1904, there had been much discharge, pain, great weakness and constipation. Reposition had been attempted: it had caused great pain and rise of temperature. On admission a swelling the size of an orange was found in the vagina. This was continuous above with a narrow ridge 1 cm. high. The position of the fundus was occupied by a depression. The investigation was painful, the tumour bled easily on contact. There was no perineal tear. After another further attempt had been made at reposition, an anæsthetic was given and Kustner's operation was carried out. A transverse incision 3 cm. long was made in the posterior vaginal wall, and the left index finger was inserted into the funnel-shaped depression, but the inversion could not be dragged back. The posterior wall of the inverted uterus was now split for a distance of 3 cm. The edge of this incision was seized with forceps and traction from within combined with pushing from without. Reposition was thus effected and the fundus was drawn out through the vaginal wound, and the posterior uterine wall sewn up by catgut

Some adhesions which were separated from the fundus were still oozing when the fundus was returned into the peritoneal cavity, consequently a drain of iodoform gauze was inserted in the pouch of Douglas. This was removed on the third day. The patient left hospital 21 days after the operation. The uterus was then normally anteflexed, movable and completely involuted. Before the operation and for some days afterwards the temperature was 99·8, whilst the original pulse frequency of 100 beats per minute gradually improved.—CUTHBERT LOCKYER. —*Zentral. fur Gynakol.*, 1904, No. 49.

On the Serum Treatment of Puerperal Fever,

BY

PEHAM.

Peham records and analyses 44 cases of puerperal fever treated with Paltauf's serum in Vienna. He considers these experiments to prove that puerperal infections caused by streptococci are influenced by the administration of this serum, however severe the infection may be. The experiments also show that the influence of the serum depends upon its administration at the earliest possible moment and upon the use of relatively large doses. In disease of long duration and in the presence of serious organic lesions the serum is powerless; it would seem also that it is unable to prevent the advance of localised suppurative processes such as metastatic abscesses. The serum does not produce any bad effects even in those cases in which the disease is due to infection by organisms other than streptococci.—W. E. FOTHERGILL.—*Archiv fur Gynakol.*, 1904, Bd. lxxiv., Ht. 1.

Thrombosis and Embolism during the Puerperium,

BY

RICHTER.

This paper deals with 98 cases of thrombosis and embolism occurring in 16,000 puerperal women. There were twelve fatal cases of embolism which, in five cases, followed thrombosis. Eight embolic cases recovered, there being in all twenty cases of embolism. Six per thousand of the women suffered from thrombosis and embolism; 1·25 per thousand from embolism alone. Of the embolic cases 60 per cent. were fatal. Of the serious cases of thrombosis only one was directly fatal. In this case a thrombus of the pelvic veins extended into the inferior vena cava and so into the right hearts. Forty cases observed by the writer in Leopold's Dresden clinic are recorded in detail. In 63 per cent. of the cases Mahler's sign was clearly present; in 34 per cent. it was less marked. In only 2 per cent. was it altogether absent.

In 19 cases of pulmonary affection (18 puerperal and one after ovariectomy) Mahler's sign was clearly present 8 times (42 per cent.), in 10 cases it was less marked. The value of Mahler's sign in puerperal embolism and thrombosis (including "puerperal lung affections") is thus very great, the more so because it is the only early symptom of these conditions. Rigid prophylactic measures are therefore called for as soon as the sign is found, in the hope of warding off embolism.—W. E. FOTHERGILL. *Archiv fur Gynakol.*, 1904, Bd. lxxiv., Ht. 1.

The Diagnosis of Rupture of the Circular Sinus during Labour,

BY

CH. MAYGRIER.

In 1893 Budin drew the attention of the profession in France to the observations of

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M. Duncan on this condition, and since then the author has been struck by the large number of cases which come to his notice. The condition is easily recognised after labour by the presence of a clot, near the margin of the placenta, protruding from the open sinus; but it must be confessed that the lesion had caused no symptoms and had not been suspected during labour. But cases occur in which the hæmorrhage during pregnancy or labour may be considerable. It is not easy to diagnose the causation of such hæmorrhage, which may arise from the separation of a placenta normally or abnormally situated. Any symptom accordingly which may throw light on the diagnosis should be of interest, and the author has been surprised to find how constant is the symptom he describes, and it is this: at the beginning of the second stage of labour there is a slight hæmorrhage at the onset of a pain; the hæmorrhage ceases during the continuance of the pain only to recur so soon as the uterine contraction has passed off. These phenomena are due to pressure during a pain of the foetal head on the bleeding point. The quantity of blood lost is sometimes so large as to require the termination of the labour by the application of the forceps. It seems probable that if the foetus were not engaged the hæmorrhage would continue throughout each pain.—E. H. L. OLIPHANT.—*L'Obstetrique*, November, 1904.

A Case of Bloody Milk,

BY

BOUCHACOURT AND JEANNIN.

The authors have been unable to find any record of a similar case to the one which they report. A primipara, æt. 20, was noticed to have a chocolate-coloured secretion from both breasts at the time of labour. The patient stated that this had continued for 10 days. On the third day after labour the secretion was examined and was found to

contain blood and a large number of micro-organisms of various sorts, including the staphylococcus aureus and the colon bacillus. On the 5th day the milk—which was abundant—possessed the same characters. The patient was perfectly well until the 7th day, when there was pain and swelling of the breasts with some fever; it was possible to express some pus from the nipples. This was the onset of an attack of double galactophoritis. The cause of the intra-mammary hæmorrhage was not discovered.—G. DRUMMOND ROBINSON.—*Bulletin de la Soc. d'Obstet. de Paris*, No. 5. Meeting of June 16, 1904.

Intra-peritoneal Hæmorrhage due to the Rupture of a Hæmorrhagic Cyst of the Ovary,

BY

BENDER AND MARCEL.

At the present time the tendency is to consider all hæmorrhagic effusions into the female pelvis as a consequence of an ectopic gestation. The authors record the present case as an example of an internal hæmorrhage, serious enough to endanger the patient's life, caused by the rupture of a hæmorrhagic cyst of the ovary.

The patient was a woman of 26, who was admitted to the hospital as an urgent case, with all the signs of a severe internal hæmorrhage. She gave a history of delayed menstruation followed by irregular metrorrhagia, with an acute onset of the present symptoms 36 hours before. She showed extreme pallor, the pulse was 150 and scarcely perceptible at the wrist, and there was great abdominal pain and tenderness, so that the case was naturally considered as one of ruptured tubal gestation, and as sufficiently urgent to require immediate abdominal section. About a litre and a half of blood was found in the peritoneal cavity, and a

1905.]

large clot was removed from behind the left broad ligament together with the appendages of that side. The right appendages were normal. Examination of the parts removed revealed little change in the tube; some of the fimbriæ were adherent to the ovary, but the ostium was patent, the canal was free from blood and the mucosa was perfectly healthy. On searching for the cause of the hæmorrhage, a small thin-walled hæmorrhagic cyst was found in the ovary, which presented a considerable rupture, from which protruded a mass of clot adherent to the inner wall.

Histological examination failed to show any evidence of gestation products, and confirmed the naked-eye appearances by revealing a layer of epithelium with cells like those of the granulosa lining the inner wall of the cyst. In view of the careful examination made during the operation and of the parts removed, the authors consider that this ruptured cyst must have been the cause of the extensive hæmorrhage into the peritoneal cavity.—J. S. FAIRBAIRN.—*Bulletin et Mem. de la Soc. Anat. de Paris*, July 1904.

Three Unusual Myomata,

BY

KUSTNER.

Kustner publishes a short account of three myomata. One was removed from the sigmoid flexure; a second from the cervical stump after supravaginal amputation; the third from a gravid uterus.

1. *Myoma removed from the sigmoid flexure.* The patient, a II-para, was aged 53 years; her last pregnancy was 24 years ago. Since the climacteric, that is to say, for three years, there had been indefinite pain in the pelvis. On examination a myoma was diagnosed behind a markedly anteflexed uterus. By laparotomy it was discovered that the tumour grew from the mesial aspect of the meso-sigmoid. It was removed, and the

patient recovered. Microscopically the diagnosis of fibromyoma was confirmed. Kustner remarks that fibroids in this situation (*darmmyome*) are very rare.

2. *Myoma in cervical stump.* The patient was aged 42 years. She had one child twenty years ago. The uterus was removed together with the adnexa in 1900 on account of double pyosalpinx. On November 24th, 1903, a myoma the size of an apple was found to be growing from the cervical canal. It was removed and the actual cautery applied to the site of enucleation. The development of a growth in a segment of the cervix left behind after supravaginal hysterectomy raises the interesting question as to whether the operation of panhysterectomy is not preferable to the supravaginal method. Kustner himself in this observation sees no argument in favour of panhysterectomy. He says, if a myoma does develop subsequent to supravaginal hysterectomy its removal from the cervix is a matter of the greatest simplicity.

3. *Myoma in a gravid uterus.* A uterus was shown from the posterior wall of which an interstitial myoma had been enucleated. The patient was aged 40 years. She had a generally contracted pelvis. The operation was undertaken during the 29th week of pregnancy. The foetus was first removed by Cæsarean section and placed in an incubator. It died in a few hours. Kustner performed the operation at the urgent desire of the patient, who showed signs of peritonitis and failing health. Her condition became so serious that he decided not to postpone the operation until such time as would assure a more secure viability of the foetus.

The tumour was adherent to the pouch of Douglas; it was in part soft and lymphangiectatic. Kustner was aware that not a few myomectomies had been performed during gestation without disturbance to the latter. He, however, did not approve of this

interference unless it was called for by some unusual circumstance.—CUTHBERT LOCKYER.—*Zentral. fur Gynakol.*, 1904. No. 49.

Pedunculated Uterine Fibroid with Torsion of its Pedicle and of the Uterus,

BY
FERRY.

The patient was a woman of 49, who had known of the existence of an abdominal tumour for about 7 years; on several occasions she had suffered from attacks of abdominal pain with constipation and dysuria, two occurring a few months before her admission to hospital, the last being the reason of her admission.

At the operation the pedicle, which was about the thickness of 3 fingers, was found to arise from the fundus of the uterus and to be twisted on itself for a turn and a half in the direction of the hands of a watch; the uterus was involved in such a way that it had taken a half turn so that the left appendages were to the right and the right to the left. There were signs of peritoneal reaction as shown by redness of the serosa, fine adhesions and the presence of a serous exudate in the abdomen. The pedicle was tied off, the tumour removed and the uterus replaced. The tumour weighed 3·3 kilos.—J. S. FAIRBAIRN.—*Bull. et Mem. de la Soc. Anat. de Paris*, May 1904.

Cancer of the Breast with Secondary Invasion of a Uterine Fibroid,

BY
BENDER and LARDENNOIS.

This communication gives a careful account of a *post-mortem* examination on a case of general diffusion of a carcinoma, at which a fibro-myoma of the uterus was found to have

undergone extensive epitheliomatous transformation, without there being any change in the uterine mucosa.

The patient was a woman of 36, who had been operated on a year previously for cancer of the breast; on this occasion she was admitted to hospital for uterine hæmorrhage. The uterus was found to be enlarged to the size of a foetal head by an irregular bossy mass, quite movable and presenting all the characteristics of a fibro-myoma. As there was no evidence of recurrence and as the general condition was good, it was decided to do abdominal hysterectomy, but before this could be carried out signs of invasion of the spinal cord appeared and the patient rapidly became cachectic and died within a few months. At the autopsy very general diffusion of the growth was found, the lungs, liver, pancreas, bones, etc., being affected. The chief interest lies in the examination of the uterus. It formed a mass about the size of a foetal head, and contained numbers of interstitial and subperitoneal fibroids, the largest being about the size of a large orange. On section some of these tumours, and especially the largest, were found to be studded with small nodules of new growth similar to those seen in the liver and other organs. The mode of invasion appeared to be from without inwards or from the surface of the myoma to its centre. Microscopic examination of these portions showed bands of epithelial cells splitting up the fibro-muscular bundles and invading the tissues of the tumour just as in the sections from other organs involved by the growth. The uterine mucosa was healthy.—J. S. FAIRBAIRN.—*Bullet. et Mém. de la Soc. Anat. de Paris*, October 1904.

The Origin and Import of Leucocytosis,

BY
BIRNBAUM.

This writer, after an examination of the literature of the subject and a record of his personal observations, forms the opinion that the view expressed by Grawitz in 1896 was substantially correct. "I am able to affirm," said this authority, "on the ground of very numerous observations, that in all possible forms of septic disease leucocytosis is present in the majority of cases. On the other hand, there are, not infrequently, very active inflammations without any leucocytosis. I emphasise this because many are attaching undue importance to the presence of leucocytosis in diagnosis; for while undoubted neutrophil leucocytosis, when present, is of definite diagnostic importance, the absence of leucocytosis is a negative finding which by no means excludes the possibility of the presence of pus."—W. E. FOTHERGILL.—*Archiv fur Gynakol.*, 1904. Bd. lxxxiv., Ht. 1.—*The Journal of Obstetrics and Gynecology*.

The Use of Spinal Anæsthesia in Labour,

BY
MARTIN.

Munch. Med. Wchnschr., October 16th, 1904.

In this paper Martin records his impressions of the value of Bier's method of lumbar anæsthesia from its use in over thirty cases of labour. A combination of adrenalin and cocaine was employed for the injection. One cubic centimetre of a solution of adrenalin (1 in 2,000) was injected into the spinal canal, under Schleich's local anæsthesia, and five minutes later, this was followed by an injection of cocaine in a dose varying from 0·8 of a gramme to 2 grammes. Among the thirty cases, of whom half were primiparæ,

all healthy women whose ages ranged from 18 to 36 years, complete anæsthesia was obtained extending commonly up to the lower ribs, and occasionally so widespread as to render the whole trunk analgesic. In one case only was the anæsthesia confined to the genital organs alone. The time of duration of the anæsthesia was sometimes not much more than half an hour, but at other times lasted as long as four hours. Martin finds that pregnant women bear spinal anæsthesia very well, and disagreeable after-effects are not usual. Occasionally very severe vomiting occurred, but rigors with rise of temperature did not appear in any of the cases. The untoward symptoms did not seem to be controlled in any way by the use of subcutaneous injections of caffeine-sodium-salicylate as recommended by Tuffier.

As regards the effects of this form of anæsthesia on the course of labour, it was noted that the activity of the uterus was somewhat impaired, both in the number and force of the contractions. The "bearing-down" pains were specially affected, for the abdominal muscles were only called into play when the patient was urged to do so. If the labour was completed within one and a half hours after the injection, the women had hardly an unpleasant sensation in the whole process of delivery, even when this entailed the use of forceps, turning, etc. Spinal anæsthesia in no case led to the occurrence of anxious symptoms during the third stage of labour, and the processes of uterine involution and of lactation were in no way disturbed. Martin considers that while this method of anæsthesia should not displace chloroform in private practice, it will, when further tested experimentally, become more apparent that it produces no harmful results. He now intends to test its value in some cases of pathological labour.—OLIPHANT NICHOLSON.—*The Journal of Obstetrics and Gynecology*.

Injection of Stovaine into the Spinal Cord in Obstetrics,

BY

CHARTIER.

According to Chaput and others stovaine has certain advantages over cocaine for intra-spinal injection. The former dilates the vessels, slows the pulse, does not tend to cause syncope, and allows of operations being performed while the patient is sitting up. It is less toxic than cocaine and can therefore be employed in large doses, the only adverse sequelæ being occasional slight headache and backache with a very slight rise of temperature.

Chartier gives details of 11 cases in which he has used stovaine himself, employing a 10 per cent. solution made up with sodium chloride. He injected 5 to 8 drops, *i.e.*, $2\frac{1}{2}$ to 4 centigrammes of stovaine.

Sensory phenomena. After injection of $2\frac{1}{2}$ cg. anæsthesia begins in the toes and spreads up until it reaches a variable limit between the umbilicus and the inter-mammary line. Complete anæsthesia lasts from three-quarters of an hour to one hour. At the end of this time vaginal and perineal tears can be sewn up painlessly. There is complete loss of uterine sensibility, the patient being unconscious of the most violent uterine contraction six or eight minutes after the injection. Seven applications of forceps, one curetting and one basiotripsy were carried out without causing any pain.

Motor Phenomena. Complete paraplegia is obtained in a few minutes, the abdominal muscles are relaxed, and the soft parts of the birth-canal lose their tonicity. As there is no expulsive action of the abdominal muscles and the soft parts stretch readily, the accoucheur can avoid rupture of the perineum in cases where otherwise this accident would be very likely to occur.

Stovaine, like cocaine, acts as an oxytocic. The maximum frequency and force of the uterine contractions occur in fifteen to twenty minutes after the injection. At the end of forty-five or fifty minutes after the injection of $2\frac{1}{2}$ c.g. of stovaine the contractions begin to diminish in strength, and at the end of an hour they are once more painful. The cervix is easily dilated. In two cases where uterine inertia threatened an undue prolongation of labour this oxytocic action was most useful. In five cases the placenta came away while the patient was still under the influence of the drug. There is no danger of tonic contraction if the dose is not larger than 2--5 cg., and this dose, may, if necessary, be repeated. Injection of stovaine for surgical purposes is, of course, contra-indicated in pregnant women.

General phenomena. There is no evidence that the foetus suffers from the toxic effects of the drug. As regards the mother no bad effects were seen immediately; later, however, six out of the eleven patients suffered from more or less violent headache, chiefly frontal, with pains in the eyes and spine, giddiness, nausea and vomiting. These phenomena, which were never alarming persisted until the eleventh day in two patients. Quinine was found to be the most useful drug in the treatment of these symptoms.

In the first case which Chartier records, a II-para, 7 months pregnant, not in labour, was given 3 cg. on account of uncontrollable vomiting. A uterine contraction lasting two minutes began five minutes after the injection. Eight hours later the foetus was born without assistance.—HENRY RUSSELL ANDREWS.—*The Journal of Obstetrics and Gynecology.*

OPHTHALMOLOGY.

Keratitis Profunda, *

BY

W. T. HOLMES SPICER.

Many cases of interstitial keratitis are met with in which no trace or history of syphilis, congenital or acquired, can be obtained; in which the local changes resemble each other, but in which the causes vary greatly, or cannot readily be discovered. I have put together fifty-four of these cases in which the observations have been fairly complete and continuous, and it appears to me from an examination of these cases that this disease stands out as a distinct clinical entity. Of the 54 cases, 34 occurred in males and 20 in females, the difference being accounted for by habits and occupations, chiefly by the greater liability to injury in the males and by their greater addiction to alcohol. The occupations have been most various, and no deductions can be drawn from them. I find that the average age of all the patients taken together is 40; the oldest patient was 65.

Investigating the habits and personal health of the patients, eight admitted taking alcohol in excess; nearly all took alcohol, and very many took what was undoubtedly too much; ten of them drank beer in excess, two of them were brewers' men, and one a potman of almost unlimited capacity for beer. Nearly all the most acute and severe cases occurred in this group. Over-eating is less easy to identify, but it was clearly present in some cases, combined generally with over-drinking, especially of beer. Nine patients had typical gout, seven others were subject to rheumatism or rheumatic pains, one to sciatica. Disturbances of the intestinal tract, faecal retention, or chronic constipation with indigestion, were present in seven cases; carious teeth or pyorrhoea alveolaris were found in four cases; dysentery was

* Read at the meeting of the British Medical Association in Oxford.

present in two cases; four of the cases occurred just before or after the termination of pregnancy. Some patients were broken in health or prematurely old, ill-nourished, with blueness of the extremities, with defective circulation, or were the subjects of chronic bronchitis. Finally, there was a small number who seemed to be in perfect health, were abstemious and regular in habits, but who inherited a strong family history of gout. Seven cases seem to have been actually started by an injury, such as an abrasion, a slight blow or a foreign body. To sum up, over-eating and drinking and their results in the individual or descendants in the form of gout and rheumatism, with defective intestinal hygiene, were responsible for 40 cases, or just three quarters of the total number.

The duration of the disease was noted in 45 cases; it was reckoned from the first appearance of symptoms till the disappearance of all congestion. The average time was three months, the slightest case only lasted three weeks; the longest, 12 months, was in a woman who insisted, against all advice, in suckling a child till it was 18 months old. The duration of the opacity was of course much longer. The right and left eyes were each affected 27 times, and both eyes were involved five times.

The final results as regards vision are frequently not stated, the case terminating and the patient ceasing attendance when the irritation was at an end, but in nine cases the final result was 5/6, in two it was 6/9, in one it was 6/12. Judging from the amount of opacity present when last seen a number of patients would suffer from more or less permanent damage, but in the less severe cases the prognosis is good.

As regards local changes, moderate ciliary congestion comes on soon after the first complaint of dimness of sight; it is generally dusky in colour and rarely severe. The

greatly swollen limbus, rising above the level of the cornea, and the dense salmon patch, I have never seen. Quite early in the first few weeks, especially in the cases beginning at the edge of the cornea, blood-vessels spring from behind the scleral edge, and run towards the centre of the cornea, but they can be seen as separate vessels. The opacification of the cornea takes one of two forms—the central disc and the peripheral cone. In the disc form a grey opacity forms in the centre of the deepest part of the cornea, occupying about the central half or third; the disc is sometimes less dense at the centre than at the periphery, so that there is an opaque ring surrounding the comparatively clear centre; or the central disc may be surrounded by a ring of maculæ which may coalesce into a complete ring surrounding the disc. In the peripheral conical form the opacity starts from the margin of the cornea and advances towards the centre; the base of the cone was downwards in 12 cases, upwards in seven, twice it was to the outer side, and once to the inner. The disc opacity occurred in 25 cases, the conical form in 22; in a few cases the two kinds were mixed. If the opacity of the cornea be examined under magnification at its first appearance it will be seen to consist of fine striated lines, "striated keratitis," which was seen in 34 cases. In the disc form the striated lines run for the most part vertically with a tendency to radiate from the centre; in slight cases, limited to the centre of the cornea, the lines radiate strictly in all directions from the centre. In the marginal form the striation is marginal also, and appears as delicate fingers of opacity extending from behind the scleral edge of the cornea directly inwards towards the centre. The lines are somewhat uneven in outline, sometimes they cross or intersect one another; sometimes they are extremely delicate, and appear to have a double contour suggesting a tubular structure. The striation of the cornea is a very early sign, and is help-

ful in determining the nature of the affection.

Very soon the striation disappears or is hidden by the increasing opacity of the cornea just in front of it. The actual opacity of the cornea occurs either as a uniform layer or as a number of delicate grey maculæ situated in the deep layers. These maculæ are to be distinguished from deposits on the back of the cornea by their colour, grey, as distinguished from yellow and by their having a less sharply defined edge; as the disease progresses the maculæ increase in number and size, and unite more or less into one grey layer. In the peripheral form, as the uniform grey layer advances over the cornea, it is often headed by a skirmishing line of grey maculæ.

Œdema of the cornea is almost always present; it shows itself by the surface being slightly uneven, appearing when magnified like the skin of an orange, or, as the books say, like shagreen. Very often, in addition, there appear to be little bullæ on the surface, like clear black drops; these are sometimes fairly large, and if two or more adjacent bullæ give way an appearance of superficial ulceration arises.

If a drop of fluorescein be placed in the conjunctival sac and allowed to remain there for a few minutes before being washed out, in certain cases the deepest part of the cornea appears to take on a delicate green stain; it is even possible to determine exactly the seat of the stain, either by the hand lens or by the corneal microscope. In such a case the level of the various changes in the cornea can be made out without much difficulty. There is first of all the surface epithelium shown by its bullous appearance; next below that, but separated from it by clear cornea, there is the central disc of grey or white exudation, beginning at a variable depth below the surface and extending back to the deepest layers of the *substantia propria*. This does not stain; behind this again

are the lines of striation which do not stain, then comes the layer stains, generally larger than the opaque disc in the cornea, and except for the staining often appearing quite transparent and normal. This is the layer of endothelium, changed by disease; it takes on the stain from the fluorescein in its passage through cornea, or from the aqueous into which it has been absorbed from the conjunctival sac: the latter method is the more probable one, as the same result is obtained if the fluorescein is injected beneath the conjunctiva, and does not touch the cornea at all. The deep staining results are not always obtained; there is a certain period in the course of the disease only when the endothelium stains; either before or after no staining takes place. The endothelium is capable of very rapid regeneration, in a few days it can be entirely replaced. On the other hand the possibility of deep staining may last for a long time; in one case I have found it present for at least a month.

As far as my observations go it is the central disc form in which the staining is most readily obtained. Sometimes the staining is patchy and incomplete, sometimes it is only punctiform; once while observing the cornea under strong magnification, after the use of fluorescein, I saw a number of green dots appear on the back of the cornea; these did not become larger at the time, but a week later the whole central part of the posterior surface of the cornea stained uniformly. I have seen this punctate staining in three other cases in which, however, there were punctate deposits on the back of the cornea. Deposits on the back of the cornea do not stain, or if they do they are opaque, and do not show their posterior or stained surface.

In 34 cases iritis was not present, that is the pupil dilated quite easily and well with one application of atropine, and left no pigment on the lens: iritis was present in 14 cases. Deposit on the back of the cornea or *keratitis punctata* was present in 21 cases

and was stated to be absent in 30; in some cases it appeared late, in one case after 4 weeks. In one case there was a sectorial atrophy of the iris left behind, the upper outer part being left thin, grey, fibrous and somewhat drawn up; in this case increased tension had been a marked feature of the case throughout. The tension in the eye was raised in 4 cases.

The extreme periphery of the fundus has been examined in many cases both at the beginning and after recovery, but nothing has been seen except in one case in which a young man, aged 18, after a prolonged attack of diarrhoea suffered from widespread retinal phlebitis in both eyes; the veins all over the retina were sheathed in white, the bands on each side of the vessel appeared to be almost as wide as the blood column; towards the extreme periphery there were widespread hæmorrhages. About 6 weeks later he developed a patch of interstitial keratitis at the outer side of his right eye.

Before considering the pathology of deep keratitis as a whole we must explain the meaning of the various things seen in the cornea. A marked feature of the disease is the oedema of the cornea; this shows itself chiefly in the swollen and bullous appearance of the surface. The epithelial cells are all more or less distended with fluid, and the swollen cells project on the surface as small vesicles; the inter-cellular spaces are also distended, and the large bullæ are formed by the separation and lifting up into a bleb of one or more layers of epithelium. The *substantia propria* of the cornea is also oedematous, but this cannot be recognised.

In the posterior part of the cornea the striated lines are evidence of oedema also; these lines are almost certainly produced by wrinkles in Descemet's membrane caused by oedema of the posterior part of the cornea; in the disc-like form of deep keratitis the oedema is general, the wrinkles occupy the

centre of the cornea; in the peripheral form the wrinkles are limited to the affected part. The double contour sometimes assumed by the striated lines suggests a tubular formation in the cornea; any tubular formation in this situation is, however, difficult to explain and the appearance must in some way, be due to the action of light on the curving surface of the folds.

The deep layer which stains with fluorescein lies behind the striated lines, and is due to colouration of the layer of endothelium; the cells are cast off at first individually, and afterwards in numbers, leaving a denuded surface which stains with fluorescein taken up from the aqueous into which it has absorbed from the conjunctival sac.

The denudation of the posterior surface of Descemet's membrane by the casting off of its endothelium leaves the back of the cornea unprotected; the aqueous fluid gains access to the posterior layers of the substantia propria of the cornea, and gives rise to the irritation, inflammation and exudation of cells in that situation (Leber). This exudation is either in the form of separate colonies of cells producing the maculæ, or it forms a continuous layer, the discoid or peripheral conical opacity characteristic of the disease.

The experiments of Wagenmann, Koster and v. Hippel carry us a step further in explaining the possible origin of the changes in the cornea which have been already described.

Wagenmann (*v. Graefe's Archiv*, 1890, iv.), found after section of one long ciliary artery with some of the neighbouring short ciliary arteries in the rabbit that there was in some cases a spontaneous partial parenchymatous opacity of the cornea. Microscopically the cornea remained for the most part intact, but there were seen in the first stage clear but trifling changes in the endothelium. Twelve hours after section of both long ciliary arteries a diffuse grey-white opacity appeared

at the margin of the cornea, and quickly pushed its way towards the centre, involving finally the whole cornea. After a few days the cornea was invaded by vessels running in its substance. The appearances were exactly those of interstitial keratitis.

W. Koster (*Graefe's Archiv*, 1895, ii.), after ligature of the four venæ vorticosæ, found the whole cornea invaded by closely packed spots and streaks; these increased quickly and produced a typical parenchymatous keratitis; on the third day vessels began to invade the cornea. With ligature of two or three venæ vorticosæ only a slight opacity appeared at the margin of the cornea.

v. Hippel (*Graefe's Archiv*, 1903, iii.) found, after ligature of the four venæ vorticosæ, as well as after section of the long ciliary arteries in the rabbit, that after 22 hours the cornea became slightly hazy, stained in its deepest layer with fluorescein, and when excised gave an intense blue colouration in the same layer with methylene blue. He found microscopically that in these cases the endothelium was imperfect in the stained region.

As parenchymatous keratitis can be produced experimentally by interference with the blood supply, it is probable that in keratitis profunda, a variety of parenchymatous keratitis, the true seat of the disease is in the nutrient blood-vessels, and that the different forms which it manifests may be due to the different vessels affected, not necessarily the long ciliary arteries or the venæ vorticosæ, but the vessels which more directly supply the cornea.

As to the treatment, in addition to hot fomentations, atrophine should be used, with complete rest of both eyes and protection from light. In the few cases in which the tension is raised, atrophine should be used only with caution and where the patient can be kept under close observation. Eserine may be used tentatively in such cases; sometimes it is beneficial, but it often tends to increase the irritation. In such

cases, where the tension is dangerously high, paracentesis may be done. I have done iridectomy in two cases; in one of them the result was not satisfactory, for the cornea became completely opaque, the eye remained irritable and was eventually excised for pain. In the other case, complicated with posterior synechiæ, the result was at once beneficial. Peritomy was done in one case also without benefit. If vascular disease be the true cause of the disease one could hardly expect peritomy to be anything but harmful.

I have used subconjunctival injections of cyanide of mercury 1 in 1,500; in the acute stage I have found them to produce a great deal of inflammatory reaction and to be harmful; in the later stages they are unnecessary. Sub-conjunctival injections of normal saline I have found of no value. Diionine is well spoken of in the later stages, but I have not found any very marked benefit from its use. What is of the greatest importance is the general treatment. The cause must be sought for. Strict dieting both in quantity and quality must be secured; in cases of alcoholic excess, abstention; beer and sweet wines must be forbidden. For the relief of constipation, regular doses of mercurial pill, and especially the dilution and washing out of the fluids of the body by the drinking of large amounts of water, hot or cold. This is especially valuable in those who suffer from defective circulation. Some cases do well with regular doses of mercury, but as a rule they do equally well without it. —*The Ophthalmic Review*.

THERAPEUTICS. GUAIAQUIN AND ITS PROPERTIES.

BY

M. C. NANJUNDA RAO, B.A., M.B. & C.M.

(GUAIAQUIN is a new chemical compound (guaiacol bisulphonate of quinine)

possessing the characteristic properties of both guaiacol and quinine. It is prepared by interaction of guaiacol sulphonic acid and alkaloid quinine, the guaiacol sulphonic acid being prepared by treating pure crystalline guaiacol with concentrated sulphuric acid. It contains 44.2 per cent. of alkaloid quinine, combined with 55.74 per cent. of guaiacol sulphuric acid; the latter being equivalent to 33.38 per cent. of pure guaiacol.

Guaiakin is an acid salt possessing the formula $(C_6H_4O_2CH_2HSO_3)_2C^1H_{24}N_2O_2$ and exists in the form of a yellowish crystalline powder very soluble in water, alcohol and dilute acids and of a bitter taste. It is free from both the odour and caustic taste and effects of guaiacol. Thus this combination of guaiacol and quinine possesses the physiological action of quinine with the antiseptic effects of guaiacol.

The antiseptic properties of guaiakin have been tested and it has been found that in a dilution of one to twenty-five, it has inhibited the growth of the following bacteria:—*Staphylococcus Aureus*, *Streptococcus*, *Pyogenes*; Typhoid bacillus, *Bacillus*, *Pyocyanens* and *Bacillus Coli Communis*.

It exerts no inhibitive action on the normal digestive processes and in this respect is superior to almost all the intestinal disinfectants in use at the present time. Hence the properties of guaiakin are antimiasmatic, antiseptic, disinfectant and stimulating to the glands of the gastro-intestinal tract. Hence, it is best suited for cases of Piroplasmiasis, or malarial cachexia, kalazar, &c.,

As regards dosage, six to ten grains may be taken three times a day after meals—and

12 grains have been given four times a day without any bad effects. In one case it is reported that 60 grains were administered daily without unpleasant results.

It is a very hygroscopic substance, being easily soluble in water, but the solution has a very bitter taste and patients do not like it.

The most convenient method of administration is in gelatine coated pills prepared by Mackesson and Robins of New-York, which can be had of any respectable chemist, each containing 1, 2 or 3 grains respectively.

Guaiacuin may also be employed to advantage hypodermically. It is said that it does not cause any irritation nor the severe pain which usually attends hypodermic injections of quinine. Its antiseptic properties also prevent formation of puncture abscesses. A sterile 10 per cent. solution may be employed for injection. The syringe should be sterilised and the site of injection washed off with alcohol. It should be injected deep into the pectoral, deltoid or gluteal muscles, preferably the pectoral; the site of injection needs no further attention, the patient complaining of no more pain than from an ordinary hypodermic or morphia injection and there being absolutely no irritation afterwards.

Hypodermic injections of guaiacuin have been employed more especially in cases of what are called æstivo-autumnal fevers and pernicious malarial fevers where quinine, arsenic, Warbaig's tincture and other antiperiodics have had no effect. Six grains dissolved in 20 minims of boiled water have been injected once a day without causing any pain or abscess.

From its antiseptic properties it is said to have been found of great value as an

intestinal disinfectant in cases of neurasthenia, dyspepsia, anæmias and other wasting diseases, the result of antitoxications presumably arising from intestinal fermentations with formation of toxins.

Extreme Cyanosis after Injection of Suprarenal Extract,

BY

A. SCHUCKING

In 3 plastic gynaecological operations, 3 c.c. of a 1 in 1,000 adrenalin solution were injected at either side of the proposed vaginal incision, which was then made bloodlessly except when large arteries were divided. An injection was also made in the vaginal portion of the cervix to avoid oozing. The hæmostatic action lasted 15 minutes. The operation resembled one on the cadaver and the after-bleeding was not such as to suggest secondary paralysis of the vasoconstrictors. In each of the 3 cases there was somewhat troublesome vomiting, which was probably due to the general anæsthetic.

In 2 cases a 1 in 100 solution of suprarenal extract was substituted for adrenalin. Excellent hæmostasis resulted from the injection of 1½ and 1¾ c.c. respectively. In the first case, during anæsthesia with chloroform and ether, there was a transient and moderate amount of cyanosis. This was not at first attributed to the suprarenal extract. It also occurred, and in a greater degree, in the second case. Seven minutes after 1½ c.c. had been injected into the posterior vaginal wall and cervix, the skin assumed a deep blue tint, which rapidly deepened to an intense bluish-black such as is seldom seen except in Addison's disease. As the respiration was superficial artificial respiration was begun. The pulse was plainly palpable. The respiration soon became deep and regular, though the discolouration persisted

for 30 minutes. When consciousness was regained there was violent vomiting, which repeatedly recurred during the following 24 hours. Thus the submucous injection of suprarenal extract produced transient results, which, when permanent, are typical of chronic suprarenal disease. This appears to indicate that Addison's disease is due to an internal hyper-secretion.—*Munch. Med. Woch.*, Feb. 2, p. 204.

Is a Knowledge of Materia Medica Necessary?

"What fools these mortals be."—

Midsummer Night's Dream.

BY

RALPH J. SCHIRMAN, M.D., SAN FRANCISCO.

In looking over the faculties contained in the announcements of the various medical colleges, we come across the line "Professor of Materia Medica and Therapeutics." How unnecessary must that chair appear to the present day physicians, and how superfluous to the students of the college when by simply perusing the advertising pages of the various Medical Journals and the literature sent out by the Proprietary Medicine Manufacturers, all the knowledge necessary to prescribe for a patient can be obtained. Has the patient pain, anti-pain tablets will stop it; are the kidneys and bladder disordered, samto will cure that; does the patient need a tonic, Blank's beef or iron tonic will soon build him up. How foolish it is that so many people waste four or more years of their lives and several hundreds of dollars for a medical education when it can all be obtained from the proprietary manufacturer. All that is really necessary to practice medicine is to take a large number of medical journals, read carefully the directions given by the advertisers, act in accordance with the instructions and there you are. The manufacturer is willing to take all the burden of diagnosing, etc. There is an odd chance that the patient may be suffering from nephritis, a heart lesion or something else

that would require far different stuff, but that has nothing to do with the case.

And then, after having secured the co-operation of the physician to prescribe his stuff, the proprietary medicine manufacturer, in the interest of humanity, proceeds to inform the physician that it is the safest plan to prescribe his combination in original packages for fear of druggist substitution, when the manufacturer knows very well that the only substitution that is liable to be made is that of his combination in place of the physician, by the patient after he learns what he is taking.

The substitution evil is not as wide-spread as the manufacturers of proprietary medicines would have us believe, and the cry of substitution was raised by the manufacturers merely as a means of getting physicians to prescribe their combinations in original packages and thus inform the public that Jones' pills, Smith's tablets, Green's compound all have the endorsement of the medical profession.

It may be that some of the proprietary medicines have sufficient virtue to be endorsed by being prescribed by physicians, but the manner in which the manufacturers use such endorsements for the information of the public should receive the condemnation of the entire profession.

For instance, since the postal authorities have allowed manufacturers, etc., to print their own postal cards, the medical man is receiving postal cards large enough for street car signs, and all of them instructing the physician that it is his duty to use some one's preparation of something or he is fatally behind the times.

Can the mind of man conceive impudence carried to a greater extreme? The physician who allows his name to be used in connection with such articles does wrong to himself, to his common sense, to his standing in the profession, to his obligations to the sick and to the public.

The giving of testimonials or endorsing some proprietary medicine by physicians is, in many instances, merely a case of vanity—the physician desiring to see his name in print, but there is danger connected with said endorsement. When John Doe gives his opinion that ice is hot and fire cold, it remains John Doe's opinion, but when John suffixes his title of M. D. to his opinion regarding copyrighted medicines, wines, beef extracts, etc., it becomes of professional significance and to some extent involves our entire profession therein.

Unless the physician has missed his calling and if he is capable of thinking at all, the Pharmacopoeia and Dispensatory should certainly be large enough to allow him to exercise himself freely in the art of prescribing, to think out his prescriptions, to make any required combinations and let ready-made substitutes severely alone and thus refute the opinion, as has been often alleged, that he does not know enough to write a prescription.

If he prescribes A's emulsion, B's lozenges, C's cod liver oil, D's pills and E's bitters, he becomes a mere distributor of proprietary goods and the pharmacist need do no more than hand it out to his customers just as the grocer hands out soap, matches and crackers.

The same hat cannot fit every head, or the same shoe answer for every foot, neither can the proportion of ingredients in a ready-made combination suit every patient's case, therefore the physician should determine not to aid any speculator in life and health; and also in justice to the entire profession, the physician should avoid prescribing preparations which will enable patients afterwards to snap their fingers in the physician's face and take the remedy as often as they please without his aid or knowledge, after the first prescription, in any part of the country.—*The California Medical Journal.*

Blood-Poisoning from Tonsillitis Value of Perchloride of Iron,

BY

SIR ISAMBARD OWEN, M.B., F.R.C.P.

A man, aged 22, was admitted to St. George's Hospital on Jan. 1, 1904, suffering from a severe sore throat. The fauces were generally red and swollen; the tonsils were swollen and a patch of membrane was observed on the left tonsil. The anterior chain of cervical glands was swollen on both sides. The sore throat was said to have commenced on Dec. 24, 1903. A swab taken for examination showed neither diphtheritic organisms nor streptococci.

The patient was seen by the writer on Jan. 2. The temperature had risen to 103° on the previous night, and had remained between 101° and 102° during the day. The left tonsil exhibited the appearances of suppuration. The cervical glands in the neck were still swollen. A few scattered rhonchi of high pitch were heard at the right apex. The left tonsil was lanced and a wash of listerine used. The swelling and redness of the tonsils and the cervical glands diminished; but the temperature continued to rise. The night temperature, notwithstanding repeated sponging, reached 104.7° on the night of the 4th and about 103° on the succeeding nights. The patient grew weak, tremulous, and deaf, and began to wander in his mind. The rhonchi in the chest increased; the abdomen became distended and tympanitic, and the tongue became dry. On the 5th typhoid fever being suspected, Widal's test was made, but no agglutination took place. On the 6th the rhonchi disappeared. Some loose motions had been passed. The patient complained of pain in the right knee and shoulder. In the afternoon the whole of the right arm was very tender. The left knee was swollen and there was evidence of fluid effusion on the inner side of the joint and beneath the quadriceps extensor. The superficial veins over the joint were dilated. The patient was

pale and sweating profusely. Lead and opium lotion was applied to the affected joints and the left knee was put upon a splint. By the 7th both the delirium and the sweating had increased. The swelling of the knee was rather less but the tongue was still dry and raw. On Jan. 7 streptococci were found in the blood.

Four injections of 20 c.c. of the Lister Institute serum were made—1 on the 7th, 1 on the 8th, and 2 on the 9th—without apparent result. On the 8th the apex beat of the heart was observed to be displaced into the nipple line and to have become diffused. The second pulmonary sound was accentuated. On the 10th the shoulder was more painful, and the joint was obviously swollen. Tubular breathing was heard over the left lung about the angle of the scapula. The apex beat of the heart had extended outside the nipple line and a "slapping" second sound was heard in the pulmonary area. Microscopic examination of the blood revealed nothing abnormal. Treatment by Roux's serum was carried on from the 12th to the 16th, 8 sub-cutaneous injections of 20 c.c. each being given in all, *viz.*, 1 on the 12th, 2 each on the 13th, 14th and 15th, and 1 on the 16th. The temperature sank steadily from the 13th to the 17th, the delirium disappeared, the shoulder became less painful, and the tongue moist and less red, and appetite was recovered. On the 16th 2 boils, $\frac{3}{4}$ in. in diameter, appeared on the back of the shoulder over the scapula, and 1 on the left buttock. The serum treatment was omitted until the 18th. On the 18th no streptococci could be found in the blood, but they were present in the urine. Treatment by Roux's serum was recommenced, 1 injection of 20 c.c. being given on the 18th and 19th, 3 on the 20th, and 1 each on the 21st, 22nd and 23rd. The temperature rose to 100° on the evening of the 19th, but was normal from the 20th to the 23rd. The boils had healed by the 25th, and the knee had recovered, but pain persisted in the right arm, the grasp of the hand

being very feeble. On the 24th the night temperature again rose slightly above normal. The injections were recommenced on the 26th, 1 being made each day from the 26th to Feb. 1, 2 on Feb. 2, and 1 on the 3rd. During this period the pain in the right shoulder and arm continued to diminish. The appetite slowly improved, the mental faculties were completely recovered, and the boils healed. But beyond a certain point the improvement did not go. The temperature continued slightly raised and the patient remained weak. By the 2nd the right shoulder was free from pain, but on the previous day pain and slight tenderness had appeared in the left thumb joint, and on the 2nd the left wrist was also painful and swollen, and the dorsum of the left hand was puffed and oedematous. By the 4th the pain and swelling had partly quitted the left wrist and had appeared in the right, the dorsum of the right hand being now swollen. The writer ordered the injections to be omitted and gave the mixture he orders in facial erysipelas, *viz.*, 30 m. of tinct. of perchloride of iron, with 25 m. of dilute hydrochloric acid, and 3 gr. of sulphate of quinine, to be taken every 6 hours. Next day the pain and swelling of the joints had diminished. By the 7th both wrists had decidedly improved and the night temperature had not risen above 100°. Blood taken from the median basilic vein on the 6th was sterile. On the 7th, the condition remaining unchanged, the dose of the tincture was increased to 35 m. From the following day the temperature was subnormal and the joints were free from pain and swelling. Recovery ensued.

General streptococcal infection following suppurative tonsillitis, which at the first appeared to be of an ordinary character, is uncommon. The treatment was commenced by the use of a serum, which, though polyvalent, was less complex than the Roux's serum. The effect of injecting this serum was apparently nil, but an almost immediate drop in the temperature, accompanied by a

progressive diminution of the local symptoms and improvement in the general condition, followed the use of Roux's preparation. But it did not destroy or neutralise the whole of the *materies morbi*. The residual morbid manifestations, however, disappeared rapidly under full doses of perchloride of iron.—*Lancet*, Oct. 15, p. 1079.

DERMATOLOGY.

Acute Erythematous Dermatitis in a Psoriasis Patient,

BY

JONATHAN HUTCHINSON.

Our patient is a dark-complexioned Welshman, aged 33, of short stature, and probably of Iberian descent. He has strong polished nails and large lunulæ, which suggest a Semitic strain, but if this exists he knows nothing of it.

Mr. S. J. first consulted me on January 7, 1898, and from that date until to-day, November 8, 1904, I have seen nothing of him. During the interval he has enjoyed good health, but has never got quite free from a psoriasis eruption which has troubled him for many years. This psoriasis began three or four years before his first visit to me, and during the whole of that period he kept it in check by the almost continuous use of a prescription containing arsenic. When he came to me, in 1898, it was not for his psoriasis, but for a group of alarming symptoms which I at once attributed to arsenical poisoning. He was troubled with an almost constant desire to pass water, and with much smarting in the urethra during the act. This had compelled him during the last fortnight to remain at home, for the calls occurred every ten minutes. Six months previously he had for three weeks felt the soles of his feet quite numb, but this had passed off. His anus also was sore and very irritable, and looked red and dry. My advice to him was to keep his bed for a week or two so as to favour the action of the skin and relieve the kidneys, to lay aside the arsenic and never to take that

drug again. I subsequently learnt that all the symptoms mentioned wholly disappeared within a month or two of leaving off the arsenic, and that they had never again recurred.

In the present month (November 1904) my patient came to me again. This time it was for an acute relapse of skin symptoms or, to speak more accurately, for a quite new development of them. At my request he has kindly attended here to-day, and you have had an opportunity of observing his present condition. His statement is that he was in his usual state, that is, with a few indolent patches of crusted psoriasis on various parts of his trunk and limbs, until suddenly, on October 12 last, an outbreak of general dermatitis occurred. His psoriasis gave him no trouble, and he was at the time neither taking medicine nor using any ointment for it. He had formerly used with benefit an ointment of chrysophanic acid, but had not applied it for three or four months past. Neither arsenic nor any other internal drug had been touched for four years. His first symptom in the present outbreak was the sudden occurrence of dryness of the whole surface. He ceased to perspire and his skin felt hot and dry. In the course of a few days he was covered with florid patches, and then the ability to sweat returned, and his skin ceased to burn. The patches, which were mere spots at first, rapidly extended at their borders, and began to desquamate. His face remained free, but a noteworthy feature was that his hands, which had always been free psoriasis, were now involved from the finger tips to the wrists in peeling dermatitis, which was most severe on their palmar aspects. He described the first stage as having consisted in the formation of little hard spots along the inner aspects of the finger, which itched a little, but did not vesicate. These soon spread, until the whole hand was involved. The roots of the nails did not suffer. His feet were much less affected than his hands. The condition which

you have just inspected is that of a trunk and limbs covered with florid patches so numerous, and many of them so large, that but little healthy skin remains. The sides of his armpits and chest are involved in large patches which might be called dry eczema, since the surface is reddened and uniformly furfuraceous. On the trunk many patches are not larger than peas, and some which are as big as halfpence show a red border and a much paler centre. Clearly the patches spread at their edges, and they do not accumulate scale crusts, but simply desquamate. His old psoriasis patches are still easily distinguished from the new ones, being attended by a certain degree of thickening and some accumulation of scale.

It is impossible not to be struck by the similarity of the new erythematous eruptions to certain states which attend granuloma fungoides, and which have been described as premycosic. I show you a fine portrait from Radcliffe Crocker's Atlas which illustrates that affection. I do not know whether this stage has ever been noted as setting in suddenly as did our patient's eruptions.

I have yet another peculiar feature in our patient's case to mention to you. Simultaneously with his outburst of dermatitis both his mammary glands became hard and slightly enlarged, and his left, which was the larger of the two, has now evidently suppurated and will need an incision.

The first point which I wish to make in reference to our patient is that his present eruption is certainly something very different from what we might consider as merely an acute relapse of his psoriasis. It has occurred, it is true, just at the time of year at which such relapses are often seen, but its suddenness, its extent, its superficiality, and above all the condition of the hands, are opposed to such a suspicion. Still we must keep in mind that, like psoriasis, it is an eruption of

patches, not a diffuse dermatitis like the erysipelato-eczematous ones which we sometimes meet with. The exemption of the face and the freedom from disturbance of the general health, also separate it from these, and from most forms of what is named specifically exfoliative or generalised dermatitis.

Let me finally remind you that it occurs to a man who was once poisoned by arsenic. My impression is a strong one, that the effect of such a poisoning is often permanent, and leaves the tissues ever after predisposed to special forms of disturbed nutrition.

It is a case the sequel of which we shall watch with great interest. Its features are very exceptional, and such being the fact, I have thought it well to bring them under your inspection, and to place them on record in some detail.—*The Polyclinic*.

OTOLOGY.

The Mastoid Operation in Infants and Children,

BY

HERMAN JARECKY, M.D., NEW YORK CITY.

Visiting Otologist Harlem Hospital; Assistant Surgeon to Manhattan Eye and Ear Hospital; Fellow of the New York Academy of Medicine, American Medical Association, etc., etc.

This operation in infants and children is simpler than in adults, as at birth the antrum exists only as a cavity about the size of a small pea. The process is not formed until after the end of the first year, assuming the adult form only in the third year, and the pneumatic spaces not until puberty. During the operation strict asepsis must be observed. The space around the mastoid for two or three inches beyond should be shaved

and made surgically clean. The auditory canal should be irrigated with a bichloride solution of 1 to 1000. Then, under complete anæsthesia, with a scalpel, a curvilinear incision should be made from the end of the mastoid close to the insertion of the auricle to about one-half inch of its upper border, down to the bone, which is then denuded of periosteum.

It is necessary to remember that there are frequently dehiscences filled with fibro-cartilage, as the squamo-mastoid suture is not ossified at birth. So when making the primary incision, the knife must be used gently until the periosteum is reached, and this likewise must be raised with the greatest care to prevent in such cases the instrument slipping into the cranial cavity. The bleeding is controlled either by clamping the vessels or with gauze wrung out of hot water. An Allport retractor or one of its modifications should be used, which not only draws aside the tissues, but also helps to stop the oozing. The parts should be separated with the auricle held forward, so that the posterior and superior borders of the auditory canal and the whole field of operation are exposed to view. If the bone is bathed in pus, this is wiped away and any perforation is examined with a probe. The opening is enlarged either with a spoon or rongeur. Should no perforation or sinus exist, then either with a flat chisel or gouge and a mallet the antrum should be opened. The subra-meatal triangle is above the antrum. This is made by drawing one line horizontal with the superior border of the auditory canal, a second vertical with the posterior border, and a base line corresponding with the curvilinear line between these points. A point about one-quarter inch above and the same distance behind the meatus may be selected—the best place to enter the antrum.

The chisel should be used gently, and the bone chipped away in small sections, always

working downward, forward, and inward. A probe should be used to determine from time to time whether the antrum has been entered and also to examine the cavity made.

In young children the antrum is only covered by a delicate layer of bone; therefore the cavity is easily entered. As soon as an opening has been made a rongeur should be used to enlarge it, and the cavity should then be thoroughly cleared out with a Volkmann's spoon.

In curetting after opening the mastoid it must be borne in mind that the bone tissue in childhood is soft, so that healthy tissue need not be sacrificed unnecessarily.

The space leading from the antrum to the roof of the tympanum, that is, the aditus and attic, should also be carefully cleaned out with a small curette. The excavation should then be carefully extended backward until the lateral sinus is exposed and inspected as to whether its appearance is healthy. Its presence can be determined by its bluish appearance and the soft feel to the probe. All granulations and soft tissue having been cleared out, the parts are gently irrigated with a bichloride solution of 1 to 5000, normal salt solution, saturated solution of boric acid, or sterile water if considered necessary. The wound is then wiped dry, the upper and lower ends stitched together, and the rest packed somewhat lightly with iodoform gauze. I usually bury the gauze, that is, do not have it project above, then over this I draw the parts together and apply layers of sterile gauze, absorbent cotton and a bandage.

Unless pain or a rise in temperature occurs it is not necessary to change the dressing for five or six days. Upon re-dressing there is usually no discharge in the auditory canal; if there is, it is gently irrigated or wiped out.

For the mastoid wound a dry wiping is all that is necessary ordinarily, and a dress-

ing of sterile gauze lightly packed. This can be changed every two or three days. Granulation tissue, of course, must be cauterized.—*The International Journal of Surgery.*

Our Book Shelf.

We have received the following books:—

From Messrs. John Wright & Co., Publishers, Bristol:

I. 14 volumes of the Golden Rules Series, namely:

Golden Rules of Surgical Practice.	
Do Gynæcology.	
do Obstetric Practice.	
do Medical Practice.	
do Psychiatry.	
do Physiology.	
do Ophthalmic Practice.	
do Skin Practice.	
do Aural and Nasal Practice.	
do Hygiene.	
do Diseases of Children.	
do Refraction.	
do Dental Surgery.	
do Anæsthesia.	

These are all small, compact volumes small enough to be carried in one's waistcoat pocket, and are all, with one exception, priced at one shilling each, the exception being the Diseases of Children, which is priced 2s. as it is nearly double the size of the other volumes. Although the volumes are small they contain practically all the information that is essential in the various branches of medical knowledge.

In these volumes Messrs Wright & Co., of Bristol, have done for medical knowledge what Messrs. Burroughs Welcome

& Co., have done for drugs in their tabloid preparations. In other words, the Golden Rules Series have compressed medical knowledge in tabloid form. The volumes are cheap and handy and will be exceedingly useful to medical students who are preparing to face their examiners, and to general practitioners who hardly get the time to refresh their memory by going over the pages of bulky and exhaustive treatises.

From the same publishers we have received:—

II. "A Pocket Book on Clinical Methods," by Chas. H. Melland, M.D. (Lond). Price 1s. 6d. nett. The book is a small one of 75 pages with blank pages for memoranda, and contains useful chapters on the examination of the sputum, the gastric contents, the fæces, the urine, pus and other fluids, and the blood. The book will be a useful guide to students in their methods of clinical laboratory examination.

From the same publisher we have received:—

III. A small monograph on the "Infectivity of Enteric Fever," by Dr. Alexander Collie, M.D., in which the author ably sets forth his views and facts in support thereof regarding the infectivity of enteric fever. Opinion differs in England among medical men as to whether enteric fever is infective or not. We have ourselves seen enteric fever cases treated in the ordinary medical wards of a big London Hospital under a distinguished physician who was of opinion that enteric fever is not infective. Dr. Collie pleads his case ably and well, and those who are interested in the controversy cannot do better than read this work of his to hear the case for the side declaring that enteric fever is infectious.

Dr. Collie may be pleased to hear that here in Madras enteric fever is classed among diseases which have to be notified to the Health Officer, although they don't call it infectious disease here, but classify it as a "dangerous disease," whatever that may mean.

From the same publishers:—

IV. A volume on "The Physiognomy of Mental Diseases and Degeneracy" by James Shand, M. D. Price 3 shillings nett. This is a reproduction, with some additions and alterations, of the author's papers, or the parts thereof, which refer to Physiognomy

in the *Medical Annual* for 1894, 1897 and 1903. The author deals exhaustively with the subject of facial expression as a means of diagnosis and prognosis in mental diseases. There are over fifty illustrations in the book showing the facial expression of patients suffering from different kinds of insanities, all of them taken from real life. The book will be highly useful to students of mental disease. Every medical officer in the mofussil ought to find the book invaluable in his diagnosis of insanity before sending his patient before the magistrate for committal to the asylum.

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The Antiseptic.

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Original Articles.

*Some Instances of Congenital Defects in the Female Genital Tract,

BY

J. B. HELLIER, M. D. (LONDON);

Hon. Obstetric Physician, Leeds Infirmary;
Lecturer on Gynaecology, Leeds University.

It is not necessary to discuss at length the different varieties of congenital anomalies that may be found in the female genital tract, or to trace them to their developmental origin. This is well done in our best text-books. See, for instance, an article by Dr. J. W. Ballantyne in "Albutt & Playfair's Gynaecology" (of which a new edition is in preparation), or the article by Nagel, in "Veit's Handbuch der Gynaecologie," on "Entwicklung und Entwicklungsfehler der weiblichen Genitalien (Band I 1897). There is a question in relation to this subject on which we have almost no information, and on which those who practise in India, with its many peoples and varied conditions of life, may be able to give information. It is this: What conditions of race, locality, hygienic environment, &c., favour the production of such congenital anomalies? Perhaps some of your readers may have observations on this point.

* Specially contributed to "The Antiseptic."

During the last six years I have seen in Leeds two cases in which the uterus was extremely rudimentary, with only one horn developed, two in which uterus and vagina were both absent; three cases of septate uterus, and two of *retentio menses* from *atresia vaginae*. Some account of these will, I hope, interest your readers.

Case. I. A single woman, aged 49, came under my care in March 1899 on account of dysuria. As she stated that she had never menstruated, a careful examination was made under æther. The external genitals, the vagina and vaginal portion of the cervix were normal. The cervix was then drawn down with vulsellum forceps and a combined recto-abdominal examination was made. The uterus was very small and bifid. It was most developed on the right side and its walls were very thin. The isthmus where the two cornua met could be distinctly felt. The sound passed one inch but went to the right only. She was thin and delicate and suffered from headache, but she never had any menstrual molimina and had had no serious illness. A slight degree of cystitis seemed to be the cause of the bladder symptoms. For the amenorrhœa no treatment was advised, for the uterus was obviously functionally inactive, and at her age there was no object in trying the doubtful expedient of dilating the cavity, and so on.

Case II. This is a somewhat similar case. A young woman, aged 21, was admitted into the Leeds Infirmary, in June 1900, because she had never menstruated. She was in fairly good general condition with moderately well-developed mammae and normal external genitals, pubic hair being present. During the previous twelve months she had complained of a good deal of pain in the abdomen and back, and in the left mamma? and left thigh, together with headache and constipation, but no periodicity had been noticed in her symptoms. The vagina was normal and the vaginal portion of the cervix was normal in position, but on placing her under æther, and making a combined examination, with one finger in the anterior cul-de-sac and one in the rectum, the two fingers seemed to meet just above the cervix, and the first impression was that the uterus was extremely rudimentary and the fundus absent; but it was found that the sound would pass two inches into a very thin-walled cavity towards the right. On seizing the cervix with vulsellum forceps and having it held down by an assistant and then making a combined recto-abdominal examination, it was easy to make out that the uterus was bifid, the right side being more developed than the left, and the appendages could be felt on the right, the sound passed to the right but not to the left. There was no sign of cystic swelling in the pelvis. Hence the condition was one of bifid uterus, with left half rudimentary. The whole organ was small and thin-walled. The uterus was dilated to No. 10 Hegar and the patient was sent out, taking an emmenagogue mixture; but it was considered very doubtful if menstruation would occur. No report since.

In the next case (*Case III.*) the defect was still more complete. Miss X, age 22,

was examined under anæsthetic, at the request of another practitioner, to confirm his diagnosis of Atresia. She was in most respects a well-developed woman, and was in excellent health and condition and not anæmic. She had never menstruated, and had no trace of periodic symptoms, all days in the month being alike to her. The mammae were fully developed, the external genitals normal, pubic hair abundant. A small depression $\frac{1}{4}$ inch deep was all that represented the vagina. With sound in bladder and finger in the rectum no tissues except rectal and vesical walls seemed to intervene. About 3 inches above the vulva, however, a small fibrous thickening could be felt in the middle line, and from this a thin band or cord could be felt passing out on each side to the pelvic wall. This was all that represented the uterus and appendages, no ovary could be felt and no cystic swelling.

Case IV. was that of a married woman of 45, who was admitted into the Leeds Infirmary on Dec. 3, 1902, for cystic enlargement of the right gland of Bartholin, which had been growing for two years and had attained the size of a pigeon's egg. She stated that she had never menstruated. She suffered at monthly intervals from malaise and headache, but always enjoyed fairly good health. When the cyst was removed opportunity was taken to examine the pelvic organs. The vagina terminated in a cul-de-sac about 1" deep, but no trace of uterus or of uterine appendages could be felt.

For the majority of such cases treatment is obviously out of the question. One case I saw many years ago dwells in my memory to warn me against regarding every case as hopeless. A mother brought

a Jewish girl to me, who was about 13 or 14 but who had not menstruated. The vagina terminated in a short cul-de-sac, beyond which I could find no passage for a probe. Per rectum I could feel a very small uterus, and I gave it as my opinion that she would never menstruate. To my great surprise she returned a year or more later, and I found that there had been all the time a thin vaginal passage whose walls had been adherent and the lumen closed, but that the uterus had developed and begun to secrete the monthly discharge, and this had opened up the vagina to some extent. I dilated the vagina thoroughly and she subsequently married and bore a child.

The next three cases illustrate the effect of imperfect coalescence of the ducts of Müller, so that the genital canal is double in a part of its course.

Case V. Mrs H. age 35, married 12 years, had borne one child at the sixth month. She came under my care for menorrhagia, for which I curetted the uterus on April 8th, 1904. I found that at the upper part of the vagina there was a rudimentary septum. The vaginal portion of the cervix was single, but it presented an os uteri on each side. A uterine sound was introduced into each os and a septum of considerable thickness was thus demonstrated. By the rectum the double fundus could be well felt, being separated by a deep notch which reached about half way down the womb. It was obviously necessary to curette both sides in order to treat the menorrhagia. I could not determine which side of the womb had been the seat of the pregnancy.

Case VI. In this case the uterus and vagina were septate and obstruction

to labour was caused by the vaginal septum.

A married woman of 38 was admitted into the Leeds Infirmary on account of a ruptured perineum and incontinence of fæces, on Oct. 30, 1903. In the previous January she was attended in her first confinement by a medical man, who found a most unusual condition. Under an anæsthetic he could insert only two fingers into the vagina. He found the feet presenting but they were contained in a sort of pouch on the left side of the vagina. With some difficulty the feet were hooked out and drawn into the main vaginal passage. The child was then delivered, the perineum being ruptured in the process. The medical man sutured the perineum under anæsthesia and took the opportunity of examining the vagina just after delivery. He describes the pouch as being bounded on the left by the vaginal wall and on the right by a septum which extended from the symphysis pubis in front to the middle line behind. He could pass his fingers into this pouch, which seemed to be about two inches deep, and the tips of the fingers in the bottom of the pouch seemed to be about 1-4 inch from fingers applied to the left labium. Unfortunately the perineum did not hold and so she came under my care nine months later.

I found (1) a complete rupture through the sphincter into the rectum, (2) an imperfect septum in the vagina, (3) a septate uterus.

The vaginal portion of the cervix appeared to be normal, and the os was single, but immediately within the os externum the sound impinged on a septum. Two sounds could be passed simultaneously

into the two halves of the uterus for the normal distance. Per rectum the broad fundus could be felt with a little notch in the centre. The vaginal septum was defective in front of the os. It had an attachment about 2 or 2½ inches long to the posterior vaginal wall in the middle line and another about 1½ inches long to the anterior wall, rather to the left of the middle line. It was a well-formed fleshy septum and not a cicatricial band. The lower edge was free, so that on making a vaginal examination the fingers passed with ease on each side of the septum. The septum was excised by me, and then the vagina appeared normal. Perineorrhaphy by flap-splitting was also performed and a successful result was obtained.

It is not easy to reconcile the description of what was found immediately after labour, with that found by me nine months later. The medical man describes a cul-de-sac or pouch containing the feet, and this suggests a septate vagina, of which one half was imperforate at the vulval end, but I found both halves freely open at the vulval end. It is plain to me that the vaginal septum must have been pouched out by the child's feet, at the time of labour, in a sort of hammock and that the septum had been damaged during delivery and its attachments torn. Nine months later when I saw her, involution of the uterus and vagina had taken place and one could not say in which half of the uterus pregnancy had occurred. This is a most interesting but excessively rare form of obstructed labour.

Case VII. The most interesting case of this series is one of double pregnancy in a double uterus, a full account of which will be found in the *Journal of Obstetrics and Gynaecology of the British Empire*, Vol.

III, p. 448. A short résumé will suffice here. A Leeds medical man was attending a woman in her fourth labour. A living female child was born at 5-30 p.m. Jan. 28, 1903, vertex presentation, and the placenta soon followed. On abdominal palpation the presence of a second child was recognised. At 11-0 p.m., as the child had not been born, nor even the head descended, the practitioner introduced his hand into the womb, and to his unbounded astonishment found the cavity empty! He sent for me, believing, I think, that the child was extra uterine in position. I examined her under chloroform at 12 p.m. I searched for a second os on each side of the first, but could not find one, but then discovered it in front and a little to the left of the other, and a foetal head was just within touch. It was possible to put the index finger in the left os and the thumb in the right and to grasp a thick fleshy septum between the two.

By podalic version a living male child was delivered from the left half of the uterus. It was then easy to palpate the double fundus uteri. The female weighed 6½ lbs. the male 7lb. There was nothing to suggest that the two pregnancies were of different dates.

In this case there was no trace of a vaginal septum but the uterine septum was complete, the two *ora* opening separately into the vagina. A month later I examined this patient again. To my surprise I found the os uteri single, for involution was well advanced and the septum was retracted within the os and commenced just inside it, so that a simple digital vaginal examination might now fail to reveal the duplex structure of the womb. Such an abnormality as this, no doubt, often exists undiscovered.

In the *Journal of Obstetrics and Gynaecology of the British Empire* for May 1904 I have published a drawing and description of a most interesting case of a uterus with a rudimentary horn, which had been the seat of cornual pregnancy, to which it may interest the reader to refer.

Lastly I will mention two cases of *retentio mensium* from *atresia vaginæ*. This condition is very rare, although it is always recognised sooner or later when present.

Case VIII. This is published in *extenso*, with drawings, in the *Quarterly Med. Journal* (now discontinued) Feb. 1901.

The patient was 15 years old and she came to the hospital with a large hæmatocolpos which distended the vulva, which also filled the pelvis and rose above the navel, and which was surmounted by a distended uterus (hæmatometra). Hæmatosalpinx was not present. Strange to say the patient enjoyed perfect health and had no symptoms at all. The swelling was discovered accidentally by her mother when measuring her for some underclothing.

The case was treated by slow evacuation, excision of a piece of the hymen and subsequent irrigation with antiseptic solution. Six pints of inspissated fluid were drawn off and the abdominal girth decreased 4 in. in consequence. She made an excellent recovery and has menstruated normally since.

Case IX. A servant girl, aged 17, was admitted into the Leeds Infirmary on March 29, 1904. She had enjoyed good health till about a year before, when she began to suffer from attacks of abdominal pain at intervals of 2 or 3 months. Four months ago she noticed an abdominal

swelling at the time when the pain was felt, but when the pain subsided the swelling became less. With the next recurrence of the pain there was again a temporary enlargement in the tumour. Then the pain became more constant and the tumour did not diminish. On admission she was found to be a well nourished girl, rather pale and unhealthy looking. The mammæ were well developed and the pubic hair was abundant. The vagina was occluded by a septum at the entrance and there was a cystic swelling filling the pelvis and rising above the pelvic brim and forming a prominent swelling above the pubes as large as a 4½ months' pregnancy; this lay more to the right than the left. No other swelling could be felt in the abdomen. The case was treated by free incision of the septum and the evacuation of rather more than a pint of thick, reddish brown fluid. The cavity was washed out with a solution of iodine daily, and she made an excellent recovery.

Cases of retension of the menses are far from common. They may be treated with success in the manner here described if strict aseptic precautions are taken, and there is no hæmatosalpinx. Irrigation is an important part of the after treatment, for the emptied cavity formed by the distended vaginal walls has at first little tendency to retract, and there is a considerable inspiratory current of air when the diaphragm ascends, as it was easy to observe in these two cases. When there is hæmatocolpos, this is bilateral and two smaller tumours lie on each side of the hæmatometra, and when the main cavity is emptied these tubal cysts do not tend to empty themselves readily, having walls that are thin and with little or no expulsive power. Hence they may become septic. As it is extremely unlikely that

such tubes will ever be functionally active, the best and safest plan in such cases is now held to be to remove them by abdominal section.

*** The Importance of Development of the Chest in the Young,**

BY

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THE object of this lecture is to show how physical exercises affect the body in general and the tissues of the growing child in particular. In the development of the mind, the brain is the important organ: in the physical development of an individual, the most important structure is the chest, because within it are the principal organs of the circulation and respiration. Therefore, we will consider the chest to-day. It becomes a matter of prime importance that the subject of the physiology of the chest should be briefly discussed, as text-books make little reference to it. And as this lecture is addressed to medical practitioners, it is meet to refer to a matter which is of greater value to the work-a-day man than almost any other subject in physiology. For a man's working or athletic capacity lies in the development of his chest. In early life our minds are carefully instructed by trained and highly educated men: yet the development of our bodies is left to ourselves or the attention of superannuated or pensioned soldiers. From our birth, little care is taken to enable us to preserve a healthy body for the abode of a mind which should be healthy. The old proverb of *mens sana in corpore sano* seems to be forgotten.

* Specially contributed to "The Antiseptic."

Some Points in the Physiology of the Chest.

In exercise, the chest is of importance in several directions, of which only a few will be mentioned. When the so-called healthy people take exercise, and especially if they are "out of condition," their hearts beat rapidly. The great cause for this increased rapidity is found in the deleterious products which result from the "physiological explosions" of muscular contractions. The normal rate of the heart's beat has been arranged for the physiological activities of the body during rest: for we spend fully three quarters of the day at rest, or, to be more correct, in comparative quiet. Very few hours are spent in muscular activity of any great severity. In consequence, we do not need the ponderous muscles of a professional strong man to enable us to do our daily work. More than this, the larger the muscles the greater will be the amount of the products of their contractions; so that a professional strong man is very likely to be hampered by his masses of muscle. As the heart is more or less accustomed and adapted for work during rest or quiet, it becomes quite easy to see that, if it is unaided during muscular exertion, it will be quite inefficient to carry out the work. It has therefore become necessary for the organism to evolve some means of assisting the heart in its work. This is effected by the movements of the chest during respiration. Inspiration is effected by the descent of the diaphragm and the elevation of the sternum and ribs: the abdominal and thoracic factors. The heart, in order to do its work efficiently, increases the rapidity of its beat. In consequence, less blood is propelled into the lungs at each stroke, and its purification proceeds but little quicker than ordinarily, and the

deleterious products of "muscle-combustion" accumulate in the system. To prevent this, the expansion of the chest for inspiration is deeper during exercise. At the same time that air is sucked or inspired into the lungs, blood is aspirated from the great veins of the neck, arms and abdomen into the right side of the heart. The stretching of the lungs during inspiration dilates the capillaries within them, and allows the surcharged right ventricle to relieve itself into their meshes. Besides being rendered deeper, the respirations are quickened. Hence the impure blood becomes adequately aerated and purified when the chest acts well during exercise. For the heart to work adequately during muscular exertion, it is dependent on the respiratory movements. And the respiratory movement which is most important is the expansion of the chest during inspiration. The best index, which we have, of a man's capacity for muscular work is the difference between the measurements of his chest between full inspiration and full expiration. The greater the difference, the more can that man relieve his labouring heart: the smaller the difference, the less can he aid his heart. It will now be seen that it is not the external measurement of the chest which is important, but the capability of that chest to move with respiration, as measured by the difference in the circumferences in full inspiration and respiration. A girl of sixteen may be more capable to run half a mile than a professional strong man with herculean muscles, but with a chest whose inspiratory expansion is quite inadequate to his muscular development.

The Active and Resting Positions of the Chest.

There are two types of chest the expansion of which is inadequate. One is seen

in subjects past middle age, and therefore does not concern us so much here; and the other is found early in life. The former will be briefly considered first and represents fixation of the chest in *the position of activity or inspiration*; whilst in the second, the chest is fixed in *the position of rest or expiration*.

(a) In vigorous people who have reached middle age, and especially if they have been subjects of chronic cough, the chest is apt to become more or less fixed in a position of inspiration. They stand erect with chests prominent and square shoulders, but are incapable of any long exertion. So long as they would remain quiet, the public would regard them as particularly finely made people.

(b) In the second class, seen chiefly in the young and feeble, and, again, in the elderly, the chest is in precisely the opposite position, namely, that of expiration or rest. In them, the dorsal spine is flexed, the sternum is more or less vertical, the ribs are depressed and the costal margin frequently everted; there are hollows above and below the clavicles, the shoulders are rounded, the scapulæ prominent and the lower abdomen often projects, the very opposite to the chest of the first type. How often can this be seen amongst our friends! how very much more frequently amongst hospital patients! How easy to enumerate the chain of concomitant ills; mental sluggishness and depression, hypersensitiveness to cold, indigestion, constipation, anæmia, anorexia, headache and almost every ill suffered by subjects of feeble habit.

Examples of both classes suffer distress during muscular exercise, according to the degree of their lack of chest expansion. For the former we can do but little, for the latter a great deal can be done. In

young subjects, the chest expansion can be greatly improved; in older subjects the symptoms can be relieved, the system renewed in vigor and the evil-day postponed.

How can we recognise the distress which is caused by deficient expansion of the chest? Amongst the well grown and comparatively healthy, the most obvious sign is incapacity for work, such as walking up hill or running. In the strong, it can be recognised with but small reason to doubt in the lack of pluck and staying power. For instance, two men began to ascend the lower slopes of a mountain. One had a pulse rate of 84 and the other of 72. After a time, the one with the more rapid pulse and also the less efficient expansion of his chest, was compelled to call for a halt. It was then found that his pulse rate was 120 and the other man's about 84. Of course other factors help to bring this about, such as bad training. But the instance will serve to illustrate the question under discussion. In the feeble, the increase in the rapidity of the pulse and respirations is the earliest sign of distress. Soon, the colour begins to fade from the cheeks and the limbs to tremble. A good test is to make the patient hold out his hands. Trembling of the outstretched hands is a sure sign of nervous, if not muscular fatigue also.

Exercises during the period of Growth

Having pointed out the types of chest which are deficient in inspiratory expansion and indicated by a short consideration of the physiology of the chest, how much this depreciates the working value of the individual, we must pass on to consider what can be done for the relief of

the condition. By far the most can be done during the period of growth. Attention must be directed first to the special peculiarities of that period. During this time, and then only, can the most far-reaching results be obtained and the individual derive all the benefit which he is capable of receiving.

Growing tissues may be likened to the clay and the forces which act upon them to the potter's hand. Another simile is that of a jelly and its mould. It has long been known that growing tissues may be shaped at will. The ancient Peruvians used to cause the heads of their children to grow malformed. The Japanese know how to modify growth until an oak is a tree a few inches high. Professor Henslow, the botanist, turned a tree upside down, causing its roots to become branches and its branches roots. But it is needless to multiply examples. All that need be done in this lecture is to indicate the reasons why the period of growth is advocated as the time of the whole life of an individual, when the body can be most affected for good or evil. It is the duty of medical men to take particular care to see that good habits of body and of mind are cultivated then. We cannot too strongly impress on school-masters the same fact and make them cultivate the functions of the chest just as they cultivate the mind, which is the function of the brain. In all rapidly growing or feeble children and adults, special care should be taken to teach respiratory exercises. The measure of the success attained is represented by any increase in the difference between the circumferences of the full or empty chest. It will take a long time to eradicate the idea that it is a large chest which is to be aimed at. A man with an immovable empty chest has a splendid ex-

ternal measurement. Yet he is quite unfit for exercise and cannot assist his heart by respiratory movements. It is similar with big muscles. Good chest action should be cultivated and discouragement given to those who unwittingly hamper themselves with too great muscular development.

After the period of growth has passed, the muscles, joints and ligaments become set and taut, fixing the amount of the movements which the chest and limbs can make. Then no further improvements can be made; relief alone can be given. Exercises serve as an education to the whole body; the muscles, joints, ligaments and so forth. The nervous system is also educated, and physical exercises form the basis of the instruction for mentally deficient children. But of more importance in exercise, and perhaps in length of life, is the proper education of chest and the organs therein contained. Slow movements educate the muscles and quick movements educate the nervous system.

Physiological Symmetry.

A few words must be said about this physical education. No one system of the body should be developed in excess of the others or at their expense. Great discouragement must be given to the tendency of the young to develop their muscular system alone: good measurements round the "biceps" or calf often being regarded as more important than anything else. All systems should be developed together *harmoniously and symmetrically*. All discord or a symmetry should be avoided, except in so far as fitting an individual for his vocation in life. For instance, it is of more import-

ance to develop the muscles of a future navy than of a musician.

Besides this symmetry, it is most important that the position or carriage of the body should be carefully attended to. Whatever position is habitually adopted, that is the one in which the body will become fixed when growth ceases. The slouching attitude so often seen, with the spine flexed, the head forward and the shoulders stooping is the one which is necessarily associated with the flattened thorax in the position of expiration or rest. Every encouragement must be given for children to maintain an erect attitude, with the spine straight, head erect, shoulders back, chest forward and the whole body in a position of activity. The maintenance of a good position is an exercise in itself, and a short drill with erect carriage maintained throughout should form part of the daily instruction in childhood.

Some Respiratory Exercises.

[Some respiratory exercises were then demonstrated; a summary of a few of which is added.]

1. Stand erect with hands on hips, inspire and expire slowly, allowing a pause of 10 seconds or so between these acts. Bend the body back during inspiration and forward during expiration.

2. Stand erect and slowly raise the extended arms from the sides in a lateral direction; inspire during this; pause as above; then expire and lower arms slowly.

3. Same as 2, except instead of raising the arms laterally they are directed forwards and not brought quite over the head.

The interval between inspiration and expiration in 2 and 3 may be utilized with advantages, as follows:—

(a) The knees are bent and separated, the trunk lowered as far as possible and then raised.

(b) The trunk is flexed at the hips until the fingers touch the ground, and then raised, the knees being kept straight.

(c) The body may be slowly raised on to the toes and lowered two or three times.

These movements may all be repeated a certain number of times, 5, 10 or 20, and carried out as slowly as is possible.

Nasal Respiratory Exercises.

In teaching respiratory exercises to children there is a further and special consideration, which is not noticed in any code of instruction. Care should be taken to see that children are taught nasal respiration. The subsequent growth of the maxillæ and the naso-pharynx will help to render such respiration fully efficient: and it will soon become a habit. By these means the nasal cavities are fully aerated and any infective condition there removed. An infective irritative condition causes hypertrophy of the lymphoid tissue, forming the well-known adenoid vegetations. A very large number of adenoid cases can be completely cured by these means without any operation at all. Even if an operation is performed it will not be successful unless these exercises render nasal respiration a habit. If the tonsils are large, it is wisest not to defer operation. Much middle ear trouble in children would be avoided if only more attention was paid to the proper aeration of the naso-pharynx.

Adenoid vegetations are very frequently associated with the flat type of chest with depressed sternum, rounded shoulders and wing-like scapulæ. Thus inattention to nasal respiration brings about not only deformities of face and naso-pharynx but also of chest. The last if allowed to persist into adult life completely cripples the muscular working capacity of the individual.

Respiratory Exercises in Spinal Curvatures.

Respiratory exercises should form the basis of all physical culture, and particularly so in children. In normal respiration the dorsal spine is alternately extended and flexed, so that such exercises assist in retaining the mobility of the vertebral column. Cases of lateral curvature of the spine are not uncommon among older children. Respiratory exercises are especially useful for some of these cases in which the curvature is not reduced by flexion or hanging on a trapeze or bar. The exercises which have been already described are of the kind called active or voluntary. That is to say, the patient performs the movements by his own muscular action. In the scoliosis cases under consideration, other exercises, of a passive character, are the most useful. For instance, the patient lies on his back astride of some form or table. The legs are fixed with strap stirrups like those on the stretcher of a rowing boat. The patient then breathes slowly, and during inspiration the instructor raises the arms from the side above the head, as in artificial respiration. By this procedure the chest is forcibly expanded. In a case of irreducible scoliosis more force must be used on the arm on the side of the conca-

vity of the dorsal curve. The more powerful pull will cause more powerful expansion of the contracted side of the chest. This is a most useful exercise for these cases. For if they are treated in ordinary ways they often get worse in consequence. A slight help may be obtained by fixing with a strap or pulling on the leg of the opposite side, at the same time that the arms are drawn over the head.

By kyphosis is meant an antero-posterior stoop of the dorsal spine. If left in this position, the spine becomes more or less fixed. Respiratory exercises are of the greatest use in maintaining mobility of the spine and developing the chest, which in these instances is of the flat type.

As a result of rickets the chest is often left with some malformation. You may search any text-book and no mention will be made of treatment. In fact, all is left to the curative methods of the exercise of function and natural growth. In some cases this is sufficient, but one might go as far as to say that every child who has exhibited ricketty tendencies will be much improved by physical respiratory exercises. The pigeon breast, the funnel chest and all could or should be entirely removed by a long course of respiratory exercises during childhood or youth.

It must be most forcibly impressed upon you that it is not the very large chest or the one with great external measurement which is to be cultivated. The value of a chest, a man's index for health and muscular work, is seen in the difference in the measurements of his chest in full inspiration and full expiration. To fit a child for the work of life, it should give a freely moveable chest; not a fixed one, be its size ever so great.

Effects on the Abdominal Muscles.

This brief sketch of physical exercises for the development of the chest cannot be closed without some reference to the effects upon the abdominal muscles. Great injury to the inguinal regions is inflicted upon a child by the persistence of distension of the abdomen during the period of growth. When distended the abdomen bulges forward, as it cannot expand backwards or laterally; as a consequence, the anterior muscles suffer most. These are of two groups, the recti and the internal obliques. The former are merely longitudinal straps down the front of the abdomen, and in consequence, the effects of the persistent distension fall mainly on the internal oblique muscles. These are stretched, and as they consist of growing cells, they adapt themselves to the increased length. Consequently, when the distension subsides the stretched muscle cannot return to its proper length. Such is, I believe, the origin of those large, fleshy internal oblique muscles, too often seen in operating on the inguinal region. Respiratory exercises will strengthen these muscles, keep them in firm healthy tone, and tend to minimise the risks of hernia formation, which is the great danger.

*** WET NURSING IN INDIA**

BY

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NOTWITHSTANDING all the expense, discomfort, worry, annoyances, extra room, domestic squabbles pleaded in connection with wet nursing in India, the most important fact cannot be blinked that the child's life hangs in the scales. Artificial

* Specially contributed to "The Antiseptic."

feeding may prosper for a while, until a dirty bottle, a careless nurse (one who tends a child), some epidemic affecting human beings, the goats or the cows, else teething troubles, or climatic influences provoke the dreaded diarrhoea consequent thereon, when medicines lose their power, when it is too late to rush off for the first disengaged wet nurse or "aymah;" for the time has gone by for building a constitution to resist disease, just as the wave that has passed over can never be recalled. It is always desirable that a mother should nurse her own child. This, however, in the case of many European women in the tropics is difficult, or even impossible, especially after the second or third confinement. In such circumstances recourse must be had to a wet-nurse. Care should be exercised in the selection of a suitable woman for this purpose, as disease may very easily be communicated by her. If a wet-nurse be not procurable, hand-feeding must be resorted to, but it is a practice which cannot be recommended, and the remarks apply only to healthy females. Others, again, may be unable to bear the expense of a wet-nurse: such circumstances must sometimes lead to supplementing the milk of the mother by artificial means. Although the extreme desirability of healthy females nursing their children, there are a large number of European women in India unable to undertake this duty. In addition to those suffering from actual disease, or weakened by former attacks, there is a more numerous class who are debilitated to a greater or less extent, by heat, malaria, and the relaxing nature of the climate, and this is especially apparent in the weaker system of the female, particularly when child-bearing, parturition, and lactation are superadded as causes of debility. It is a fact that whenever the milk is not sufficient for the wants of the

infant, it is also more or less deficient in qualities in which nutritive properties depend; and it is therefore unsuited for use. The limited supply shows that the constitution of the mother is unequal to the task, and milk of the best quality cannot be secreted by a woman whose constitutional powers are failing. The sooner these facts are valued and acted upon, by the employment of a wet-nurse, the better it will be for both mother and child. The best age for selecting a wet-nurse is from 20 to 30 years old, not too early, when functions are premature and girls ignorant, bewildered, simple, quite likely to act against orders. Selected young women sometimes soon forget themselves, become ungrateful, inclined to flirt, or, like Jeshurun, to wax fat, and kick. Many, however, are very good and valuable and make excellent wet-nurses if kindly treated. It is a matter for congratulation that in India, the much discussed disadvantages connected with this class of female servants, are reduced to a minimum, as compared with England. Nor should a middle-aged woman be usually selected, one worn out, possibly, by many maternities, domestic cares, anxieties, associated, perhaps, with a history of poverty and ill treatment; in fact, the old story of depraved habits or addicted to some vice; her milk cannot, as a rule, be considered satisfactory. Presuming there is a choice available (as some people imagine at times until they go to pick for themselves), the old trick is to be remembered of impostors drinking largely of fluid, as water, previous to examination, thus allowing milk temporarily to accumulate, leading to the deceptive idea of superabundance in breasts distended for a little while, when in reality the normal amount secreted is not sufficient for a healthy child. Such deception may be suspected

when a thin, feeble-looking woman appears with overflowing bosoms. The only sure method of detection is by applying another child to empty the mamma and watching the rapidity of the re-accumulation of the milk. It should also be ascertained that a child shown by a wet-nurse should approximate that of the age of the child she undertakes to nurse. This is of importance, for the milk varies in nutritive properties in definite proportion to the age of the child. Milk should present a bluish-white colour, and possess a sweet taste. If tested with test-paper it should afford an alkaline, not an acid reaction; and if examined under a microscope, all globules should be seen floating about separate and free, and not massing together. Allowed to stand a few hours, it should give a thin film, resembling cream. Dropped in water, healthy human milk should form a cloudy mixture, and not sink in thick drops. The goodness of the milk may also be judged of by observation of the nurse's child. If it sucks heartily, the milk is most likely good; if it sucks laboriously, desists, and cries, the reverse is probably the case. Milk of a dark complexioned woman is richer in solid constituents, and according to Dr. Eustace Smith the child should increase 3 to 5 ounces in weight after being nursed a short time. Menstruation during lactation is objectionable, yet in India often unavoidable; nor does pregnancy during lactation necessarily infect the milk, although some believe it is never good, and probably liable to stop the flow altogether. A woman confined about three or four months of her second child should be preferred for a baby of 3 or 4 weeks old. It is the popular belief that the same complexion as that of the mother should be looked for, but as that

same complexion or colour may be combined with an equally weakly constitution there are more important points to be considered. The wet nurse should have unblemished skin, clear eyes, clean tongue, good teeth, inoffensive breath, and be free from scrofula—not forgetting that if she has a bright, cheerful, amiable, active disposition, her wages may be fixed accordingly. Her child should be examined very closely, as to thriving condition, freedom from sickness, from any skin eruption, especially about the head (Favus). Instead of being large, soft, flabby, pendulous, her bosoms firm, elastic, pear-shaped, should be moderately distended with milk; the skin thin, mottled with veins, the nipples well developed, yet not too large, and free from cracks or fissures. It may so happen that the tongue of the infant to be nursed is not altogether free, requires a nick underneath with a pair of sharp scissors. Very few children are really tongue-tied. Do not therefore too quickly come to the conclusion that such is the case, simply because an infant does not readily suck. Every milk at first may cause constipation, and if after a while the child loses weight, change the nurse. Boys are heavier than girls, and though nursing mothers at first grow stout, they lose flesh and hair (temporarily) after a few months, more with sons than daughters. The European nurse allowed at least 3 pints of milk a day, besides a judicious allowance of gruel, tea and malt liquor, should avoid rich soups, pastry, gravies, salted meats, cabbage, and all unwholesome food; should not be fed up too soon after a period of want at home; should avoid hot rooms and remaining too long in the nursery instead of taking a due amount of exercise, which should not be such to induce fatigue. Be

very kind to the woman, try to keep away friends and relations, for an endless annoyance may be caused by the association of gossiping friends and extortionate relatives eternally hanging about the premises, threatening to take the nurse away when her services are most valuable. Some ladies are always changing, always finding fault with wet-nurses: the result is no benefit to the child, who may not appreciate the milk of a woman whose healthy boy is over two years of age. I once heard of a woman who had one child and no more, yet for eight years she was never free from milk, especially at the menstrual periods, and by an intelligent chemist was advised to go out wet-nursing the rest of her life. In choosing a Native wet-nurse the great hope is not to fall in with one who smokes in excess, or indulges in sedatives or stimulants. In certain parts of India, a moderate indulgence in tobacco-smoking must be permitted, as some women—Bheels, for instance—will rarely take service if debarred from the customary pipe. At Simla, in 1877, a very fine child, 2 years of age, had just been weaned after being nursed by the same woman from the commencement, and the following information was kindly given by the proud and happy mother extant (a strong opponent to the pestilent, pernicious, and, in some cases, unpardonable system of neglect termed—bringing up by hand). The nurse, aged 19, of the weaver caste, received 10 rupees a month, besides cloths, cooking utensils and caste money; never allowed chupaties or hand cakes, green vegetables or potatoes. She would have a cup of tea in the early morning, also for breakfast half a seer of warm milk, half a loaf of bread; for dinner either curry and rice, dhal or kicherie, washed

down with water, whilst for tea or supper a whole loaf of bread and half a seer of warm milk, and the last thing at night perhaps a cup of tea. The same diet in the plains, and a bath daily, rigid cleanliness, plenty of exercise, no followers. This pretty healthy looking girl menstruated regularly without detriment to the child. It is an unfortunate fact that whilst all love and interest become transferred to the pale-faced stranger, the poor little dark man, making his own arrangements, as we say in India, often is ignored. This nurse was one of those from Agra. The hill women, dirty, comical, uncivilized almost, are very valuable. A poor little infant rapidly running down hill at Meerut was hurried up to the Himalayas, and there, thanks to one of these women, the tide turned towards recovery. When milk fails, the leaves of the castor oil plant should be boiled in water, the breasts bathed with a decoction for 15 or 20 minutes, part of the boiled leaves to be spread over them and allowed to remain on until dry. Of late years the local application of castor oil leaves has been extensively used among some classes of natives with a view of increasing or exciting the lacteal secretion. An excellent curry or stew marvelously increasing the flow of milk is made of the unripe peepo of the Papaya tree, a native of America cultivated throughout India. The milky juice exuding from the rind of the unripe fruit of this curious tree also removes the toughness, softens and renders meat most tender and digestible. The seeds remove worms and the fruit makes a nice dessert. Puny women sometimes make excellent wet-nurses. In India, by all accounts, certain traditions never change, for instance, profound belief in castor oil, butter and sugar, application of burnt linen to the umbilical cord after

separation, tight bandaging of infants, stimulating diet after delivery, some animal food and porter on the third day. Children have congee and broth too soon: for example, it is said, an infant a month old starved on chicken broth. According to the *Indian Medical Gazette* the worst London chalk mixture would be purer itself compared to milk brought to barracks by the milkman who virtuously brings his own cows. Putting a child to the breast too soon, after delivery, excites after pains, so Mrs. Gamp remarks to Mrs. Harris. These are very common in multipara, but comparatively rare in primipara. In England, some practitioners advise that the child should at once, whilst others say three hours after accouchement, be applied to the breast. After the second day, calculating the amount taken at about 6 ounces, the child should be nursed 5 or 6 times between 6 in the morning and 2 at night, so that the mother has 8 hours' sleep. Trousseau allows at 6 months, thin farinaceous soups, arrowroot, tapioca, cassava, vermicelli, rice, flour, bread-crumbs well boiled and passed through a cullender, or hasty pudding, made of wheaten flour, all prepared with milk diluted with sugared water. Cow's milk can be mixed with punada barley or grits, one-third water, two-thirds milk. When teeth appear, fresh eggs, bread, chicken broth, are all useful. Whereas an English cow yields about 3 gallons, the Bengali cow has only 4 to 6 pounds; the milk of the latter poor in solids and fat, being too often adulterated with dirty water. The little animals are fed on 10 lbs. of rice straw, 2 lbs. of oil cake, 1 lb. of rice husks, 30 pints of water, and but very seldom have any green fodder. In India goat's milk is generally most suitable for strong children, and the best

form of feeding bottle is that known as the "British Feeding Bottle," which can be placed in any position without the food running out while the infant is sucking. Care should be taken to keep the feeding bottle and fittings at all times clean and sweet. One lady after three months' nursing tried the bottle system, and as nearly as possible, thanks to a dirty nurse and sour milk, a dangerous diarrhoea all but proved fatal. Foul matter, rapid decomposition, food adulteration are conditions frequently to be expected in India. A child brought up by hand, perhaps, may be insufficiently clad when brought, say, from Lucknow to Landour, the result being very cold feet at night, the liver acts irregularly or sluggishly, there may be cramp of the bowels followed by diarrhoea. Supposing that the child has weak lungs, feeble heart, or an excitable, irritable brain, the mischief may strain any one of these faulty links in the chain, and start new mischief, besides the disease of the intestinal or mesenteric glands running on. A distended abdomen at once attracts attention, and though fortunately the cause is often accumulation of gas, owing to weakness of the walls when the bowels are deranged, the food ill digested, the starchy matters decomposed, we may have other conditions to deal with, should the child be about three years of age. Fortunately certain ailments are milder in India, yet many infantile diseases become very serious at certain times in particular places, when the weakest of children go to the wall, and the weakest are those brought up by hand, it stands to reason. Every nursery guide book, every medical man in practice, every sensible mother who knows the country and, may be, has bitterly bought her sad experience, all tell the same story, that debility, want of

blood, tone and stamina predispose to malarial fevers; in fact, to all the indirect causes of infantile mortality in India. There is a vague impression abroad that the climate of India is extremely fatal to European child life. Paradoxical though it appear, it may be stated that such a belief is at once true and it is untrue; the mortality is enormously in excess of that which prevails in Europe, and it is lower than, or as low as that of the western country.

Cases and Comments.

Comments on 500 Cases of Plague,

BY

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THE ordinary and more prominent symptoms of plague are so well known that I do not intend touching upon them here except to note certain peculiarities regarding some of them. Fever, headache, bilious vomiting, furred tongue, early prostration, injected eyes, drunken look, incoherent and belated answers, staggering gait, delirium, buboes, pneumonia, diarrhoea, convulsions and abortion are symptoms of the different varieties of the disease, which are familiar not only to the members of the profession but also to all other intelligent and observant persons residing in or near infected areas. I wish to record in the pages of your journal the

rarer, but none the less important, minor symptoms of the disease that have come under my observation when I was dealing with over a thousand cases, more than five hundred of which were under my treatment in hospitals. The existing books and pamphlets on the subject do not mention most of these symptoms, and if they notice a few the information about them is very meagre.

Temperature.—It is usual in plague for temperature to fall with the passing of the acute stage, with generally evening rise for a few days more, and also when suppuration of buboes occur. In certain cases (3 p. c.) fever leaves and buboes undergo resolution or, if they are opened, the ulcers heal. After a few days of complete intermittance, temperature rises again and persists for four, five or even six weeks. The patient undergoes progressive emaciation until he is reduced to a mere skeleton. Delirium returns soon after the relapse of fever and continues to the last. The fever runs a very irregular course. It either assumes the remittant character or intermits off and on for three or four days. Sometimes the temperature stands high for days with or without morning remission. More than 75 p. c. of such cases end fatally in spite of the most energetic treatment, and the few that ultimately recover become mere wrecks and take months before they regain their original state of health.

Delirium.—There are very few cases that pass through the acute stage without delirium of some form or other. Some patients are brought to the hospital with total unconsciousness or low muttering and high temperature, varying from 103° to 105° . They lie in the same state for a week or more, never stirring far out of their beds

and always swallowing whatever is poured into their mouths. When consciousness returns, they always find themselves with paralysis of the limbs or complete loss of speech or both. In isolated cases of plague delirium continues for a long time in the convalescent stage with normal or sub-normal temperature. No mental derangement is left as a permanent sequela in any of the recovered cases.

Loss of Speech.—Loss of speech occurs in six out of every hundred cases. When the patient recovers from the prolonged delirium noted above, he becomes totally dumb. Every question is understood and replied to by mere nods of the head. In a few days, he lisps single words like a child. Speech is recovered in three or four weeks. Some thickness in utterance, with slight halting is, however, left as a permanent defect. I have watched my patients for the last three years and found no improvement in their mode of talk after three or four months of their discharge from the hospital.

Paralysis.—Paralysis is observed in 5 p. c. of cases after profound and prolonged delirium. In only one case, an old woman of sixty, there was sudden hemiplegia in the convalescent stage. Paralysis and loss of speech usually go together. Complete or partial paralysis occurs in one or both of the arms and the legs and in the tongue. Sensory symptoms are not lost, but the deep reflex actions are considerably impaired. Patients could not lift the affected limbs, so that they have to be fed by others. Or, if they are able to move them, they tremble violently. The extent of paralysis and speech affection is in proportion to the intensity and duration of the low delirium already referred to. Most of the patients recover completely, but some are partly crippled for life.

Eye.—About 10 p. c. suffer from eye affections, usually cattarrhal ophthalmia, phlyctænides in the conjunctiva, mostly in the corneal margin, hypopean and corneal ulcers. In cases where conjunctival redness is exaggerated and persists for any length of time, myopia usually results, permanently; while in others the conjunctiva becomes very much inflamed with profuse lachrymation, photophobia and at times cedema, which in severe attacks overlap the cornea all round. Pus forms in the anterior chamber and sight is completely lost. In a case of progressive emaciation with trembling and incoordination in all the limbs, the patient who had no inflammatory eye complaint felt his field of vision narrow gradually and objects grow hazier until he could no longer see anything at all, which was probably due to atrophy of the optic nerve.

Skin.—In five per cent. of patients there are skin eruptions. They are usually found on the face, chest, abdomen, back and arms and are papular in almost all cases. In some they resemble purpuric points. They are not very close and are somewhat scattered, more or less uniformly. They fade away completely in three or four weeks. In one case several papules became purulent. These eruptions occur towards the end of the acute stage and sometimes after the temperature becomes finally normal. There is neither pain nor itching.

Discharge.—Hæmorrhagic discharges from the nose, stomach, lungs, bowels and uterus occur in a small number of cases. The quantity is usually large. Except in epistaxis, the result of hæmorrhage is always disastrous. Patients at once collapse and die in a few hours. The same is the case when diarrhoea sets in in a severe form. The blood passed out is much

thinner and less coagulable than normal blood. There was a solitary case of profuse hæmorrhage under the skin. In Bombay such cases are evidently more numerous and are classified as a separate variety named "cellulo-cutaneous."

Circulatory.—It is well-known that in plague there is always a tendency to heart failure. With all our precautions, in patients who are progressing satisfactorily pulse suddenly becomes weak and, in rare instances irregular. I do not mean those dramatic incidents where the patient you had left in excellent condition five minutes back sinks and expires before you have done with his next room neighbour. I refer to cases of persistent gradual heart failure, against which you fight with all your might, almost to no purpose. I recently had a Marwadi youth who had recurring symptoms of heart failure every day for nearly three weeks. All this time he had to be supported with hypodermic strychnine injections, which at once rendered his breathing easy and pulse stronger.

Respiratory.—In every twelfth case (excepting pneumonia) there are respiratory symptoms, usually of bronchitis, with distressing cough and scanty, sticky and frothy expectoration. At times symptoms of broncho-pneumonia supervene. Pneumonic plague patients rarely live after 36 hours, and I have not seen one recover. There is profound delirium with prostration and the temperature is always high, reaching in a few cases 106°. Patients cough so seldom that the cases are liable to be mistaken for "toxic" ones until examination of the chest or rusty sputum reveals the truth. I understand that in Madras some are of opinion that plague pneumonia is absolutely devoid of rusty sputum, the absence of which should be the distinguishing point between it and ordi-

nary pneumonia. In all cases diagnosed as pneumonic plague in Bellary, I have invariably found blood-mixed sputum. Last year out of an Ediga joint family of 38 members, 24 were attacked with this form of plague and all of them died within 12 to 36 hours after the appearance of the symptoms. Six of these cases were admitted into my hospital and four more of them I saw in the fields, and in all the ten the expectoration was blood-stained. I learnt from the survivors that it was so in the remaining fourteen. In most of these severe cases of pneumonia for hours prior to their death the patients accompany every act of expiration with loud groans audible throughout the camp.

Swelling.—Besides the swelling of inguinal, femoral, axillary, cervical and submaxillary glands, we occasionally meet with buboes of the parotid, the buccal, the supraclavicular and also of stray glands at the bends of the elbow and above the internal condyle of the humerus and the chain of glands on the outer margin of the mammae. Frequently a hard, marble-sized swelling shows itself behind the chin. Numerous nonglandular circumscribed swellings appear in almost every part of the body, on the face, chest, abdomen, back, arms, legs and the gluteal regions: very few of them suppurate. In a chronic inguinal sinus case, a large secondary abscess formed in the back between the scapulæ. Cases of general swelling of the body are exceedingly rare. They occur in patients who become anæmic through prolonged fever or in those in whom pus forms in the pelvic cellular tissue. In four cases of axillary buboes, the temperature was always between 104° and 105° and the buboes became rapidly bigger, with the surrounding œdema enveloping half the

trunk and the whole upper forearm. The submaxillary gland on the same side was next involved, together with the parotids and the chain of cervical glands. The head was deflected to and bent on that side and breathing and deglutition became more and more difficult. The submaxillary glands on the other side followed suit and the patients were virtually suffocated. In one of these cases patches of œdematous tissue became gangrenous. Buboes sometimes appear from four to nine days after fever comes on. In stray cases buboes first appear with fever 2 or 3 days later on. Many of the cases sent to the hospital as "toxic" or "suspicious" developed buboes several days after admission. Deaths in the town returned as due to toxic or suspicious plague are probably those in which buboes might appear if the patients live long enough. The majority of bubonic cases have single buboes, but multiple glandular swellings are by no means rare, and number in some cases from 5 to 8.

Ulcers.—It is notorious that plague ulcers take a long time to heal. There is a special danger about inguinal and femoral abscesses, in that now and then pus burrows through the canals in and below Poupart's ligament into the pelvic cavity and forms an abscess in the cellular tissue, which could be felt as a distinct tumour above the ligament. In a case of femoral bubo the sinus communicated into the abdominal wall with a long oblongular abscess parallel to the rectus muscle.

Other Symptoms.—Although appetite is satisfactory in the great majority of patients, we now and then come across cases with incessant nausea, capricious appetite or perverted taste. Some are restless and spit everything on the bystanders. Poor patients when they become

convalescent rebel against the hospital diet, however rich it may be. Some have an irresistible hankering after their usual meals, such as jonna and covva food with the highly pungent tamarind chutney or green chillies. I lost four patients who were only waiting to be discharged but died of acute colic and restlessness which affected the heart's action, diarrhoea, dysentery and relapse of fever. In three plague cases hiccough was noticed, and in isolated instances boys and girls of 14 or 15 years had convulsions. Spleen is enlarged when there is high fever, but we must not lose sight of the fact that malaria might co-exist with plague.

Second Attacks.—I have observed three men attacked with plague a second time. In one the attack was very mild with only two days' slight fever and some swelling of glands with pain. In the second case the symptoms were more severe and the patient died. All the three had femoral buboes during the first attack, which were operated in Nos. 1 and 3 and subsided in No. 2. They all had buboes in the original places during the second attack though case No. 3 had an inguinal bubo as well.

Mortality.—Mortality in the town is always high in the middle of an epidemic when it reaches its zenith, while it is low at the commencement and the end. The same rule applies to death rate in hospitals. Patients admitted into hospitals exhibit symptoms varying in intensity with the degree of the virulence of the epidemic in the town. The following information from the hospital admission register will bear out the above statements.

Dates	Admission	Death	Remarks.
2-12-04—17-12-04.	21	12	3 died within 24 hours.
20-12-04—27-12-04.	12	9	7 died from 14 to 18 hours after admission.

Dates	Admission	Death	Remarks.
10-1-05.	7	5	Two died with- in 24 hours.
14-1-05—16-1-05.	9	7	3 died from 31 to 17 hours.
21-1-05—24-2-05.	27	10	6 died in 24 hours.

The epidemic, which was very mild this time, commenced on the 2nd December 1904 and the last case was reported on the 24th February 1905.

EDITORIAL NOTICE.

The Editor will always be pleased to receive communications on matters of importance to the profession for publication in "The Antiseptic."

Articles, letters, and all communications intended for publication, and books for review, should be addressed to the Editor, "Lady Napier Villa," Egmore.

All communications relating to advertisements, subscriptions, and other business matters to be addressed to the Manager, 323, Thumbu Chetty Street B. T., Madras.

THE ANTISEPTIC.

APRIL, 1905.

The "Lancet" on the Indian Medical Service.

ELSEWHERE we reproduce a leading article which appeared in the *Lancet* of February 18th last on the subject of "The Indian Medical Service." The high position which our contemporary occupies among the medical journals in Europe compels all medical men to treat its opinions with respect and consideration. And this fact makes it all the more regrettable that our contemporary in discussing the future of the Indian Medical Service should unfortunately have made it a race question. Throughout the leading article we have referred to the *Lancet* contrasts the prospects of European medical men in India with those of the Eurasian and Native medical men. If the *Lancet* had kept to its original resolve to discuss the future of the Indian Medical Service and of the Subordinate Medical Service in India it would have been infinitely better, for as the Indian Medical Service is open to natives of India and does include a number of Native gentlemen in its ranks, and as there are a fair number of European gentlemen among the ranks of the Subordinate Medical Service, the question of race might have been kept out.

Our contemporary admits that it derived its information from correspondents in India, some of whom, at all events, we are told, have been actuated by "feelings that are of a purely personal or a purely controversial nature, and therefore lacking in sympathy with the best interests of both the public medical services and the medical requirements of India." Against this indulgence in personalities our contemporary set its face, and we are glad to see that it has successfully kept personalities out of its leading article. But the *Lancet* has only avoided the Scylla of personalities to fall into the Charybdis of race. "For," says our contemporary, "in considering the question of the increased employment and the employment in more responsible and highly placed duties of the Native medical graduates we must not ignore the influence which the difference of race introduces into it—not merely those of a physical nature but racial distinctions of character, religion, education and methods of thought which, however much we may regret their existence, nevertheless tend to keep the European and Native races of India more or less apart." Continuing in this way in quite the latest Curzonian style, the *Lancet* comes to the conclusion "that the ethical standards of the Native and the European are identical cannot be maintained." Englishmen have often told us that they have a high ethical standard. Our contemporary is satisfied that English-

men are highly ethical, and concludes with a fine specimen of its own ethics. The *Lancet* admits that "it is a legitimate grievance of the qualified natives of India—for it must not be forgotten that it is their country over which we rule—that they are not placed more frequently in medical charge of the smaller districts of India." That admission on the part of an Englishman does indicate the possession of some ethical qualities. But please note the *very next* sentence. Here it is: "While the British 'raj' lasts, however, the Indian European medical officers will be required for the larger stations and more important appointments." Our contemporary is careful to say "Indian European medical officers" instead of members of the Indian Medical Service, for the latter may include natives of India, which would go against the high ethics of our contemporary. Whatever one may think of the ethics of these concluding sentences there is no mistaking their business-like straightforwardness. As long as the British raj in India lasts we want the best appointments in that country for Englishmen. Ethics or no ethics that is a perfectly plain and candid admission, and we appreciate it. For, every sensible man admits that Great Britain maintains her colonies and dependencies to secure an outlet for her surplus population and an open market for her commercial products. No one has ever been taken in by all the talk about Eng-

land's mission in India to do God's work, and similar Exeter Hall sentiments. England holds India, and naturally she wants to find profitable employment there for as many of her population as she can possibly do. We can quite understand that position. But if Lord Curzon, the *Lancet* and others will talk less of ethics, people in this country will take them more seriously. Ethics apart, even from a business point of view our contemporary's article is disappointing. Without reducing the number of English medical men in India even by a single unit there are a number of reforms which can be effected which will tend to improve the medical comforts both of the European and Native population in India.

The chief question, however, in connection with medical reform in India is the necessity for the creation of a Civil Medical Department. The system of drafting military medical men into civil employ may be very serviceable in a newly conquered country, where a civil administration gradually takes the place of a military occupation. But in a country like India, which has enjoyed the benefits of British rule for over a century, there is absolutely no necessity for the mixing up of Military and Civil officers. The only argument used in support of the present system is that it will be too costly to have a separate Civil Medical Department. Well, if we want good

doctors we must pay for them, and we don't suppose that the people of India will grudge the extra expense if they get good value for their money.

Under the present system a young officer who enters the Indian Medical Service by competition undergoes a six months' military training at Netley, and then comes out to India. The first few years of his service are usually spent in military duty, which period as a rule is sufficiently long to enable the young lieutenant or captain to forget a good portion of what he learned before he went in for the competitive examination. Then comes his sudden transfer to the Civil Department, either as the Medical and Sanitary Officer of a large district, or in some cases as Professor in one of the Medical Colleges in India. Let us take first the men who are put in charge of districts as District Medical and Sanitary Officers. It is a notorious fact that only a very small *per cent.* of the officers of the Indian Medical Service (we don't think even 5 *per cent.*) have had any special training in public health or hold special diplomas in public health. The amount of special knowledge in public health required in a candidate for a medical degree or diploma in the United Kingdom is exceedingly little. But in the United Kingdom they have a wise rule that only holders of special diplomas in public health can be entertained as Medical Officers of Health for boroughs or counties

of over fifty thousand inhabitants, whereas under the present system in India a junior medical man with only a couple of years' military experience is put in sanitary charge of large districts whose populations are counted by millions.

Let us next take Professors in the various Medical Colleges. Our contemporary says that "Commissioned Medical officers are employed extensively as Professors at the large Medical Colleges." That is perfectly true, and, what is more, according to present rules, none but Commissioned Medical Officers can be so employed. If Sir Frederick Treves applies for one of the vacant professorships of surgery at one of the medical colleges in India, as matters stand at present he will be ineligible for the appointment. The *Lancet* mentions the fact that the Commissioned Medical Offices are extensively appointed as Professors in the Medical Colleges. Has our contemporary ever gone in to the question of how many of these are fitted to be professors by special training? As far as our experience of European countries goes we have found that it takes a man several years of special study to become a professor. But out here the rapidity with which a man can develop into a Professor is only rivalled by the rapidity with which certain pathogenic microbes multiply themselves. And once an officer of the Indian Medical service becomes a Professor in a Medical College he does not, as a rule, stick

to his subject, as professors in other parts of the world do. He jumps about from chair to chair, becoming professor of chemistry and midwifery, anatomy and ophthalmology, botany and medicine, zoology and surgery, all in such rapid succession that an astonished and bewildered public is left wondering at the versatility of the Indian medical professor.

"Still they gazed and still the wonder grew,
That one small head could carry all he knew."

The Director of Public Instruction in Madras once drew the attention of the Government to the evils arising out of this system of rapid change of professors in the Madras Medical College. And as far as we can see the Director's remarks have had no appreciable effect in stopping the "quick change" of professors in the local college.

Sometime ago when Col. Maitland was appointed Principal of the Medical College there was a vacancy in the professorship of surgery here. For months the place went begging and there was no permanent professor of surgery forthcoming. And after a delay of several months a permanent professor was appointed—an excellent officer who had specialized in medicine and taken the very high qualification of member of the Royal College of Physicians of London. If Major Gifford had taken his Fellowship of the College of Surgeons most probably he would have been appointed Professor of Medicine. It is a way they have in

India. Now there is another important place about to become vacant—namely that of Professor of Obstetrics and Gynæcology at the Medical College and Superintendent of the Government Maternity Hospital. The Madras Maternity Hospital is one of the largest and best in India, and it ought always to be under a skilled obstetrician and gynæcologist. The rules and traditions of the medical service in India require that an officer of the Indian Medical Service should be appointed to the place shortly to be rendered vacant by the retirement of Lt.-Col. Sturmer. We have not heard of any exceptionally good obstetricians among the I. M. S. men in Madras. They will all know as much of obstetrics and gynæcology as is required in a general practitioner. But where is the officer with any special training in this branch of practice capable of taking charge of such a large and well equipped maternity hospital and supplying the place of a consultant to the large and growing class of general practitioners in this presidency? Echo answers—where? Under ordinary conditions existing in any civilized community the best available man for the place would have been chosen. We have in Madras a medical man who has had experience in this very same maternity hospital for over 22 years, and who as an obstetrician has few equals and no superiors in India. We refer to Capt. Falconer. But he suffers from a serious disability. He is not a member of the

Indian Medical Service. He belongs to the Subordinate Medical Department. And that damning fact makes him ineligible for the appointment for which professional knowledge and experience makes him eminently suitable. A member of the Indian Medical Service must be appointed to the place, even though to the new professor an axis-traction forceps may be a Chinese puzzle. We do not know who the new professor of obstetrics will be. But whoever may be chosen, from what we know of the members of the Indian Medical Service in Madras, it will take him some time to get as much of special experience in obstetrics as is expected from a professor of that branch of medical science.

But if the present system could be somewhat modified and we could get out a few specialists for some of the important places in the larger towns, would it not conduce infinitely more for the efficiency of medical teaching and medical aid in India? We can assure our contemporary, the *Lancet*, that we don't make this suggestion with any desire to see the European medical officers supplanted by Natives or Eurasians. Let the *Lancet*, by all means, have the best appointments in India for Europeans as long "as the British Raj lasts." But will it make much difference to the *Lancet* if we have a somewhat different kind of Europeans for some of the more important appointments? For instance this appointment of Professor of Mid-

wifery in the local college that we have alluded to is worth about £1000 a year with free quarters. The holder of the place if he knows his work well can easily make another £1000 or £2000 by private practice. An income of two to three thousand pounds a year will be tempting enough to a good many expert obstetricians in London, Edinburgh or Dublin to make them accept the appointment and come out to India. The public here will have the advantage of having an experienced and skilled medical man as the head of the Maternity Hospital, and the *Lancet* will have the satisfaction of having maintained the number of English medical men in India undiminished. That is a small instalment of medical reform that is more pressing than any other. The professorships in the various medical colleges in India ought not to be the exclusive monopoly of the Indian Medical Service. As vacancies arise in these professorships a small committee of the Royal Colleges of Physicians and Surgeons of London and England respectively may be requested by the Secretary of State for India to select the best candidate available, the members of the Indian Medical Service being eligible like other members of the medical profession. That is the direction in which medical reform in India ought to commence. The presence of a few good professional experts in the presidency towns will enhance the prestige of European medical men.

At present it is just the other way. The *Lancet* observes that the Indian medical officers get less and less private practice because the qualified natives accept much lower fees than the I.M.S. officers and have the advantage of speaking the native languages fluently and of permanency of residence. Does the increase in the number of six-penny dispensaries in London bring down the income of the consultants in Harley Street? And did any of the European doctors who made large practices in India ever speak any Indian language fluently? No. Those excuses won't hold water. Time was when European medical men succeeded in India, because they were *European* medical men. Those days are gone. In these days of increased efficiency a man is judged by his work and not by the colour of his skin, except for appointments to the Government services in India. And we may point out to our contemporary, the *Lancet*, that increase of efficiency ought to be the aim in view of any medical reform that may be initiated, and not a mere desire to keep a number of Englishmen in comfortable positions in India.

Our Contemporaries. MEDICINE.

The Significance of Cough in Children, some Diagnostic Suggestions,

BY

LOUIS FISCHER, M.D.

There are several varieties of cough in children which require consideration.

Hacking cough.—A hacking cough in which the child appears distressed or in pain may be caused by various conditions.

Pleurisy.—A hacking cough without expectoration occurs in pleurisy. This cough occurs as frequently by day as by night. Position does not affect the cough. The examination of the chest will clear the diagnosis. A point worth noting is that friction sounds are most plainly heard in the axillary space in the region corresponding to the space situated above the liver. In pleurisy there is always an elevated temperature, also an accelerated pulse rate.

Pertussis.—In the early stages of whooping cough (first week of illness) a distressing cough resembling bronchial catarrh is heard. *It is important to note that the differential diagnosis between bronchitis and pertussis is sometimes very difficult to determine, especially in the early stages of pertussis.* In pertussis, the history of exposure to a case of whooping cough will aid in making the diagnosis.

Fever is not present in whooping cough unless some complication such as pertussis pneumonia or pertussis bronchitis exists.

Pseudo Pertussis.—A distressing cough, spasmodic in character, most frequently heard when the child is indoors or at night, has been designated as pseudo pertussis. The disease is noncommunicable although very persistent, lasting weeks and months. The cause of these attacks of pseudo pertussis depends on an irritation of one of the terminal branches of the laryngeal nerve, resulting in a spasmodic cough.

Influenza.—A very distressing cough usually accompanies influenza. This is a hacking, irritative cough, very persistent night and day, causing the child pain. The pain is denoted by crying in a very young child. As a rule there is some expectoration of a glairy character, although an irritant cough without expectoration may be present.

Typhoid Cough.—A bronchial catarrh, associated with fever, requires a careful examination of the rest of the body. Note if the spleen is enlarged; if roseolar eruption is present on the chest or abdomen; if a Diazo reaction is present in the urine, and if a Widal reaction can be secured. It is important to remember that in the early stages of typhoid fever a bronchitis may be present.

Useless Coughs.—In post-nasal catarrh we frequently have a large mass of mucus constantly trickling down the pharyngeal wall, causing an irritant cough which continues until the discharge is expectorated or swallowed.

Night Coughs.—Children frequently cough while in the recumbent position, but do not cough while walking around. The point to notice is, does the child breathe with its mouth open (mouth breathing), and has the face and particularly the nose a pinched expression. When adenoids exist they will usually cause a continuous night cough. Other symptoms, such as bed wetting, irritability, loss of appetite and, at times, emaciation may be associated with an adenoid cough. A normal temperature is always found in a night cough due to irritation, such as rhinopharyngitis or adenoid vegetations.

Tuberculosis.—When differentiating cough, due to a distinct localized irritation, such as post-nasal catarrh or a cough resulting from an infection as previously described, accompanying influenza or pertussis, tuberculosis should always be borne in mind. A cough, hacking and irritant with no expectoration always calls for a careful exploration of the chest. There are pretubercular conditions in which there is an anæmia associated with anorexia and general breaking down of the system. A cough associated with this condition requires thought and consideration and may possibly be an associated factor of tuberculosis.

Absence of Expectoration.—Most coughs in infancy are marked by an absence of expectoration. Children cough and then swallow the discharge, therefore the absence of expectorated matter must not necessarily be construed as an entire absence of secretion.

Pneumonia.—Cough when present in pneumonia is not accompanied by expectoration of a prune-juice character which is so characteristic in adults. This peculiarity should be remembered in obscure febrile conditions in which a positive diagnosis is so hard to make.

Hysterical Cough. A cough is frequently heard in very neurotic children. It has no particular significance. It can be designated "nervous" cough. It is part of the complex phenomenon called "hysteria." Children frequently simulate sickness and complain just as do adults. In the same manner they cough and pretend grave illness.—*The Dietetic and Hygienic Gazette.*

The Cardiac Complications of Diphtheria,

BY

F. W. WHITE, M.D., AND H. H. SMITH, M.D.

These doctors have analysed 1,000 cases of diphtheria treated in the Boston City Hospital, in which the condition of the heart was particularly observed. Their results show a much higher proportion of murmurs (94 per cent.) than has been found by others. The patients were principally children. All the murmurs were systolic except those in a few cases of chronic heart disease. They were loud and sometimes musical. They were usually heard at the apex, frequently transmitted to the axilla, and generally associated with accentuation of the pulmonic second sound. The majority were associated with irregular action of the heart and outlasted the fever. It was therefore concluded that they were not functional. They developed in the first few days of the

illness and they lasted several weeks at least. Five or 6 patients were examined 8 or 10 months after leaving hospital. All had murmurs, and 2 had cardiac enlargement and irregularity with a weak first sound, indicating, probably, chronic myocarditis. In about 35 per cent. of the cases the heart was irregular at the time of discharge. Pathological researches have shown that such murmurs are due to mitral insufficiency from changes in the heart muscle or in its innervation. Endocarditis and pericarditis are very rare complications of diphtheria. Cardiac enlargement was infrequently found, contrasting with the observations of Dr. D. B. Lees. The writers also do not confirm his views as to the frequency and importance of acute cardiac dilatation and syncope. In almost all the fatal cases there was gradual cardiac failure.

There were three types of cases. In the first and most serious there were gallop rhythm, vomiting, epigastric pain, and tenderness, and the majority were fatal in 2 or 3 weeks. The second type lasted weeks or months with a rapid regular or irregular heart which gradually became normal. The third type was very rare. Its main feature was a slow pulse at the end of the second or the beginning of the third week. There were 3 cases of this type, which were all fatal.

Treatment.—Prolonged rest in bed was ordered in all severe cases, but all the patients who had murmurs and a somewhat irregular pulse increased in rate were not kept in bed. Digitalis and alcohol rarely did any good. Strychnia was found to be the best drug, and was given in doses of $\frac{1}{16}$ gr. every 4 hours to a child aged from 5 to 10. In many cases larger doses seemed to be useful.—*Boston Med. and Surg. Jour.*, Nov. 12, p. 433.

Malignant Endocarditis followed by Convalescence,

BY

G. NEWTON PITT, M. D., F. R. C. P.

CASE 1.—A boy, aged 13, developed chorea on May 13, 1903. A week later an apical bruit was detected, and later there was albumin in the urine, while headache and vomiting developed. An extensor plantar reflex on the right side was then noticed. The bruit became louder, rigors developed, and a large amount of albumin was found in the urine. Six days after the extensor plantar reflex was noticed there was right hemiplegia with complete aphasia and incontinence of urine. The boy became extremely drowsy and much emaciated. The general condition during June and July deteriorated, so that death seemed almost certain. He was extremely anæmic, but improved rapidly when injections of anti-streptococcic serum were given on alternate days for 6 weeks. The boy recovered in the most remarkable manner. Speech returned with power in the right side, and he gradually regained his strength, being, in Oct., the picture of health.

CASE 2.—A boy, aged 11, was admitted to hospital with a right apical pneumonia, which cleared up in 5 days. A fortnight later the temperature was slightly raised, and a systolic blowing bruit developed in the left fifth space. It gradually became louder and the temperature oscillated up to 100° F. for a month, when it became normal. Injections of Pane's anti-pneumococcic serum were given, and he left the hospital in perfect health and remained so when last heard of. Some months later the bruit was still audible.

That cases of malignant endocarditis may run a course of some months is well known, but comparatively few cases are recorded in which the patients regained health. In both these cases the boys enjoy perfect health, although the valves were permanently damaged. The beneficial effects of the anti-

streptococcic serum were very striking, and recovery was certainly due to its use.—*Lancet*, Nov. 12, p. 1349.

Recovery from Malignant Endocarditis,

BY

G. F. WITHINGTON, M. B.

A man, aged 26, was admitted to hospital on April 19, 1904. A first attack of gonorrhoea began on Mar. 8. Two weeks later he had measles. During convalescence from the latter disease he was seized with severe pain in the region of the heart and dyspnoea which lasted for 4 hours. Chills, irregular fever, sweating, and cough followed and persisted up to the time of admission. Four days before admission he had pain in the left leg, which rapidly swelled and turned purple.

The temperature ranged from 102° to 103° and the pulse from 160 to 170, and there was orthopnoea. Cardiac dulness extended 3 cm. to the right and 16 cm. to the left of the middle line. A presystolic thrill was felt below the nipple, but no murmur was heard at the apex. A short systolic murmur was heard in the left fourth intercostal space. At the bases of the lungs were limited areas of consolidation. There was marked phlebitis of the left leg throughout. The left calf measured 3 in. more than its fellow and the thigh was only a little less swollen. The leucocytes were 16,200.

During the next few days the action of the heart grew less tumultuous, the murmur became more distinct, and the pulmonary second sound increased. The temperature ranged between 101° and 103°. Blood taken from the bend of the elbow on April 25 yielded a culture of the gonococcus. On the 28th the temperature became normal and 2 days later the phlebitis was diminished. On May 8th the murmur was still present, but there were no other cardiac symptoms, and

the area of cardiac dulness was diminished. Early in June the patient was in fair health, the murmur was still heard, but the areas of pulmonary consolidation, which were thought to be embolic, were nearly resolved.

Recovery from malignant endocarditis is very rare.—*Boston Med. and Surg. Jour.*, July 28.

Epidemic and Epizootic Plague.

The *Lancet* of Dec. 3 contains an account of an investigation of plague published in a Blue Book by Dr. William Hunter, Government Bacteriologist in Hong Kong, which revolutionizes our knowledge of the pathology of the disease. Dr. Hunter confirms the observations of Mr. J. Bell, of the Government Civil Hospital, Hong Kong, that the bacillus is present in the peripheral blood from the initial stage of disease—contrary to the current view that it appears only a few days before the fatal termination. The application of Ross's method of examining the blood in malaria (*Review*, Vol. VI., p. 172) showed the bacillus in numbers in the peripheral blood during the first or second day of the disease, in fact before the bubo developed. Hitherto the bubo has been regarded as an early if not an initial, manifestation, and as a result of an attempt to arrest the bacillus and prevent its reaching the blood. Now plague must be regarded as primarily a septicæmia which can be diagnosed by examination of the blood on the first or second day.

The bacillus invades the body in the great majority of cases, according to Dr. Hunter, by the gastro-intestinal tract. If cases were seen in the earliest stages before even feverish symptoms have developed, diarrhoea and vomiting would be found to be prominent symptoms. Almost all domestic animals contract plague, birds are subject to it, and Dr. Hunter has proved that flies, cockroaches, and other non-sectorial insects harbour the bacilli both upon and within their bodies. The contamination of food would naturally

follow. Dr. W. J. R. Simpson has shown the possibility of conveying plague to animals by way of food. But there are other channels. That the bacilli may gain access to the body by the skin is well illustrated in the case of a man who developed a local lesion and subsequently infection of the blood from a wound of the hand during the performance of a necropsy on an animal dead from plague. Dr. Hunter also contends that pneumonic plague may be primary—that is, that it may be due to inhalation of the bacillus.

Rats are the most susceptible of all animals to plague. Epizootic plague always precedes epidemic plague; the time between the initial cases of plague in the rat and in man is from 10 to 14 days; and the disappearance of the epizootic is followed within a week or two by the subsidence of the epidemic. Dr. Hunter shows that plague in rats is present throughout the whole year, but the disease becomes widely spread at certain times—in Hong Kong during the first quarter of the year, and within a week or a fortnight it also becomes epidemic. Throughout the epizootic period the type of plague amongst rats is acute, but in the interval between epidemics it takes a chronic form which serves to bridge over epidemic plague, and causes the obstinate clinging of plague to particular areas and its periodical recrudescence. The recrudescence of plague in rats in acute form appears to depend upon the infection of fresh generations, the young animals being highly susceptible. This, in turn, gives rise to an epidemic in man.—*The Medical Review*.

On a case of Jaundice,

BY

SEYMOUR TAYLOR, M. D., F. R. C. P.

A patient suffering from jaundice was to have appeared at the Polyclinic consultation; but as he failed to attend, probably owing to the Arctic weather, the discussion of his case was held on the basis of notes which had been furnished beforehand.

A. S., aged 53, a tailor, has suffered from jaundice of the obstructive type, with clayey stools, for the last twenty-two months. Moreover, the jaundice has remitted, and its onset in each attack has always been marked by severe colic, with rigors and vomiting, and also bile-stained urine. He has lost flesh since the first attack of jaundice, but not before this date.

I think we must accept the diagnosis as correct, *viz.*, that this jaundice is due to the presence of gall-stone. The history of his illnesses with their signs and symptoms all point to this conclusion. There is nothing to suggest any catarrhal affection of the stomach or duodenum, and the disease has lasted too long for one to suppose that the jaundice is of a catarrhal nature; a remark which also applies to malignant disease as its cause. But there are one or two points bearing on treatment to which I wish to draw your attention; and I will, before we finish, compare this case with another one (female) whom I have at present under my care.

The remission of the jaundice is important. I take it that in jaundice due to malignant disease there is never any amelioration; the disease progresses from bad to worse and the uterus never shows signs of diminishing. Exception must be made to this rule in cases where the malignant neoplasm affects the bowel, the pancreas, or other neighbouring structure. In such instances the common bile duct may be temporarily obstructed, and liberated again by some displacement of the organ in which the new growth originated. But with this exception we may say that jaundice consequent on malignant disease involving the biliary passages never remits. Further, the duration and the frequency of the remissions, in my experience, give us a guide to diagnosis. The shorter the attacks of colic and jaundice the more the indication that there is one calculus only, and that of a large size; whilst on the other hand, frequency of attacks which last, it may be, two

or three, days, or longer, indicates the presence of multiple and small calculi, some of which escape into the duodenum from time to time, and cause the typical agony during their passage. The bearing of these propositions on the subject of treatment will be seen later on.

I need scarcely insist on a careful examination of the stools passed after an attack of colic. They are best treated by being broken up in a large quantity of solution of carbolic acid (1 in 20). Frequently the calculi will float, and if so this will obviate the objectionable work of filtering the evacuations through a sieve. Multiple calculi are, for the most part, of the smaller variety, and of course are usually faceted. Solitary calculi are globular or ovoid in shape, and by no means always smooth on the surface.

As regards treatment, I need not detain you with my remarks about the treatment during the stage of colic. It is chiefly directed towards the relief of the pain. We give anodynes and anaesthetics. But the question of removal of the calculi, whether by the aid of surgery or of medicine alone, is a weighty one, and requires our best care and consideration.

There is a wide diversity of opinion as to the use of olive oil in this painful disease. Some are loud in its praise, owing to the successful results which they have seen, say, in one or two cases. Others are equally emphatic in declaring the remedy to be useless. Although they have tried large doses of olive oil, they have met with no good effects.

I suspect that the truth lies somewhere between these extremes. Some cases are suitable for treatment by large doses of oil. Others can only be cured by cholecystotomy. It is useless to expect that oil, in whatever quantities, can favour the exit of a large calculus, say one the size of an acorn; nor would the common bile duct allow it. But in cases where you have knowledge that

there are many small calculi then we may prescribe olive oil with some degree of hope, if not of confidence.

Lastly, let us consider the question of cholecystotomy. No operation of such importance as this should be urged without the fullest thought and consideration. Only those people who have themselves undergone a surgical operation can properly estimate the anguish which is inseparable from such a step. Only he who has been compelled to have recourse to surgery in his own home, for one who is near and dear to him, can appreciate the terrible anxiety of the friends and relatives of our patients. The mortality of the operation has been greatly diminished of late; but it still ranges, even with the most expert surgeons, between 7 per cent. and 10 per cent., and I have been accustomed, when an operation is advisable, but not absolutely necessary, to quote these figures, so that the patient can gauge the risk, and decide for himself or herself. But there are other cases, when we must say "Aye!" or "No!" when the question is mooted, and you will ask, "Which cases are they?"

I can best answer this question by enumerating the chief clinical points in the two patients, one of whom, a man, I had reason to understand, would have attended here to-day, and the other (a woman) who is at present in bed under my care.

The man is not old (53); the attacks have been going on frequently for one and a half years at least; there is every reason to believe that he has a large solitary stone which cannot be got rid of unless by the knife; he is a thin subject, and in him no difficulty need be anticipated in finding and opening the gall-bladder or ducts. The risk, therefore, may be placed at its lowest level. On the other hand, he is a widower with four or five children, the youngest only 5 years old, entirely dependent on his exertions for their support. Surely it makes him pause (it would make any of us pause were we in

similar circumstances) before he decides "to have it done." Members of our profession are often asked, as in this instance, to solve a problem which has its social as well as its medical aspects. No other profession has such cumulative responsibilities.

Then as to the woman. She is 56 years old; she has had frequent attacks, she has passed gall-stones, and they have been discovered in the faeces. She is very stout, and the surgeon might have difficulty in controlling the gall-bladder and the surrounding structures; so that the risk of the operation must be put at its worst, *viz.*, at the 10 per cent. ratio.

In her case oil may do good; it may facilitate the exit of the calculi, which are not large. It is true that she has no one whom she has to support; but even then life is sweet, and she may prefer to have her periodical attacks of colic, and go through with them. Again, the patient will have the deciding word. I do not myself advise operation.

In conclusion, I would draw your attention to the not infrequent association of cancer and gall-stone, an association which is strongly suspicious, as indeed with most cancers, of prolonged irritation being one important causal factor in the start of this dread disease. If we have enough cases in which this association shows anything like an appreciable percentage, then another consideration would be intruded, which perhaps might allow us to be more emphatic in urging that the treatment of gall-stones is entirely in the domain of surgery.—*The Polyclinic.*

Oxygen in the Treatment of Diabetes,

By

ROBERT A. GUNN, M.D.,
New York City.

It is not my purpose in this article to discuss the causes or symptoms of diabetes. The

impaired nutrition is apparent in the early stages, and the other symptoms are easily recognized, even though the nature of the predisposing causes are not definitely known.

For the purpose of treatment it is immaterial whether there is an over production or under-consumption of sugar in the system; but it is important that we should get rid of the excess, which causes the malnutrition.

A careful inquiry into the history of diabetic patients will usually show a condition of defective oxidation of the blood. This led me to recommend the inhalation of oxygen in these cases, and a report of a case treated in this way will illustrate the results obtained.

Mr. R. C., a merchant, thirty-five years of age, of an active, nervous temperament, consulted me in June, 1900, after having been under the care of several other physicians.

He said he had been under severe mental strain for the two previous years, on account of business losses and family difficulties. His usual weight had been about one hundred and eighty pounds, but in six months after his business troubles began he had lost twenty-five pounds. He had the usual symptoms of excessive thirst, enormously increased flow of urine, loss of strength and the presence of sugar in the urine.

When he consulted me his weight was one hundred and thirty pounds, and the urine contained acetone and nearly three per cent. of sugar. His breathing was restricted so that the expansion of the thorax on full inspiration was less than two inches.

He had been following a rigid anti-diabetic diet for over a year, and had massage treatment of the muscles three times a week for several months.

I told him that he should increase his lung capacity by breathing exercises, and ordered him to inhale oxygen several times a day. I also recommended the use of faradic electri-

city, applied once daily over the entire body, so as to bring all the muscles into action. He supplied himself with two tanks of oxygen gas, one of which he kept in his residence and the other in his office. This he inhaled regularly for five or six minutes at a time, every hour, so that he took on an average about ten inhalations a day. In a month's time he noticed a marked improvement and began to gain a little flesh. The quantity of the urine decreased, his thirst diminished, his strength improved and the sugar was reduced to less than two per cent. He continued the oxygen inhalations for four months, at which time the sugar had disappeared, as well as the other symptoms that had been so pronounced. In that time his weight had increased to one hundred and fifty-four pounds, the chest expansion was four and one-half inches, and he was able to attend to his business without fatigue.

Of course, he continued to exclude the carbohydrates from his diet, and for a time he took an elixir of pepsin, bismuth and strychnine to improve his digestion.

At the present writing he weighs one hundred and seventy pounds, attends regularly to business and has had no recurrence of the diabetic symptoms. He still keeps a tank of oxygen at his residence, and whenever he goes home fatigued, after a hard day's work, he takes two or three inhalations before bedtime. I have every reason to consider this a cure, and I attribute it to the oxygen inhalations.

I have treated other cases in the same way with equally good results, and believe it to be the most rational treatment of diabetes. The increased oxidation of the blood undoubtedly burns up the excess of sugar that has not been consumed by the tissues, and thus removes it from the system. In my opinion, this excess of sugar clogs the absorbent vessels, and thus prevents the nutritive material from being carried to the several tissues from the blood. With the increased oxidation the lymphatics are freed

from obstruction and normal nutrition is re-established.

If such results can be obtained by inhaling an increased amount of oxygen for a few minutes at a time, at intervals of an hour, how much better results might be obtained if a diabetic patient could sleep for several hours in a chamber containing double the amount of oxygen that is present in the atmosphere. It is reasonable to suppose that sleeping in such an atmosphere every night, would more rapidly oxidize the excess of sugar in the system, and thus work a more rapid cure than occasional inhalations of oxygen.

Here, then, I claim another application of the advantages of my artificial air chambers, as described in *The Medical Brief* for November, 1904. Let the diabetic patient sleep in this chamber six or seven hours every night, and thus breathe the extra oxygen without any effort, and we are sure to have sufficient oxidation to remove all effete material, including sugar, from the system and to restore the normal nutrition of the body.

I expect to be able to report a case treated in this way in the near future, and I shall faithfully record the progress of the case, and the results obtained for the benefit of the profession. In the meantime, no matter what treatment is followed, it should be supplemented by frequent and continued inhalations of oxygen.—*The Medical Brief*.

SURGERY.

Injectons in Gonorrhœa,

BY

R. LUCKE.

If gonorrhœa attacks the posterior portion of the urethra within 14 days of the onset, the patient has almost certainly had previous attacks. In the first attack posterior urethritis seldom occurs before the third week. In treatment a distinction should be made between first and second or subsequent

attacks. In a first attack it may safely be assumed that the mechanism by which the posterior urethra is normally excluded from the anterior is reliable. Injections under considerable pressure may be given with advantage during the first 14 days; inflammatory symptoms subside and the gonococcus is mechanically removed from the surface of the mucosa. If the solution employed is of sufficient bactericidal power the occurrence of posterior urethritis is usually prevented. Protargol is the most generally useful drug, though in cases with very acute inflammatory symptoms antiphlogistic remedies, such as sulphate of thallin, should inaugurate the treatment.

In cases of recurrent gonorrhœal infection, or of a first attack, which is not seen until the third week of the disorder, it is always doubtful whether the compressor urethræ is competent, and in the early stages injections under pressure should be avoided. The anterior urethra may be irrigated through a catheter, or irrigation with permanganate of potassium by Janet's method (*Review*, Vol. I., p. 25) may be tried. If circumstances do not permit of irrigations, injections may be given, but the posterior urethra should be shut off by pressure on the bulb and no retention of the injection by compression of the external orifice of the urethra should be attempted. When the discharge has become scanty and no longer contains the gonococcus, *i.e.*, when the organism has been removed from the surface of the urethral mucosa, injections of strongly bactericidal solutions, such as protargol, are indicated, and should be continued until cure is effected; usually for about 4 weeks.—*Munch. Med. Woch.*, Mar. 29, p. 561.

Rupture of the Small Intestine from Indirect Violence,

BY

DR. BONAMONÉ.

A man, aged 37, jumped on his heels from a height of about 2 feet. Immediately he

was seized with pain in the hypogastrium, which was followed by vomiting. However, he was able to walk to the hospital. Examination $1\frac{1}{2}$ hours after the accident showed normal liver dulness and slight tympanitis, absence of fluid in the peritoneal cavity, and normal temperature. Ice was applied to the abdomen, and the patient improved; but on the following afternoon the temperature rose to 100.4° , the pain increased, meteorism developed, liver dulness nearly disappeared, and there was fluid in the peritoneal cavity. Laparotomy showed gas and liquid in the peritoneal cavity, and an oval rupture of the small intestine about 4 mm. long on the convex side with its long diameter longitudinal. The mucous membrane protruded a little, and the edges were clean and without blood effusion. The opening was closed with Lembert's suture. Death occurred 2 days after the accident, which the necropsy showed was due to diffuse peritoneal infection. The rupture was about 9 feet from the ileo cæcal valve. The writer thinks that the cause of the rupture was the pressure of liquid contained in the intestine against its wall when the patient jumped.—*Il Policlínico*, April, 1904.

Goitre Treated by Resection of the Thyroid Isthmus,

BY
DIEL.

Sydney Jones, in 1883, observed that removal of the isthmus of the thyroid was followed by considerable atrophy of the gland in 2 cases of goitre, a result which has been confirmed by others. This suggested to the writer that the operation might be practised for the relief of goitre irrespective of the size of the gland.

CASE 1.—A man, aged 26, had noticed a swelling in his neck for the last 6 years, which, however, did not prevent him from serving 3 years in the army. After his discharge a year ago the tumour increased considerably, especially on the left side. It per-

manently interfered with respiration, and when violent effort was made suffocation was threatened. He had been treated by capsules of thyroid gland without improvement. On admission to hospital the face was cyanosed, the respirations were laboured and wheezing, the voice was hoarse, and the trachea was considerably compressed. On the left side was a large smooth tumour extending under the sterno-mastoid, and pushing the trachea to the right. The main part of the swelling was cystic, but a portion as large as a walnut appeared to be solid. The right lobe was also hypertrophied to the size of a large hen's egg. No pulsation of the tumour was noted. The base of the neck measured 17 in. in circumference.

An incision was made in the line of the sterno-mastoid curving over the middle line and again following the sterno-mastoid of the other side. After tying 2 superficial thyroid veins the thyroid was easily exposed. A pair of forceps was placed on the isthmus, which was then divided. The adhesions to the trachea were separated. The cyst, which contained a quantity of brownish fluid, was emptied and resected. The extremities of the divided isthmus were tied with catgut. The patient left hospital in a fortnight, and a week later his neck measured 15 in., and the trachea had resumed its normal position. Six months later there was no trace of goitre on either side.

CASE 2.—A woman, aged 44, had noticed a swelling of the neck for 6 months which steadily increased in size. During her periods she had a feeling of constriction and congestion in the throat recalling the subjective symptoms of angina. During the last few weeks there had been dysphagia, for which she sought advice. Both lobes of the thyroid gland were hypertrophied and moved with the trachea. The lateral portions were soft, but a tumour measuring 3 finger-breadths was felt in the middle line, which was firmer. There was no cyanosis or altera-

tion of the voice. An incision 2 in. long was made parallel to the isthmus, and after ligature of the superficial veins the isthmus was exposed and was clamped on the right side with a pair of Kocher's forceps and divided close to the right lobe of the gland. The isthmus was separated from the trachea and the left side was similarly treated. The 2 stumps of the isthmus were tied with catgut. Two aberrant lobules of the thyroid were pulled up from behind the sternum, but no other portion of the gland was removed. Within a week the dysphagia disappeared. Three months later considerable atrophy of both lobes had taken place. Eleven months after the operation only the left lobe could be palpated and was only slightly above the normal size.

The writer regards this operation as the simplest and most suitable for cystic and parenchymatous goitres of moderate size in patients under 50. It is readily performed and offers the great advantages of safety from serious hæmorrhage and risk of wounding the recurrent laryngeal nerve. It is unsuitable for large goitres or the hard tumours met with in elderly women.—*Tribune Medical*, Aug. 27, p. 549.

The Diagnosis of Cerebellar Abscess secondary to Otitis Media,

BY

H. B. ROBINSON, F. R. C. S.

A boy, aged 13, was admitted to St. Thomas's Hospital on May 27. Since an attack of measles, 8 years before, he had had a foetid discharge from the left ear. For 3 weeks he had had pain in the ear and head. The discharge had stopped and there had been incessant vomiting and obstinate constipation. For the last 2 days he had been very drowsy. He had got rapidly thinner since the onset of his illness. On admission he complained of pain in the head which could not be specially localised. There was tenderness behind the left ear with some oedema over the

mastoid but no discharge. The membrana tympani was destroyed and the tympanum was filled with granulations. The pupils were equal, reacting to light and to accommodation, the vessels of the fundi were rather full and tortuous, the edges of the discs were blurred, and the discs themselves were slightly swollen. The grip of the left hand was weaker than that of the right; the left knee-jerk was increased but the plantar reflexes were equal and normal. He tended to curl up on the right side.

A curved incision was made behind the pinna and this was drawn well forwards with a gauze retractor passed through the meatus. The mastoid antrum was opened with a gouge and pus escaped; the posterior wall of the meatus was taken away and the antrum and tympanum were freely thrown into one. The pus appeared to come from the posterior part of the antrum and from the groove for the lateral sinus. The groove was opened up and the sinus was exposed but this was not the source of the pus. In so doing the sinus was slightly lacerated and blood welled up freely, showing no thrombosis. The bleeding was easily controlled by gauze pressure. Further exploration showed that the pus was coming through the posterior wall of the antrum itself, just in front of the sigmoid sinus and it ran away freely on introducing the pus seeker. The opening in the bone was further enlarged, when the underlying dura mater was seen perforated and the escaping pus pulsated a little and was very foul-smelling. A silver drainage-tube was passed into the abscess cavity and packed round with gauze.

After the operation the temperature fell from 102.4° to 99° , and the patient was drowsy. On the 29th the morning temperature was normal, and there was nystagmus from left to right in both eyes. On the 31st he was conscious though somewhat dull; the nystagmus movements were of less frequency. On June 4 he was still somewhat apathetic and showed slight incoordination

in finer movements, such as trying to button his jacket. On the 9th his mental condition was improved; speech was indistinct; some nystagmus was still present; and the left arm was a little weaker than the right. On the 15th there was still perceptible weakness of the left arm, the nystagmus was almost gone, and both knee-jerks were rather feeble, but the left was the more forcible. Recovery followed.

The important points in the case are the evidence which enables cerebellar abscess to be diagnosed, and the drainage through the mastoid in front of the sigmoid sinus. The symptoms pointing to cerebellar abscess were weakness of the left upper extremity and increase of the left patellar tendon reflex on the same side as the lesion, and the tendency to curl himself up on the right side—on the opposite side to the lesion. These symptoms, with others, have resulted from the experimental removal of one lateral lobe of the cerebellum, as demonstrated by Luciani and Risien Russell, which observations have been confirmed clinically, especially in a case reported by Dr. T. D. Acland and Mr. C. A. Ballance. The weakness of the upper extremity on the same side as the supposed brain lesion would at once arrest attention and suggest its origin. Luciani considers this the result of the abscess cutting off from the opposite cerebral hemisphere the reinforcing influence of the lateral lobe of the cerebellum. The fibres thus involved pass through the superior cerebellar peduncles, and an abscess in any part of the cerebellum which did not involve the course of these fibres should not produce the symptoms. The fibres of the superior peduncles are particularly related with the dentate nucleus, some being connected with its cells while others pass through it on their way from the cerebellar cortex. Should the lesion involve this portion of the cortex or the region of the dentate nucleus, there may be weakness of the upper limb or of both limbs on the same side as the lesion. It appears that the

lesion must be deeply placed to the inner and front part of the lateral lobe, and in the present case the abscess was certainly in front and also deeply placed from the distance the tube went in. In some cases there is weakness of the lower limb on the same side as the lesion, but less than that of the upper.

The increase of the patellar tendon reflex on the same side as the lesion is also explained by the weakening of the cerebral influence. The tendency to curl up on the opposite side was noticed by Risien Russell in monkeys after removal of one lateral lobe, and clinically in cases described by Ballance, Deanesly, and Gamgee. Conjugate deviation of the eyes to the opposite side is not recorded, although it may have existed. It was obtained experimentally by Risien Russell and noticed in Acland and Ballance's case. Nystagmus was not noticed until the second day after the operation, and the movements were away from the lesion; they should be to it. Perhaps it was due to some injury of the external semicircular canal at the operation.

Obstetrics and Gynaecology.

Acute Yellow Atrophy of the Liver in the Puerperium,

BY

ROBERT COHN.

A woman, aged 30, was on the fifth day after her fifth confinement seized with a rigor and pyrexia. Rigors recurred several times daily, and on the ninth day she was admitted to hospital.

The temperature was 103.6°. The genitalia appeared normal except that the os was somewhat patulous. Intra-uterine injections of lysol and 50 per cent. spirit solution, and intra-venous injections of collargol did not influence the pyrexia. Though the temperature remained for 9 days above 102.2° she did not feel ill. The temperature for 5 days

then fluctuated between 100.4 and 102.2°. After remaining normal for 3 days there was a rigor with a rise of temperature to 104°, which was repeated on the following day. The temperature then became definitely normal. She felt weak, and was somewhat emaciated but was otherwise well. She got up on the thirty-fourth day of the puerperium, and 10 days later was discharged "cured," though for 3 days she had been slightly jaundiced. No importance was attributed to this, as jaundice is common after puerperal fever. Three days later the husband reported that she was deeply jaundiced, had been delirious all night, and had finally become unconscious. She was re-admitted but died on the following morning without having regained consciousness. There was no pyrexia, and the pulse on admission was full and scarcely accelerated.

The liver was small and weighed only 30½ oz. On incision there was no trace of an acinous structure. It was of a reddish-brown colour with scattered islets of yellow or bright red parenchymatous tissue. Histological examination confirmed the diagnosis of acute yellow atrophy. The spleen was not enlarged. The left ovarian vein was normal, but the right was completely plugged by greenish-black or yellowish-grey friable coagula, which converted it into a solid cord of the size of a lead pencil. The inferior vena cava was also completely filled with a partially organised thrombus, which extended from its lower end to the left renal vein, and a similar condition was found in both internal iliac veins.

Acute puerperal yellow atrophy of the liver is exceedingly rare, though not uncommon during pregnancy. Only one other case is known to the writer, and in this the hepatic disease may have begun before delivery. Acute yellow atrophy is probably an infective process. In this case the onset apparently corresponded to the rigor which occurred on the twenty-sixth day of the puerperium, when the temperature had been nor-

mal for 3 days. Whether the hepatic changes were caused by streptococci in the circulation, or by extension of the thrombus in the inferior vena cava to the entrance of hepatic veins, it was impossible to say. No emboli or thrombi were found in the hepatic vessels.—*Zentralbl. f. Gyn.*, Aug. 27, p. 1009.

Elevation of the Hips in the Treatment of Placenta Prævia,

BY

A. KING, M. D.

A surgeon saw in consultation a woman suffering from placenta prævia. For several hours there had been slight hæmorrhage and pains. The vagina had been packed with iodoform gauze, which was saturated with blood. On removing the pack he found a marginal attachment of the placenta, the os beginning to dilate, and the head presenting. The patient was quickly etherized and placed in the lithotomy position at the edge of the bed. The castors were removed from the bedstead. The side to which the patient had been brought was elevated by means of two chairs placed under the legs. The plane of the patient's body was at an angle of 45°. The canal of the pelvis was easily accessible to manipulation. Gravity, by preventing the loss of blood and the escape of amniotic fluid, and by causing the foetus to settle to the fundus, facilitated turning. The vagina and cervix were dilated, the head pushed to one side, and the membranes ruptured over one foot, which was brought down. The entire delivery did not occupy 5 minutes. Not an ounce of blood was lost during the operation.

Another practitioner who heard of the method treated a case with the same happy result. It is surprising that this simple and efficacious method is not mentioned in the text-books. The surgeon accustomed to pelvic surgery naturally adopted it, for he knew the great saving of blood from elevation of the hips, especially when veins are

severed and that, in placenta prævia, most of the bleeding comes from the venous sinuses. He values it highly in excisions of the rectum. He no longer closes the abdominal wound, when using Trendelenburg's position in abdominal hysterectomy, without lowering the patient first to make sure that no hæmorrhage follows the change of position, for he has again and again seen blood well up from some vein though not a drop escaped when the hips were elevated.—*New York Med. Jour.*, Sept 17, p. 548.

The use of Sugar during Labour,

BY
KEIM.

Keim first described in 1898 a simple means of hastening labour by the administration of lactose. Since that time other writers have studied the subject. Payer (*Semaine Med.*, 1899, p. 427) in 7 cases of inertia at the end of the second stage of labour observed a distinct increase of contraction on the administration of about an ounce of sugar in 5 fluid oz. of water. Of 12 cases in which it was given at an early period of the labour, in only 3 were the pains increased. In 5 women at full term, but in whom labour had not begun, the use of sugar induced uterine action in 5 to 15 hours, with rapid labour. Madlener (*Munch. Med. Woch.*, 1900, No. 34) has observed 6 cases in which sugar was given for uterine inertia. In 5 of them the action of the uterus was restored sufficiently to terminate labour spontaneously. Lop (*Gaz. des Hop.*, Oct., 1901) states that sugar is administered by the midwives of Provence with the object of hastening labour.

The writer prescribes 3 packets of 385 gr. each of lactose to be taken at intervals of half-an hour, dissolved in a half tumblerful of water or milk. If lactose is not obtainable, 5 lumps of sugar represents an equivalent dose, and is repeated in the same way. Administered before the beginning of labour it

has little influence. Given after labour has begun but before dilatation has commenced sugar has little effect, but in women in whom pregnancy has been trying or complicated it may be usefully given as a general tonic. At the beginning of dilatation, and more so if this state is prolonged, the use of sugar will rapidly increase the frequency and intensity of the pains. According to Marquis this occurred 21 times in 22 observations and the average duration of the period of dilatation and expulsion was 3 hours 50 minutes in primiparæ and 2½ hours in multiparæ. These averages are for cases in which sugar was given for inertia during the early period of dilatation. Later when the os had attained the size of a 5-franc piece, sugar had a still more beneficial influence. Marquis found that from this period the average time before delivery was 1¼ hours. In a multipara in whom labour usually lasted 24 to 28 hours, a dose of lactose increased the frequency of the pains in 10 minutes. Labour which had already lasted 15 hours was completed in another hour.

In the second stage of labour sugar is useful when the slackening of the pains is due to inertia of the uterine or abdominal muscles. When there is no mechanical obstacle but the pains are feeble the administration of sugar may be substituted for the application of forceps. Sugar is most beneficial after dilatation has begun and the dose indicated (385 gr.) should be repeated thrice at intervals of half-an-hour rather than a larger quantity given at once. It usually acts in from 10 to 30 minutes, and though rapid in its action it is absolutely safe, as it is non-toxic and does not tend to produce hæmorrhage.—*Archives Generales de Medecine*, Sept. 27, p. 2474.

THERAPEUTICS.

Liquid Air and Its Therapeutical Possibilities,

BY

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History.—The liquefaction of gases has occupied the attention of scientists for over a century. The first gas liquefied was chlorine. This was accomplished under pressure, in 1806, by Northman. In 1823 Faraday repeated the same experiment, and also succeeded in liquefying ammonia and nitrous oxide. A period of fifty years now elapses before further progress is made in the liquefaction of gases. In 1877 Raoul Pictet submerged oxygen gas under great pressure, combined with great cold, and the result was a small quantity of cold, white mist. Fifteen years later Olzewski liquefied nitrogen, and the next year, 1883, Wroblewski produced oxygen in a complete liquid state. Two years later he succeeded in making liquid air, but only in small quantities. In 1892, Prof. James Dewar repeated the experiments of his predecessors, but his first liquefaction of air was a mushy ice, the first ounce of which cost \$3,000. Later, however, he produced it at \$500 a pint. Now it is produced by the Tripler system in this city, and sold at \$10 a gallon.

Liquid air presents many features of an unusual character, and it is attracting the attention of scientists generally and of medical men in particular. Its value in the treatment of naevi, epithelioma, lupus erythematosus, etc., has been demonstrated to the satisfaction of those who have used it. Before discussing its use in medicine and surgery, and the showing of clinical cases who have been treated by liquid air, I wish to say

something of its manufacture, its physical and physiological properties.

Manufacture.—When a gas is compressed it gives out heat, and when the pressure is removed the gas expands, and thus produces cold. The method first used by Dewar was to compress nitrous oxide gas and ethylene gas into a specially constructed apparatus. This method was found to be dangerous, and expensive. However, a more simple and inexpensive method of Tripler is described by Dr. A. C. White, of this city, as follows: "The natural air is compressed to the extent of two thousand to two thousand four hundred pounds to the square inch. This is allowed to escape and pass through certain small openings, each protected by its own valve, into tubes which coil upon themselves over and over again, thus cooling off the air more and more as it enters the liquid. The cooled compressed air is now allowed to escape into a vacuum, and a sudden and extreme expansion results. By this method, the two necessary conditions are obtained to produce liquid air, namely, critical temperature and critical pressure. The liquid air may now be drawn from the liquefier just as water is from a faucet, and its appearance is like that drawn from the hot water faucet, boiling and steaming. It is reasonable for it to boil, for it is 400° F. colder than its surroundings. The temperature of liquid air is 312° F. below zero, and the temperature of the room about 70° F. This makes the receptacle about 400° F. hotter than the liquid air, and, consequently, the liquid boils, thus entering into its original gaseous condition—the air we breathe.

As a laboratory experiment, ordinary air may be liquefied in very small quantity by placing dry sulphurous dioxide into a tube surrounded by ice and salt. In a comparatively short time some of it will condense into a colorless liquid. But to make on a large scale, expensive machinery, tubes, pumps, compressors and electric motors are

necessary. In order to appreciate how air is liquefied, it is necessary to remember that nearly all gases may be condensed into liquids, under the action of pressure and cold. For example, when sulphurous oxide gas is pressed by a piston into a cylinder, we reduce the volume of mass of the gas, the tension increases up to a certain point, which is called maximum tension, and here the mass begins to liquefy. The maximum tension varies according to the temperature, and the temperature at which the gas liquefies is called the "critical temperature," and when liquefaction takes place at the maximum tension at a given temperature it is called the "critical pressure." Thus the critical pressure, and critical temperature must be attained before the air is liquefied. Now, as the air is made up approximately of twenty-two parts of oxygen and 78 parts of nitrogen, and both of these gases have different critical pressures and temperatures, it is necessary to obtain 220° F. below zero before these mixed gases will liquefy, and only then when the critical pressure is applied. Upon the boiling point of liquid air, and difference in the boiling point of its two ingredients, oxygen and nitrogen, Dr. White says, undoubtedly depends the usefulness of this product in medicine and surgery. "The boiling point of liquid nitrogen is 317° F. below zero, and the boiling point of liquid oxygen is 295° F. below zero; and the boiling point of liquid air is 312° F. below zero. Therefore, the liquid nitrogen must boil away, and evaporate first, leaving pure liquid oxygen. When the liquid oxygen evaporates, if it is caught in a receptacle, it can be used as the purest kind of oxygen for inhalation purposes. Later I will illustrate by an experiment, the different boiling points of the two gases, showing that when the liquid oxygen is left, it is highly inflammable, and when lit produces great heat. Even when it became possible to make liquid air at a comparatively inexpensive rate, its

usefulness would have been limited, and in fact, of no avail in medicine and surgery except for the invention of a bulb by Dewar. This bulb is known as Dewar's bulb, and is used to hold this extraordinary product.

This bulb is a glass vessel, with two walls. The space between is exhausted to high vacuum. When liquid air is contained in one of these bulbs it evaporates at one-fifth the rate it does in an ordinary glass receptacle. Later Dewar found that when the inner and outer wall were coated with a bright deposit of silver, that the evaporation was only one-sixth that of an ordinary vessel. Even with these Dewar bulbs, the proposition to sell to physicians does not seem attractive to the manufacturer, because of evaporation, and because the bulbs are easily broken and cost from \$3.75 to \$12 a piece.

When alcohol is frozen by liquefied air at 212° F. below zero, it is likely to become explosive. Owing to the fact that certain disasters and injuries have taken place while performing this experiment, both the lay and medical public have conceived the idea that liquid air is explosive. This is an error; it is no more explosive or dangerous than steam, and like steam, if it is confined, it will explode and find a way of escape. Hence, no corks can be used in the Dewar bulbs.

As I will show you later, a lighted taper applied to liquid air will not make it explode, and even if an electric current is passed through it no evil effects result.

Liquid air is a transparent, colorless, fluid, and looks like boiling hot waters, and its weight and specific gravity are about the same as water. However, liquid air is perfectly dry; no moisture could exist, because it would immediately become frozen and become more dense than ice.

When liquid air is applied to the skin and tissues of the body, the parts are immediately frozen. The solidity of the tissues depends

on the amount of liquid air used and the length of exposure. The result of this application is, first, anæmia of the part, followed by a reddish reaction or slight inflammation. Then, if the freezing has been severe, there occurs a bulla, involving a smaller or larger area, depending upon the length of application. Dr. White, who is a pioneer in the application of liquid air in medicine, says that it is not only a local anæsthetic, but as much or as little anæsthesia can be produced with it in a few seconds' time. The anæsthesia lasts longer, and is followed by less slough than any other freezing mixture. There is slight pain attending its application as an anæsthetic. After the degree of anæsthesia has been obtained, a minute or more should elapse, as the tissue may be too hard for satisfactory operative procedure. In treating an abscess or carbuncle, spray the part with liquid air, then incise and empty the contents, spraying the cavity with liquid air. The freezing of the inner walls promotes sloughs, and makes curetting unnecessary.

For some months I have been using liquid air at the New York Skin and Cancer Hospital, in the service of Dr. L. Duncan Bulkley, the liquid air being supplied gratuitously by Dr. A. C. White, of the New York Liquid Air Institute. Probably the most spectacular results have been obtained in nævi cavernous, and impigmented.

The liquid air is applied on a swab, a flat wooden applicator about eight or ten inches long, on the end of which is wound some absorbent cotton. This applicator is dipped into the liquid air. First shake off the excess of this extremely cold fluid, then apply with firm pressure to the area to be affected. The application should last from twenty to sixty seconds, depending on the tissues to be affected. In many cases it is well not to treat more than a square inch of surface at one application. These treatments may be repeated from twice a week to twice in two

weeks, depending upon the reaction which has taken place. The abbreviated history of the following cases illustrate the value of liquid air in the successful treatment of nævi.

Case 15.—R. N., age six. Diagnosis, nævus pilosus pigment, situated below the right eye, about an inch long and three-quarters of an inch wide. After the first treatment, the part first became anæmic, then congested, and swollen to several times its natural size. The swelling subsided in a day or two, and was followed by a thick crust. After the first two applications of the liquid air, the rat-colored mole became several shades lighter, but the hairs were unaffected. However, after five applications the skin covering this area almost resumed its normal color, and now, after ten applications, about a week apart, the hairy mole is practically removed. To show the results obtained in epithelioma, I will report the following cases.—

Case 22.—A. N., age forty. Epithelioma of the right temple, of one year's duration. The growth extended over an area of three-quarters of an inch in diameter. After the first application, which was applied to the whole surface for a period of about fifty seconds, there was considerable oedema around the lesion, extending to the eyelids. This subsided in a day or two, and after six treatments the growth entirely disappeared.

Case 26.—C. F., age fifty-five. Epithelioma of the outer canthus of the eye and side of the face about an inch in diameter. This patient had two treatments a week for two months. The reaction took place in the usual way, and the growth disappeared.

Case 30.—A. N., age fifty, female. Epithelioma of the edges of nostril and wing of nose; had been treated by various methods, including radium, but without result. Liquid air was applied weekly, about thirty to forty seconds at each application. After eight applications there was a complete disappearance of the growth.

In lupus erythematosus, where the area has not been too large, liquid air has proved a more satisfactory and successful treatment than any other remedial agent. At the Vanderbilt Clinic, patients who were cured of lupus erythematosus by liquid air have returned after a period of four years. Upon examination a clean, and not prominent scar, tissue was seen over the site of the former diseased area. The following case illustrates the value of liquid air in lupus erythematosus:

Case 32.—Female, age forty-five, has had erythematous lupus of the nose for four years. The growth began as a sort of pimple, then a blotch on one side of nose. The tissues became red and scaly and finally covered the whole nose. The first application of liquid air caused but little pain, and was applied for fifty seconds over an area about half an inch wide, and one inch long. After the part thawed out, it became much congested. This was followed by a bulla, and considerable oedema in the adjacent tissues. After twelve treatments, covering a period of two and a half months, the patient was entirely cured, leaving but little scar; that is, the skin on the nose was a little whiter than that on the surrounding parts. This patient had also a few small spots of similar character in front of each ear. These were cured in four applications.

As a résumé of the uses of the liquid air, we can say that:

First—It acts as a local anæsthetic.

Second—It reduces inflammation when cold is indicated.

Third—Stronger, more frequent applications produce stimulation and inflammation of the parts, producing a slough, by causing an obliterating endarteritis, and the destruction of nerve supply.

Fourth—Liquid air has a selective action for diseased tissue on account of its low vitality.

From the physical and physiological action of this new and remarkable therapeutic

agent, it certainly appears to be worth while to make use of it, in such conditions as lupus erythematosus, superficial epithelioma, some cases of scirrhus cancer of the breast, indolent ulcers, abscesses, and particularly in the various forms of nævi.—*The Medical Brief.*

Diet and Metabolism in Gout and Diabetes,

BY

FALKENSTEIN,

In gout the secretion of HCl by the glands of the cardiac end of the stomach is defective. Dyspepsia and gout have long been associated, and the absence of free HCl in the stomach of gouty persons has been frequently demonstrated experimentally. In his own case (*Review* Vol. VII., page 365) and in 200 of his patients the writer has found the benefit of large doses (40 to 60 drops of the pure concentrated acid daily). Another factor is the tissue cells, which, in gout, do not thoroughly oxidise the nutriment brought to them in the circulation, possibly because owing to defective gastric digestion it is in an unsuitable form. Intermediate products of oxidation, such as uric acid, result, and are precipitated wherever the circulation is most sluggish. The percentage of HCl in normal gastric juice is usually said to be 0.2 to 0.3 per cent. Probably the percentage has been estimated too low, owing to the difficulty of obtaining gastric juice in a pure state. Pavloff, of St. Petersburg, has shewn that, in dogs, the percentage is from 0.5 to 0.6. Further it has been shewn that the secretion of acid gastric juice produces a copious secretion of pancreatic juice. If the acid gastric juice is made alkaline by a solution of soda, pancreatic secretion immediately ceases. The administration of HCl in sufficient quantities not only supplies the wants of the stomach but also facilitates pancreatic digestion. Gouty persons usually consume large quantities of salt. This is probably an instinctive attempt to supply the acid secret-

ing glands with sufficient raw material. HCl will benefit the general condition and prevents the further formation of urates, but, unless it is given early, it will be long before the uric acid already accumulated in the body is eliminated. Though with HCl more food and a more varied diet can be taken with impunity than without it, the gouty patient should limit himself as much as possible to easily digestible substances. A mixed and varied diet and especially meat are great stimuli to gastric secretion. Hence it is wrong to order a vegetarian and carbohydrate diet. Sugar, tobacco smoking, and alcohol do not agree with gouty persons. Lactic acid fermentation is common. Hence, the requirements of the body as to sugar can be satisfied by the amount obtained by the conversion of starch and the lævulose (fructose) present in fruit, cane sugar is best avoided. Honey is also detrimental, as it contains glucose and saccharose, as well as fructose. The prolonged use of saccharine is detrimental to the stomach and kidneys. Alcohol in the presence of sufficient oxygen is converted into carbonic acid and water ($C_2H_6O + 6O = 2CO_2 + 3H_2O$). In the gouty defective oxidation results in the production of aldehyde and water ($C_2H_6O + 2O = C_2H_4O + H_2O$). The aldehyde is further oxidised into acetic acid, the constant formation of which irritates the stomach and is detrimental to health ($C_2H_6O + 2O = C_2H_4O_2$). A cigar may be allowed after dinner, as both tobacco smoke and nicotine stimulate the nerves of digestion. Before meals, however, tobacco tends to destroy the appetite. Oxidation within the tissue cells should be stimulated by exercise, work and free diaphoresis.

The writer believes that, as in gout there is deficient secretion of gastric juice, so in diabetes pancreatic secretion is defective or absent. The cell in gout is unable to oxidise completely nitrogenous material; in diabetes carbohydrate metabolism is at fault, the intermediate product of oxidation being not uric acid but sugar. The analogy cannot be

carried further, as in diabetes the sugar is excreted by the kidneys, and in gout the uric acid is mostly retained in the tissues. If this is true abstention from carbohydrate food though it may lower the percentage of sugar in the urine, withdraws from the body useful food without influencing the disease. Treatment should be directed in diabetes, as in gout, not to the withdrawal of all possible of sugar (or uric acid) in the food, but to sources remedying the deficient pancreatic (or gastric) digestion and stimulating the metabolism of the cell. Obesity is another disease in which the factors are defective digestion and metabolism; probably the function of the hepatic cells is at fault.—*Wien. Med. Presse*, Oct. 9 p. 1938.

Anæsthesin in Sea-Sickness,

BY

L. SCHLIEP.

Anæsthesin has been recommended by von Noorden and others in gastric ulcer, nervous dyspepsia, the vomiting of pregnancy, and irritable stomach (*Review*, Vol. V., pp. 488 and 682). The writer, who has extensive experience as a ship's surgeon, has employed it successfully in sea-sickness. To bad sailors 3 or 4 doses of $7\frac{1}{2}$ gr. were given during the first few hours of the voyage, and, if necessary, on the following days. Most of these patients remained free from sea-sickness though on previous voyages they had suffered severely. Anæsthesin is also useful at the first onset of symptoms before vomiting has occurred. Two to three or more gm. may be safely given daily.—*Deutsche Med. Woch.*, Mar. 3, p. 356.

OPHTHALMOLOGY.

Amblyopia Due to Methyl Alcohol,

BY

J. W. STIRLING, M.D., MONTREAL.

The comparative rarity of this condition and its gravity render the publication of case reports of some value.

The minimum quantity of wood spirit necessary to produce the ocular symptoms is as yet uncertain, but the onset is very rapid and is associated with much general disturbance. There is marked loss of vision, going on quickly to total blindness, which may, after a varying length of time, improve to a greater or less extent, but which always ends in a certain degree of atrophy of the optic nerve with corresponding limitation of the visual field. Optic neuritis has been noted at the onset.

The pathological change must affect the whole optic nerve and not be limited to any particular nerve bundles. The visual field suffers a peripheric contraction of irregular shape and degree, but is never hemianopic, and it is rare even in the mild cases that a central scotoma has been observed. My case report is as follows:

H. E., rather thin nervous man of forty-one years of age, was brought to me by Dr. Winter of Algonquin, Ontario, on account of poor vision. The patient stated that he had had poor sight for over a year. The onset of his trouble was very sudden, and dated from a severe drinking bout about thirteen months ago. At that time he drank six ounces of wood spirit and two ounces of brandy in one hour. He felt stupid but managed to eat his supper, went to bed and slept well. The next morning felt unwell but ate his breakfast and later his dinner. About 3 p.m. (22 hours after drinking the alcohol) he vomited severely, and then went to bed two hours later, sleeping twenty-four hours continuously. Upon awaking he found that his vision had entirely gone. The patient remained totally blind for thirty-six hours, but at the expiration of that time he began to notice shadows of objects with the left eye; this vision slowly improved for six months, but has remained at a standstill ever since. He began to appreciate shadows with the right eye about a month after the left eye first noticed them. The vision of the

right eye likewise improved slowly for a few months, but this improvement has also ceased for the past six months.

His present condition is as follows: Vision—R. E. 1/20; L. E. 1/10; no lens further improves vision. The pupils barely oscillate to light, and are 3 to 4 millimetres in diameter. There is total colour blindness.

The ophthalmoscope shows both optic discs to be chalk white, the edges sharply defined, and the retinal vessels only somewhat diminished in diameter. The visual fields are greatly contracted, especially the right one, only a small portion upwards and outwards being retained.

The right field extends upwards 35°, up and out 40°, but ceases 10° short of the horizontal meridian; in no direction does it reach below the fixation point; finally, it extends 15° to the upper inner side of the vertical meridian. The left field is much larger than the right, extending to between 40 and 50° up and out, down and out, and horizontally inwards with deep re-entering angles, as is the rule in cases of optic atrophy.

It is now over a year since I last saw him, but from the latest accounts his condition remains unchanged.

Ward Holden considers the methyl alcohol amblyopia as similar in nature to that caused by quinine poisoning or that following severe hæmorrhages. In his experiments with methyl alcohol on animals (in 1899) he found marked changes in the ganglion cells of the retina and in the optic nerve trunk.

Birch-Hirschfeld has noted similar changes (*v. Graefes Archiv. f. Ophth.*, lii., Heft 2).

Rymowitsch, in similar experiments on rabbits, found fatty degeneration, etc., of the ganglion cells of the retina, with varicose hypertrophy of the nerve fibres, and oedema

of the granular layers, but without changes in the optic nerve itself.

Birch-Hirschfeld considers the changes in the ganglion cells to be the primary lesion, and the optic nerve degeneration to be secondary thereto.—*The Ophthalmic Review*.

DISEASES OF THE THROAT,

BY

LAMBERT LACK, M.D., F.R.C.S.

The patients now shown exhibit various degrees and varieties of tubercular disease of the upper air passages.

(1) A typical example of lupus. The patient, a girl, aged 20, has suffered from this affection for twelve years. The skin of the nose and upper lip has been extensively involved. It was cured by the Finsen light, leaving great constriction of the anterior nares. The soft palate is scarred and partially adherent to the posterior wall of the pharynx, the epiglottis and arytenoids are destroyed, and the upper aperture of the larynx is recognisable only as a small round aperture about the size of a lead pencil, surrounded by firm scar tissue. The interior of the larynx cannot be seen. This case exhibits well the natural course of the disease in the upper air passages. Healing and extension take place side by side, progressing very slowly. When the patient is placed under favourable conditions, and especially when arsenic in increasing doses is given internally, arrest and healing ensues, leaving much scarring and distortion of the affected parts. In this patient the superior aperture of the larynx was so small and caused so much difficulty in breathing that tracheotomy was necessary. An attempt will be made to dilate the larynx and to remove the tube.

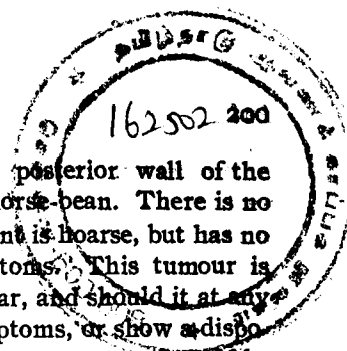
(2) A case of tuberculosis of the larynx, apparently quiescent. This patient, a woman, aged about 40, has slight fibroid phthisis with tubercle bacilli in the sputum. There

is a nodule on the posterior wall of the larynx the size of a horse-bean. There is no ulceration. The patient is hoarse, but has no other laryngeal symptoms. This tumour is undoubtedly tubercular, and should it at any time give rise to symptoms, or show a disposition to spread, the best treatment would be to punch it out. In this way the local disease could be entirely removed.

(3) A woman, with ulceration of the left vocal cord. She has early pulmonary phthisis, and the affection of the larynx is undoubtedly tubercular. The disease produces complete aphonia, which is more marked than would be expected in simple chronic laryngitis of the same extent. The unilateral nature of the affection is also in favour of tubercle. Note also the marked anæmia of the larynx and of the soft palate—quite out of proportion to the general anæmia. The diagnosis is clinched by examination of the lungs and the finding of tubercle bacilli in the sputum.

Treatment.—Local measures should, I think, be adopted. The ulceration is superficial, there is no deep tuberculous infiltration. I should recommend that the larynx be cocaineised and strong lactic acid rubbed in once or twice a week for three weeks. If this fails to effect a cure, the ulcer should be thoroughly scraped with a sharp curette, such as Heryng's, and, when the bleeding has ceased, chromic acid fused on the end of a probe should be applied; subsequently the larynx should be swabbed out twice a week with a 50 per cent. solution of lactic acid. This usually succeeds in effecting healing of the ulcer, and the patient's general health is markedly improved by the removal of the local trouble, and by the restoration of the voice.

(4 and 5) The next two cases are examples of extensive disease of the larynx; unfortunately the form most frequently met with. The disease has attacked the upper aperture



of the larynx. There are the typical pear-shaped swellings produced by the oedema of the arytenoids. Both the ary-epiglottic folds and the epiglottis are also oedematous. On the surface of the oedema in one case can be seen extensive superficial worm-eaten ulceration. Little whitish-yellow tubercles can also be seen just beneath the surface of the translucent mucous membrane. These patients are suffering from all the severe symptoms usually associated with this, the most grave, complication of phthisis. There is constant pain in the throat and desire to cough, great pain on swallowing with constant desire to swallow the saliva, and great difficulty in taking sufficient nourishment. Nothing can be done to cure these patients, but much may be done in the way of alleviation. First, in a few cases where the epiglottis is especially involved, and is apparently the cause of the pain on swallowing, great relief may be obtained by removing this structure. Secondly, orthoform may be insufflated. The patient may be directed to suck up the powder into his own larynx through a glass tube. The advantages of orthoform are that it is non-poisonous, and therefore its use may be entrusted to the patient, and it may be used freely; that the anæsthetic action lasts at least 12 hours, consequently one application a day is sufficient; and it produces no ill effects on the patient or on the local disease. It is therefore much better for this purpose than cocaine, which is dangerous because of its toxic properties and produces rapid wasting. Further, the effects of cocaine are very fleeting. It must be applied by the physician himself fifteen minutes before each meal. Should these methods fail the following prescription is most useful:—

R.

Morphinæ Hydrochlor., $\frac{1}{8}$ — $\frac{1}{2}$ gr.

Glycerin, ʒi.

Mucilaginis ad. ʒi.

To be sipped slowly twenty to thirty minutes before each meal.

There is no real reason for withholding morphia. By enabling the patient to take food his strength is maintained and his life is prolonged. The relief of pain not only renders his existence more endurable, but actually prolongs it.

Lastly, food is most important. The patients can generally swallow thickened fluids better than either solids or fluids, therefore milk and soups, etc., should be thickened with some form of starch, such as arrowroot. All irritating things should be prohibited. If there is great difficulty in administering alcohol it should be given with egg, or in extreme cases it must be administered *per rectum*.—*The Polyclinic*.

The Indian Medical Service.

The *Lancet* of the 18th ultimo contains the following article:—

We have received from time to time communications from Officers of the Indian Medical Service, and from some members of the Subordinate Medical Service who are finding employment in civil hospitals all over India in regard to various points in the existing medical system of the Empire in which they are severally or mutually interested. The present and the future standing of both services and the relationship of the Officers one to another are now much under discussion, and the aspirations entertained by many of the more able and ambitious members of the Subordinate Medical Department will certainly serve to keep these topics from neglect. Not so long ago the difficulties were only in prospect and could not be said to be of an urgent kind, so that it seemed to us more expedient to leave the whole situation to mature, when in process of time it might present features which could be more opportunely and usefully discussed. This has now happened and comment seems to us to be called for. Great changes have been taking place in matters of Indian administration generally and in the growth,

spread, and development of Indian medical education. Proof of this has been manifested in our columns, but some of the correspondence upon these and cognate matters which has reached us has been dictated by feelings that are of a personal or a purely controversial nature, and therefore lacking in sympathy with the best interest of both the public medical services and the medical requirements of India. And so the points thus raised may, it seems to us, be usefully discussed at the present time, if only that a most difficult matter may be removed from the sphere of personalities to that of general policy.

Commissioned Medical Officers of the Indian Medical Service, as everybody knows, are employed extensively as Professors at the large Medical Colleges of the Empire and give instruction at the great hospitals—those of Madras, Calcutta, and Bombay for example. This for a long time past has always been the case. The consequence is that there are now in India large and increasing numbers of really good medical men belonging to Eurasian and Native classes who have been thoroughly educated up to European standards. A reference to some of the papers set for the degree examinations of Calcutta, Bombay, and Madras will remove any doubt that may exist as to the rigour of the qualifying tests. These graduates are, as we have said, chiefly employed as subordinates in the civil hospitals all over India and surgical operations of every kind, major as well as minor, are continually being successfully performed by them. Officers of the Indian Medical Service are not alone in their appreciation of the professional value of the work so done, for it is recognised also by Collectors and Magistrates of district and all classes of the native population. The result is that the Government of India is now, or is fast becoming, fairly well supplied with a highly trained body of servants who, so far as professional qualifications are concerned, are capable of undertaking at less expensive rates of pay

most of the duties of the Commissioned Officers of the Indian Medical Service. Indeed, one of our correspondents goes so far as to forecast what, in his opinion, is likely to be in store for the latter service. He expresses his belief that the policy of the rulers of India towards the Indian Medical Service is based upon the principle of utilising the service mainly in creating for the Government a sufficiently large and efficient number of subordinate medical servants recruited from the Eurasian and Native classes of India. And in support of this view he adds that such a movement while opening an outlet to the present clamour of the intelligent native who desires Government employment for his educated intelligence might at the same time ease the country of a portion of its expensive administration. The Indian Government, he points out, does moreover now occasionally employ such medical subordinates to look after the whole medical and sanitary business of large districts, containing no inconsiderable European population, when there happens to be no Commissioned Medical Officer available for the purpose. Such a letter as that from which we are quoting expresses the spirit of toleration and generosity which all medical men of a right understanding must feel towards their professional brethren. It is not logical—to say nothing stronger—that we should spare no pains to educate the Indian and, at the same time, should refuse him forever the opportunities of a free exercise of the talents that we have enabled him to cultivate. But the time when a more liberal scheme can be adopted by the Indian Government is delicate to fix—those who know least the difficulties are clearest as to the absolute necessity for immediate reform and most unable to see how valuable it is for future peaceful developments that the change should come so gradually as to appear a merely inevitable process of social evolution. And in considering the question of the increased employment, and the em-

ployment in more responsible and highly placed duties of the native medical graduates we must not ignore the influence which the difference of race introduces into it—not merely those of a physical nature but racial distinctions of character, religion, education and methods of thought which, how, ever much we may regret their existence, nevertheless tend to keep the European and the Native races of India more or less apart. Nor is it the case that the natives of India do not themselves fully recognise these distinctions. It is a topic upon which we would prefer not to enter, but so long as human nature is what it is it cannot be ignored. That in respect of trustworthiness of character there are among the members of the Subordinate Medical Service quite a number of unimpeachable servants will be admitted, but that the ethical standards of the Native and European are identical cannot be maintained. The native of India, notwithstanding all his confidence in the British character, has profound confidence in himself and is firmly convinced that either he or one of his compatriots is eminently fitted to administer the business of any official post in India. Ask the same native, however, when he is very ill whether he would prefer treatment at the hands of a compatriot or of an officer of the Indian Medical Service, and his preference will be immediate and flattering to our race.

Reviewing the whole situation, we believe that it is a misapprehension to consider that the policy of the Government of India is eventually to displace the European Com-

missioned Medical Officer in favour of qualified Natives or Eurasians. It is certainly not that of the Collector or Magistrate, who would strenuously oppose it. Europeans in power in India have naturally enough not the least desire to have either themselves or their families medically treated by either Natives or Eurasians instead of by their own countrymen. The education and training of natives of India to be qualified medical men are generally regarded as being among the highest and noblest function of the Indian Medical Service, so that these men may gradually displace the ignorant *hakedu* and *baid* in ministering to the medical wants of the millions of suffering poor. But it goes without saying that Europeans serving in India will always prefer medical men of their own race. The gradual increase of qualified natives in the towns and the villages has certainly, and very naturally, the effect of diminishing the emoluments from private practice of the Officers of the Indian Medical Service, for the former accept much lower fees than the latter and have the advantage of speaking the native languages fluently and of permanency of residence. We consider that it is a legitimate grievance of the qualified natives of India—for it must not be forgotten that it is their country over which we rule—that they are not placed more frequently in medical charge of the smaller districts of India. Whilst the British "raj" lasts, however, in India, European Medical Officers will be required for the larger stations and more important appointments. It would not be for the advance of medical science in India were it otherwise.



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*Diabetic Retinitis.

IN this country where diabetes is so very common among the better class of Indians every fact connected with its clinical history, complications, pathology and treatment is certain to be interesting to those medical men who are called upon almost every day to deal with the disease in some form or other. The general body of the medical profession in this country is familiar with carbuncle, and diabetic coma, and even with diabetic cataract. But with regard to diabetic retinitis I am afraid that Professor Saundby's remark that the ordinary medical man "is almost only aware that such a condition exists" is only too true. Diabetic retinitis is comparatively rare, and this fact may to a certain extent account for the scanty treatment it receives in text books. The frequent association of diabetic retinitis with opacities of the vitreous has led to its being mistaken for diabetic cataract by careless medical men who are not over familiar with the use of the ophthalmoscope. Last year I saw such a case which had been diagnosed as cataract by a medical man but which turned out to be a case of retinitis hæmorrhagica diabetica with

vitreous opacity. It was not very long ago that in Europe even eminent specialists regarded diabetic retinitis as a form of albuminuric retinitis. The ophthalmoscopic appearances of the two conditions are almost similar, and in a certain proportion of cases of diabetic retinitis there is albumen present in the urine as well as sugar. But there are a large number of cases where no albumen is present in the urine, and closer study has brought out distinct dissimilarities in the ophthalmoscopic appearances of the two diseases.

Most authorities agree in the opinion that diabetic retinitis "is invariably met with in elderly persons." From my experience of the disease in India I would slightly modify that statement. I should say that it is only met with in persons who have suffered from diabetes for a fairly long time. In Madras where it is not uncommon to find comparatively young men suffering from diabetes mellitus, occurrence of diabetic retinitis in the middle aged is also sometimes noticed. The youngest patient in whom I observed diabetic retinitis was 40 years old and he gave me a history of having suffered from diabetes for a period of 17 years—from his 23rd year. But whether occurring in the elderly or middle aged persons the fact that it is a rare disease is undoubted. This rarity may be due to the fact that most diabetic patients do not live long

* Specially contributed to the "Antiseptic."

enough to develop retinitis. It is generally believed that the disease affects both eyes. This bilateral occurrence is not so general as it is commonly supposed. Last year I saw two cases of undoubted diabetic retinitis, in both cases only one eye being affected. One of the patients has since died but the other is alive and still the affection is confined to his one eye.

Symptoms. The symptoms of the disease are not many. The main symptom is failure of vision, which may be more or less sudden. The degree of blindness may also vary considerably. Some patients only complain of a mist before their eyes, others observe dark spots, while yet certain others experience total blindness. One of my patients—a very intelligent and well educated gentleman—told me that his eye complaint commenced with blindness in one-half of his one eye. He described the symptoms so well and answered my questions so intelligently that there was no difficulty in coming to the conclusion that his attack commenced in the form of a unilateral nasal hemianopsia. The hemianopsia gradually became worse until a fortnight before he consulted me the entire vision in that eye had gone. On ophthalmoscopic examination it was found to be a typical case of hæmorrhagic diabetic retinitis. The case is interesting, as I have not seen hemianopsia mentioned anywhere in connection with diabetic retinitis. Did the unilateral nasal hemianopsia indicate the presence of a hæmorrhagic lesion at the lateral extremity of the optic chiasma interfering with the direct fibres of the optic nerve and tract which corresponded with the temporal half of that retina? The development of such an inquiry is far too elaborate for the modest limits of the present article.

Ophthalmoscopic appearances. Hirschberg's classification of diabetic retinitis into 2 classes, namely of (1) retinitis centralis punctata diabetica and (2) retinitis hæmorrhagica diabetica, are described in detail in Professor Saundby's work on diabetes mellitus.

According to Professor Saundby in retinitis centralis punctata diabetica, the media of the eye are usually clear. Serious cloudiness of the vitreous does not occur in this disorder. "The chief causes of the visual disturbance are groups of small, clear, bright specks situated in the structures of the retina in and around the central part, between the upper and lower divisions of the temporal branches of the retinal artery, also near the disc and on its nasal side." In this class of cases hæmorrhages never exceed a certain size. There is no affection of the optic nerve, and neither diffuse retinitis nor marked vascular change.

In the second class of cases—namely of the hæmorrhagic variety of retinitis, hæmorrhages constitute the essential part of the process as observed with the ophthalmoscope. The white patches which are usually seen in such cases and which form such a striking part of the ophthalmoscopic appearance, are the results of inflammatory and degenerative changes in the damaged tissues and in the effused blood. These patches are very much like the patches observed in albuminuric retinitis. The difference between the two, according to Sir William Gowers, is that the patches of glycosuric retinitis differ from those of the albuminuric variety "in shape, having less tendency to assume a circular form; in colour, having a more dingy shade of white; and in grouping, the stellate arrangement at the macula being rare, although there is

a tendency for spots of a rounded or irregular form to occur in this area."

Opacities of the vitreous, as I have already stated, are more frequently associated with glycosuric retinitis than with the albuminuric variety. These opacities are the result of the escape of blood into the vitreous from the retinal hæmorrhages. Sir William Gowers states that occasionally hæmorrhagic glaucoma results from these processes, while Nettleship describes a process of vascularisation of the vitreous by the shooting of capillary loops from the choroid penetrating the retina and into the vitreous. This vascularisation of the vitreous and the bead-like dilatations on the veins near the disc, easily visible to Mr. Nettleship and Sir William Gowers, may not be quite so obvious to less distinguished and less experienced medical men. But the irregularly shaped dingy white patches ought to be easily made out by any one who can use an ophthalmoscope. These, together with the vitreous opacities which are very often present, and simple atrophy of the optic nerve, which is sometimes present, ought to make the diagnosis of the condition fairly certain. Any uncertainty that may still be left will be cleared by an examination of the urine. Prognosis is always bad in these cases. But it is as well to bear in mind that temporary improvements of the condition are sometimes possible under suitable dietetic and other treatments. But relapses are always certain and there is only one possible termination for such cases and that is a disastrous one to the patient. It is in cases of diabetic retinitis and diabetic cataracts that the *Vydyans* and the *Hakeems* find their best fields for advertisement. For as I have already said glycosuric retinitis is capable of temporary

improvement and diabetic cataract may sometimes disappear without any operative treatment. And this temporary improvement under ayurvedic or unani treatment after you have given an unfavourable prognosis of the case may be thrown in your face and you may be compelled to listen to an address on the worthlessness of the European system of medicine. But, if I may slightly modify the words of a homely rhyme, "leave them alone, they will come home and bring their eyes before them."

After making the statement that the prognosis is hopeless it is useless to dilate at any length on the treatment. I can only say that local treatment of any kind to the eyes is worse than useless. It may do more harm than good. The only treatment that is advisable is general dietetic and other measures which are called for to combat diabetes.

T. M. N.

* Some Medico-Legal Points Affecting the Medical Man,

BY

SURGEON-MAJOR R.E. WRAFTER, B.M.S.
(Retired) Dehra Dun.

SOONER or later it falls to the lot of every medical man engaged in practice, no matter what particular branch of the profession he may have chosen, to be called upon to give evidence in his medical capacity in one of the Courts of Law. In this way he may find himself summoned as a witness in the Coroner's Court, in the Police, Sessions or other Criminal Court, or in one of the many cases concerned with divorce, claims for damages on account of injury, establishment of pater-

* Specially contributed to "The Antiseptic."

nity, of live birth, of identity and of demise, or of some other of the numerous medico-legal issues raised in Civil Courts of Justice. Into any of this multiform legal maze the practitioner may be called at any time to give evidence as to facts and to opinions under circumstances that subject his evidence to close scrutiny at the hands of judge, jury and opposing counsel.

Notwithstanding differences in the laws of individual countries, the position of the medical witness nevertheless possesses certain common features. It may be useful, therefore, to discuss briefly some of the salient points of interest that suggest themselves with regard to medico-legal testimony in the United Kingdom of Great Britain. Even so far as the latter is concerned the law of Scotland differs from the law of England no less than either differs from that of America or of European continental countries. This diversity records in unmistakable character the fact that England and Scotland were formerly rival and hostile countries. The relation of medical testimony to ascertain truth is undergoing a constant evolution precisely in the same degree that medicine is becoming a more exact science. The professional dogma or truth of to-day not infrequently becomes the exploded fallacy or deception of to-morrow. Thus we find it stated that so enlightened a man as Sir Thomas Browne, the author of the famous "*Religio Medici*," swearing in Court to the evidences of witchcraft, whereby several wretched persons were condemned to death. There can be no reasonable doubt that the gracious essayist and distinguished physician in question was convinced in his own mind of the actual occurrence of witchcraft. The period in which he lived was, from the year 1605 to 1682, a time

that had barely grasped the great gospel of Modern Science outlined by Bacon, whose demise took place in 1626. The law ceased not long afterwards to regard witchcraft as a punishable offence. For all that grossly superstitious beliefs of the kind linger yet in many parts of rural England and Ireland, notably in the latter country. For instance, it is alleged that a short time ago a man was convicted somewhere in the Midlands of having obtained money by false pretences. For some time previously he had driven a thriving trade in "charms" which were sold for the purpose of protecting horses and cattle from spells cast upon them by evilly-disposed persons. To this day, again, many a repulsive remedy is still used for its supposed medicinal virtues by ignorant people, whom the tradition of its efficacy has reached from mediæval times. Then, it was once asserted by a girl, a patient in a hospital ward, that her father had made her swallow a small live frog as a remedy against fits. The densely superstitious rustic of to-day, indeed, stands where Sir Thomas Browne stood three centuries ago. Fortunately for human progress, however, the Law Courts register a higher plane of intelligence by the exclusion of supernatural beliefs. Defective as may be the standards both of medical knowledge and of general intelligence, the fact should not be lost sight of that it is the mind of laymen, in the person of judge and jury, that has to be convinced by medical evidence. In many instances it is possible to convey advanced scientific information to non-medical hearers. Suppose, for instance, the crucial point of a divorce case to hinge on the gonorrhœal or non-gonorrhœal nature of a vaginal discharge. The medical witness would first explain that in all gonorrhœal cases the pus

was caused by a specific micro-organism, the gonococcus, which could by certain microscopical methods be invariably recognized in gonorrhœal discharges. If he could add that in the case before the Court he had found gonococcus, then neither judge nor jury would have any difficulty in understanding the nature of his positive evidence. In order to present a highly technical position of that kind, however, the medical witness will have to be clear and simple in his description. It will detract from the value of his evidence if he follows the example of the witness who described a "multi-coloured tumefaction of the orbital tissues, accompanied by considerable ecchymosis of a sanguineous nature in the subcutaneous structures," only to be pulled up by the judge with the question whether he did not mean a simple black eye. With regard to the foregoing and other desirable points in the attitude of a medical witness, it would be hard to improve upon the advice given long ago by Sir William Blizard. "Be the plainest man in the world in a Court of Justice," he writes, "never harbour a thought that if you do not appear positive, you must appear little and mean for ever after; many old practitioners have erred in this respect. Give your evidence in as concise, plain, and yet clear manner as possible. Be intelligent, candid, open and just, never aiming at appearing unnecessarily scientific. State all the sources by which you have gained your information. If you can, make your evidence a self-evident truth, thus, though the Court may at the time have too good or too mean an opinion of your judgment, yet they must deem you an honest man. Never, then, be dogmatic, or set yourself up for judge or jury; take no side whatever, be impartial, and you will be honest. In courts of judicature you will frequently

hear the counsellors complain when a surgeon gives his opinion with any of the least kind of doubt, that he does not speak clearly, but if he is loud and positive, if he is technical and dogmatic, then he is allowed to be clear and right. I am sorry to have to observe that this is too frequently the case." Medical evidence is generally divided into (1) documentary; (2) oral; (3) experimental. As a matter of fact all three varieties of evidence are reduced to the oral form in actual Court, the one exception being the dying declaration. The dying declaration is the deliberate statement of a dying person with regard to the cause of that death. It can be validly used in Court only after the demise of the person who made the declaration; and for the inquiry of which that particular demise is the object. The English law assumes that no person would willingly quit this world with a lie on his lips, an assumption which is regarded to obviate the necessity of cross-examination. To render the declaration valid in English law, the person who made it must believe: (a) that death is immediately impending, (b) that recovery is absolutely impossible. In Scotland, on the other hand, the more sensible view is taken that it is not necessary that the deceased believe himself to be dying when he emits the deposition, for his consciousness of approaching death may be inferred from the nature of the injury, or the state of illness or other circumstances of the case. In one English trial (Leeds Lent Assizes, 1869), Baron Cleasby ruled a dying declaration inadmissible because the dying person said: "She thought she could not recover." In another case (*R. v. Tagent*, T C and P., 238), the declaration was held inadmissible because the person making it asked some one near her whether he thought she would

"rise again." These words were considered to show a hope of recovery that rendered the declaration invalid. In the case *R. v. Horsford*, Huntingdon Assizes, 1899, Mr. Justice Hawkins remarked of the dying statements of a poisoned woman. "I am quite satisfied myself that anything a suffering person says with regard to her bodily sensations and in answer to questions regarding her case, are admissible. * * * You must have evidence that she was in apprehension of death, and that she was personally feeling she was dying". The deceased said to her medical attendant, "I believe I am poisoned." When asked what she had taken, her reply was, "I have taken powder." In reply to the judge, the medical attendant stated that "no one in her condition could possibly entertain a hope of recovery. Her face bore a terrified expression, and her struggles showed the extremity of her condition." It was proved that the poisoner had sent her the powder, and that it contained strychnia. Professor Shuster,* after commenting upon the foregoing case, points out that the medical man who is called upon to take a dying declaration will do well to look after the following points, namely: (1) That the person expresses a conviction of impending death, or that such a sense of impending death, and that all hope of recovery is past, may be inferred from the nature of the injuries. (2) That the mind of the patient is in a fit state for the purpose. (3) That the exact words used and the order in which they were uttered be put down. (4) That the statements were voluntarily made. (5) That no questions other than those necessary for the explanation of obscure statements, should be put, and if such are put, the words of the question and the answer are to be written

*[Medical Jurisprudence, John Shuster, M. D. (Edin.), 1902, page 27.]

down. (6) That the dying person should, if able, sign the statement as well as himself and the other witnesses, or failing the ability of the dying person, to sign by himself and the other witnesses. These recommendations have been quoted at length because they form an excellent illustration of the kind of information that should be in the possession of every practitioner. At any moment the medical man may be called upon to take a dying declaration from a person who has been mortally injured. Neglect of any one of the precautions mentioned may render the declaration void, and so defeat the ends of justice. What more natural, for instance, than for the medical attendant to ask the sufferer a number of questions as to his assailant or other details, arising from the narrative. Yet, as we have seen, such a course would invalidate the whole evidence obtainable from the dying person. In the face of such contingencies, it is to be regretted that the teaching of medical jurisprudence is usually limited in our schools to a few perfunctory lectures. Under the circumstances of modern medical training, with its already overloaded curriculum, it is, perhaps, impossible to hope for more than a short course of lectures upon this special subject. Yet the fact remains that sooner or later the medical practitioner is certain to be faced with intricate medico-legal problems, demanding treatment, on the spur of the moment, and possibly involving matters of life and death. It is not too much to say that his reputation may be made or marred by the way in which he rises to the occasion or fails to grapple with it. Perhaps the soundest advice that can be given to the medical practitioner is to read over carefully a text-book on Medical Jurisprudence every few years, so as to keep his mind refreshed from time to time

as to the main features of the medico-legal matters which will be presented to him in the course of his practice. From the circumstances of the case he will necessarily suffer from the difficulty of testing theory by the experience of practice. The medical man, however, who possesses a sound theoretical grounding, will find himself greatly strengthened when he is brought at a moment's notice face to face with infanticide, homicide, criminal abortion, suspicious death, rape, testamentary, capacity, identification of the living and the dead, and a hundred and one other medico-legal questions involving the command of minute, accurate and extensive knowledge for their efficient handling. The law of Great Britain and Ireland directs that medical men cannot withhold from a court of law any secrets obtained in the course of their professional relations with patients, provided that their revelation be necessary for the purposes of justice. Any medical witness refusing to give evidence on that ground may be committed to prison for contempt of court. This non-recognition of professional secrecy runs counter to the most ancient traditions of the profession of medicine. The famous and classical oath of Hippocrates breaks the spirit of honourable ethical conduct. At the risk of a somewhat long quotation it may be reproduced as follows for the benefit of those readers to whom it may not be familiar: "I swear by Apollo, the Physician, and Esculapius, and Health and All-Heal, and all the gods and goddesses, that, according to my ability and judgment, I will keep this oath and this stipulation—to reckon on him who taught me this art equally dear to me as my parents, to share my substance with him and relieve his necessities if required, to look upon his offspring in the same footing as my own brothers, and to teach

them this art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction I will impart a knowledge of the art to my sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to anyone if asked, nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my art. I will not cut persons labouring under the stone, but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption; and, further, from the seduction of females or males, of freemen and slaves. Whatever, in connection with my professional practice, or not in connection with it, I see or hear in the life of men which ought not to be spoken of abroad I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath unviolated, may it be granted to me to enjoy life and the practice of the art respected by all men in all times. But, should I trespass and violate this oath, may the reverse be my lot." The principles of the foregoing oath with relation to professional secrecy were adopted in the Latin oath administered to Scottish University Graduates in medicine up till the year 1868. Since that date the following form has been substituted: "I do solemnly and sincerely declare that, as a graduate

in medicine of the university of—, I will exercise the several parts of my profession to the best of my knowledge and abilities, for the good, safety and welfare of all persons committing themselves, or committed, to my care and direction, and that I will not knowingly or intentionally do anything or administer anything to them to their hurt or prejudice for any consideration or from any motive whatever. And I further declare that I will keep silence as to anything I have seen or heard while visiting the sick which it would be improper to divulge." Oaths or no oaths, however, the law of Great Britain and Ireland recognizes no rights of professional secrecy on the part of a medical witness. Like a common witness, however, he is not bound to give evidence which would tend to incriminate himself. The classical illustration of that point is the case of Mr. Pelligrew, a surgeon who was called as a witness in the trial of Mr. George Patmore, for the murder of John Scott, in a duel. The trial was heard at the Old Bailey Sessions, in June, 1821. On the appearance of Mr. Pelligrew he was warned by Mr. Justice Bailey that if he (the witness) admitted he went for the purpose of giving surgical assistance knowing that a duel was to take place, he would render himself liable to a criminal prosecution. Mr. Pelligrew thereupon declined to answer any questions.

The best-known illustration of the legal compulsion upon a medical man to reveal professional secrets if called upon to do so in a court of law is that of Mr. Ciesar Hawkins, the famous surgeon, in the trial of the Duchess of Kingston before the House of Lords. The law was thus clearly laid down by Lord Mansfield: Mr. Hawkins will understand that it is your

(the other Peers) judgment and opinion that a surgeon has no privilege, where it is a material question in a civil or criminal course, to know whether parties were married or whether a child was born, to say that his introduction to the parties was in the course of his profession, and in that way he came to the knowledge of it. I take it for granted that if Mr. Hawkins understands that, it is your (the other Peers) judgment and opinion that a surgeon has no privilege, where it is a material question in a civil or criminal course, to know whether parties were married or whether a child was born, to say that his introduction to the parties was in the course of his profession, and in that way he came to the knowledge of it. I take it for granted that if Mr. Hawkins understands that, it is a satisfaction to him and a clear justification to all the world. If a surgeon were voluntarily to reveal these secrets, to be sure he would be guilty of a breach of honour, and of great indiscretion, but, to give that information in a court of justice, which, by the law of the land he is bound to do, will never be imputed to him as any indiscretion whatever." In the famous and comparatively recent case of Kitson and wife *versus* Playfair, 1896, the specific question arose whether a medical man, for the protection of the honor of his wife and children, might violate the confidence which he had received as the medical attendant of his relative. The action was brought by Mrs. Arthur Kitson, sister-in-law of the wife of Dr. William Playfair, against the last named and his wife for libel and slander. The libel was contained in the statement published by defendant that the plaintiff had "had a miscarriage under such circumstances that her pregnancy could not have been of a legitimate character." The defence hinged mainly

on privilege of the statement. The plaintiff disputed the facts upon which Dr. Playfair founded his conclusion and maintained that a portion of the placenta had been left in the uterus for many months after the foetus had been expelled or had ceased to exist. The jury found Dr. Playfair honestly believed this statement to be true, but did not give plaintiff opportunity for making an explanation * * * that the words were not uttered from a mere sense of duty and without malice, but from an indirect motive. The plaintiff had claimed five thousand pounds damages, but the jury awarded twelve thousand pounds. There are two common ways in which a patient's secret may, without bad intention, be betrayed by a medical man. First, he may communicate the facts to a relative of the patient who, in his opinion, ought to know the same; secondly, by communicating with the patient's employer. As an illustration of the latter we may take the case of a mistress who desires the family medical attendant to examine a female domestic servant with a view of determining whether she be enceinte or not. Should the medical man examine the female servant without obtaining her full and express sanction he will be liable for an action for assault. He may inform the mistress and regard his communication as privileged. For all that, should the female servant feel aggrieved, she may bring an action for damages for defamation of character against the medical man. The question of "privilege" or otherwise will then have to be determined by the judge. If the medical man pleaded justification his plea will be "that the words written or spoken were true in substance and in fact." The communication, moreover, must not only be true, but must

also have been made "without malice." Both these points, that is to say, justification and maliciousness, are left to the jury to decide, who may interpret very much to the detriment of the defendant. Another embarrassing matter is the confidential communication of a patient admitting a criminal offence. All communications made to legal advisers are privileged, but no such privilege is recognized by the law in the case of clergymen and medical men. It has often been debated whether clergymen should not enjoy privilege, as regards incriminating communications, on the ground that evil-doers would thereby be enabled to disburden their guilty consciences, and permit religious consolation and aid. This principle is pushed to a great extent by the Roman Catholic religion, which prohibits a priest or clergyman of that denomination to reveal confessions, and even to divulge anything he knows about a matter that has been confided to him in his priestly capacity. In Scotland, any criminal confidence made to a clergyman is unprivileged except that of a prisoner in custody awaiting trial, who may, in seeking spiritual solace, confess his faults. In England, on the other hand, the clergyman ranks with laymen so far as that kind of communication is concerned. In one British colony, namely, New Zealand, the medical man has the privilege of refusing to disclose professional secrets in a court of law. The same condition exists in seventeen States and territories of America. In France, medical men are on the same footing as priests with regard to the privileges of professional secrecy. In the course of practice, medical men must necessarily come across criminal information from time to time. According to the law of the United Kingdom, he is not

called upon to play the part of detective, or of police officer, and, as a rule, he will keep any such accidental information secret. Thus, if he be called to a woman in labour, and find in the course of his attendance that she has been criminally aborted, he would feel no need to inform the police authorities of the fact. At the same time he would naturally be most careful not to assist the patient actively to defeat justice, otherwise he would become particeps criminis in a highly criminal offence. There are degrees of criminality, however, beyond which no medical man would venture to step. For instance, he would in all human probability feel bound to reveal his professionally acquired knowledge of a fraud committed upon an insurance company and certainly of all cases of undoubted murder in much the same way, so far as the latter point is concerned, as he would inform the coroner of any death under suspicious circumstances that has come to his knowledge. The English law relating to professional medical confidences appears in an unsatisfactory condition, and needs wise and well considered revision. Speaking generally recent scientific advances have rendered the medical witness much more powerful and exact. Bacteriology and chemistry have strengthened his hands to a marvellous extent. The latest addition to his powers of precise diagnosis is to be found in the Röntgen ray methods. Photographs taken by radiographic processes were admitted as evidence in courts of law from an early period of their introduction. They furnished direct proof of many facts that would otherwise be established only by circuitous and laborious inference. At the same time it is well to bear in mind that the radiographic record is beset with fallacies. In all cases

involving evidence of that kind, it is advisable to obtain the help of a skilled medical radiographer, so as to exclude all possible fallacies. The medical man whose evidence depends on a radiographic print will do well to examine and cross-examine himself on all possible points, so as to detect flaws and weak links before going into the witness box. In conclusion, we may quote, for the benefit of all medical men called upon to give expert evidence, the golden rule: "Do not flatter yourself your opponents will not know the obscure and weak points of your subject, however wide and accurate your range of special information may be."

Ascaris Lumbricoides,

BY

U. RAMA RAU,

Medical Practitioner, Madras.

AMONG the nematodes that infect men in India, especially in the Madras Presidency, none are so common or present such a variety of interesting and often troublesome features as the common round worm. These generally inhabit the small intestines. Sometimes they may be passed per anus or they may reach the stomach and be vomited out. "They have been found blocking the common bile-duct, the glottis, the nasal passages; and occasionally they occur in abscesses in the groin or other part of the abdomen about which it is not easy to say whether the inflammation has been set up by worms or by some other cause."

The number of ascarides present in the intestine are varying. Dr. S. C. Townsend of Nagpur reports a case "in which within six days the patient passed no less than six thousand lumbrici, of these 755 were ejected in one motion." I have

known patients passing from 100 to 300 worms.

ETIOLOGY.—These unwelcome parasites are found in large numbers in the loose, damp soil. They deposit their larvæ in the mud, and during the rains these are washed into tanks and wells and thus reach the alimentary canal of men and animals by drinking the water. The ova are often taken in with uncooked vegetables and fruits. "The Indian method of defæcating in the open and leaving the fæcal deposit exposed causes the worms, if passed, to be eaten by crows, fowls, etc., and the ova uninjured by the process are thus freely disseminated. The droppings of these birds frequently abound with these ova. The fæcal matter breaks up, the ova are blown about by the air and are so carried into the wells. Mosquitoes and their larvæ, white-ants and other insects swallow them. The eggs are also particularly sticky and easily adhere to the jaws or antennæ of insects and are thus carried into the food or into the water consumed by man." Of all the districts in the Madras Presidency, in my experience, it is more prevalent on the West Coast. Most probably this is due to the damp climate, which is peculiarly suitable for the development of ova.

SYMPTOMS.—In *mild cases* the chief symptoms are headache, and a tendency to faint. The sufferer is dyspeptic, and is disinclined for food; fulness is felt at the pit of the stomach and at times some sort of "undulatory movement" in the abdomen; (this peculiar motion is due most probably to the meandering of the worm in the stomach and duodenum); Nausea, irregular appetite, itching of the nose, grinding of the teeth, etc.

In *severe cases*—severe muco-enteritis, convulsions in children, with high temper-

ature; severe jaundice (if worms obstruct the bile-duct), or "suffocation if it gets into the larynx; and occasionally the worms have formed a convoluted mass large enough to cause intestinal obstruction," dysentery, etc.

DIAGNOSIS.—Appearance of the worm discharged through the anus or by vomiting is a sure sign. But in most cases there is absolutely no history of having passed worms for a number of years. In such cases other symptoms have to be watched. My usual practice is, in any case of high fever which lasts more than three days without any other complication, with nervous symptoms, nausea, foul breath, coated tongue, to administer a dose of santonin and castor oil and I am glad to say I have been always successful.

COMPLICATIONS:—*Nervous disorders* such as hysteria, spurious epileptiform seizures, melancholia, convulsive attacks, night terrors, very high temperature.

Digestive disorders:—Muco-enteritis. If the parasite is high up in the intestinal tract, vomiting is often severe, and difficult to control. If the parasite is located somewhere near ileum or near ileo-cæcal valve then there is a severe form of diarrhoea, and the area all round the ileo-cæcal valve is very tender, gurgling just like typhoid gurgling (very deceptive) with high temperature. Here, below, I give the report of a case which was under my treatment. The patient, aged 18 years, a native of Coorg, came to me with fever. The fever commenced with rigor and the thermometer recorded 104°F. It came down next day and went on keeping, till the 10th day, increasing by one degree every day till the 6th day and then was almost, remittent between 105°, 104° and 103°. The temperature shows the

beginning of typhoid. The temperature during the first week is very much what is called staircase temperature of the typhoid fever and that of the second week is almost continuous just like that of the 2nd week of the typhoid, and there was diarrhoea and slight enlargement of the spleen, and there was typhoid state present. Certainly one is liable to mistake it for typhoid. At any rate a beginner like myself did think it to be a case of typhoid. Fortunately he vomited a round worm. That cleared the diagnosis and in two days the temperature came down with a dose of santonin and castor oil, which brought out about 15 worms.

DYSENTERY.—In some cases (of dysentery), in spite of the ordinary remedies, blood and mucus is passed with much tenesmus and colic, then we are to suspect the presence of worms. In such cases, removal of the worms is attended with immediate disappearance of dysenteric symptoms. In children suffering from dysentery, I have always observed, that if the cause of the illness is due to worms, they, in addition to the ordinary symptoms of dysentery, are always very irritable and peevish. Pricking of the nose, irritation about the genitals, grinding of the teeth, are also present.

Sequelæ of worms are:—"Boils, chronic diarrhoea, chronic dysentery, meningites, peritonites, perforation of bowels by worms, abscess of the liver, nephritis, anæmia, dropsy, etc." Dr. A. Mitra of Kashmir reports of a case admitted to the hospital "with symptoms of anæmia and slight fever in the evening and a small boil exactly over the umbilicus, about the size of a No. 6 shot. There was a ring of inflammatory redness around this boil. She was put under iron and no notice was taken of the boil beyond fo-

menting it with hot water. The boil burst of itself, discharging a drop of sero-sanguinous matter. During the course of two days four round worms of fairly good size came out from the umbilical depression on which the boil was situated." There was a case in the Madras Native Infirmary, while I was working in the medical ward as a student, worth noting in this connection. A girl, of about 10 years of age, was admitted into the ward for fever of about four days' duration, which was suspected to be a case of typhoid. Next morning when she was examined by a senior clinical superintendent it was suspected to be a case of pneumonia. So no definite diagnosis was made. 3rd day when we all came to the ward to hear the clinical lecture from our Clinical Assistant, we found to our surprise the child dead, with the report of having passed about two pints of blood at about 5 a. m. On *post-mortem* examination, we found a lot of living and dead worms in the intestine and also a particular ulcerated area, which had only a thin membrane covering it. From that we came to the conclusion that when the worm tried to perforate the intestine it must have come across an artery, which must have bled her to death.

TREATMENT:—The best drug is santonin, to be followed after 12 hours by a dose of castor oil. Of all purgatives the best after santonin is castor oil, as "the oil appears to lessen very considerably the risk of any evil effects." For children it is always better to give on three or four successive mornings followed by a dose of compound rhubarb powder. In cases where there is fever it is always better to administer in divided doses, instead of one single dose. For, once a young boy, of 10 years, came to me

contain only from 16 to 24 per cent. In his experiments usually from 1 to 1½ kilogrammes, or from 2½ to 3 pounds of potatoes was substituted for every 350 to 500 grammes of bread, and he always found that there was a definite drop in the curve representing the sugar and urine excretion while the individual was on the potato starch. He found also there was always a marked amelioration in the patient's symptoms. Thirst became less marked, neuralgias disappeared, and strength increased. He also found that after the potatoes had been substituted for bread for several days, and then the patient placed on the original amount of bread, the excretion of sugar while on the latter never reached the limit obtained previous to the potato regime. In other words, a certain tolerance for wheat starch was produced by the potato regime. Potato treatment in a number of cases has been tried at the Johns Hopkins Hospital which can, in a general way, substantiate Mosse's results. It does appear, then, that potato starch is more easily assimilated than bread starch, but in the author's opinion there is decided benefit derived from the administration of potato starch in substitution for wheat starch in the treatment of diabetics. The potatoes are weighed raw and are best prepared by baking.

One other point in the treatment of diabetes the author emphasizes, and that is the necessity, in manifestly severe cases, of having the patient provide a specimen of his urine, if not weekly, at least every two weeks, for the purpose of determining the earliest possible appearance in the urine of the abnormal acid which precedes the development of diabetic coma. This complication is now universally accepted as being due to an acid intoxication. The essential cause is the production in the system of beta-oxybutyric acid, held by most observers to be derived from the breaking down of the tissue albumens, and possibly also the body fats. Magnus Levy supports rather strongly

the latter view. Beta-oxybutyric acid in itself is rather difficult to test for, but its derivative products, diacetic acid and acetone, are readily detected in the urine, the former by Gerhard's ferric-chloride test and the latter by the sodium-nitroprussic test. The appearance of the Burgundy-red reaction of diacetic acid should always be considered a danger-signal, and the patient should be started on the alkaline treatment immediately, and by slight changes in the diet the acid will in many instances disappear from the urine. By the early recognition of the appearance of diacetic acid in the urine, which always means that its antecedent, beta-oxybutyric is also being formed in the system, the development of diabetic coma can be frequently warded off. Once the individual, however, has become deeply comatose the treatment is very unsatisfactory. In the severe cases of diabetes where coma manifestations make their appearance, such as headaches, restlessness, acetone odor to the breath, commencing Kussmaul's "air hunger," and the appearance of large quantities of acetone and diacetic acid in the urine, very active treatment is necessary. The patient should be given very large quantities of sodium bicarbonate by mouth and by rectum. These should be pushed until the urine is alkaline in reaction. We will then be sure that the effect of the beta-oxybutyric acid in the blood has been neutralised. Subcutaneous infusions of normal saline solution may be used, but in the hospital experience of the writer have not given very satisfactory results. Where the coma has become decidedly deep it is necessary to get the alkali into the circulating blood more rapidly than is possible by administering it by mouth or by rectum. This can be accomplished by giving an intravenous injection of a one-per-cent to two-per-cent solution of sodium bicarbonate in normal salt solution, from 500 to 1000 cubic centimeters of the solution being used. The fluid must be allowed to run in very slowly, otherwise the

action of the heart may become seriously embarrassed.—*The Therapeutic Gazette.*

Halitosis, Bad Breath,

BY

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Orkney Springs, Va.

In treating this subject we will be as brief as possible, owing to limited space. The exhaled air, called the breath, is composed of nitrogen and oxygen; the latter is less in proportion than found in the atmosphere. The breath also contains aqueous vapor, ammonia, organic impurities, and a little over four per cent of carbonic acid. The last named ingredient is increased in the early stages of the acute infectious diseases, *viz.*, measles, scarlatina, small-pox, etc., except typhus fever, when it is diminished. The temperature is slightly less than that of the body, being influenced by that of the external air, but seldom falls below 92° F. In fevers, the temperature is increased, but in the algid stage of cholera, and when death is pending, in many diseases it is almost cold.

In perfect health the breath is almost odorless, but is modified by very slight causes, and under many conditions becomes valuable as a diagnostic sign.

In diabetes mellitus there is a peculiar sweetish odor, likened to those of honey, sweet apples, or new mown hay. In glaucoma a peculiar breath known as *haline safrancee* is invariably present. In pyemia there is a peculiar breath that is hard to describe, but when once detected will seldom be forgotten. The breath of chronic alcoholisms is very offensive, possessing a peculiarity, unlike any other odor. Many volatile substances when entering the system through the ordinary channels are excreted to a certain degree through the lungs, and contaminate the breath. These are chloroform, turpentine, alcohol, etc.

Bad breath may be due to either local causes or systemic disease. Among those that are local will be found dental caries, and various affections of nose, mouth, larynx, pharynx, tonsils, and lungs. Bad breath more frequently results, in those who have decayed teeth, from particles of food that are undergoing decomposition than from the teeth themselves. This is sometimes the cause where there are no caries, in persons that are careless about their teeth.

In cancrum oris, follicular tonsillitis, and necrosis of the jaw, the breath has a very characteristic sickening odor. In follicular pharyngitis, the odor is due to decomposition of the secretions and food particles that fill up the follicles, and is characteristic of fecal matter. The breath in diphtheria is suggestive of putrefaction.

There is a condition known as catarrh of the tongue, which occurs as a disease *per se*, or may be associated with dyspepsia, in which the odor is due to decomposition of mucus, epithelial scales and particles of food.

Offensive breath is always present in dyspepsia, either gastric or intestinal. The cause, or wherefore, is easily understood. The broken-down tissues, and effete matter, that should be eliminated through certain channels, are dammed up, hence Nature tries to assist, by throwing off a part through the lungs.

When constipation is associated with this disease, the breath at times is very offensive, because of large quantities of decomposing organic matter. The breath is also offensive in gingivitis, the result of mercurial or arsenical poisoning. The same is true in scurvy and syphilitic ulceration of the mouth and fauces. Ulcers in the larynx and pharynx, especially when syphilitic, contaminate the breath. The same is true of tubercular ulcers.

There is no disease that makes the breath so offensive as ozena. In this disease the breath is exceedingly foul and repulsive.

Patients suffering from uremia have a breath that strongly resembles ammonia, due to a failure on the part of the kidneys to eliminate urea.

Various mineral substances, which are themselves almost, or quite, without odor, when taken into the system, in sufficient quantities, cause a very disagreeable breath, due to irritation of the stomach or deranged digestion. The odor of the breath may change temporarily under trivial causes. Fits of anger and excitement may, and often do, produce fetid breath.

Some women's breaths are always offensive during their menstrual period. In feverish conditions in children, the breath has a sweetish odor, reminding one of chloroform. Children suffering from worms, have this peculiar breath except more fetid, but it can not be relied upon, because many conditions in which there is irritability along the alimentary canal may give rise to similar, if not identically the same bad breath.

In certain forms of bronchitis, and in cancer of stomach and liver, the breath may become very offensive. There are some individuals who suffer more or less from an offensive breath, the cause of which it is impossible to discover. This may be constant, and yet there seems to be no deviation from normal good health.

We believe that the cause of this condition lies in faulty elimination of the skin, because the breath of this class of persons always partake (smell) of sweat and other secretions.

Treatment.—The treatment of this condition is as varied as the causes themselves. The thing to be remembered above everything else is to find the cause. This found, your success will depend whether the disease is curable or not. Where it is due to caries of the teeth, all cavities should be

filled, and teeth that are too far gone extracted. If the gums are spongy, a tooth wash should be used containing thymol and myrrh.

When the cause lies with the stomach, we have found nothing more serviceable than charcoal after meals, in conjunction with the recognized treatment. In catarrhal conditions of stomach and bowels, with fetid breath, we have found the non-alcoholic extract of golden seal to be a most efficient remedy. Constipation should be corrected, if present, in all diseased conditions of the alimentary canal. Begin this with a thorough cleaning out of all retained debris, then follow with your laxative, and add to this the sulpho-carbolates to render the canal aseptic, and maintain it, and the offensive breath will soon disappear.

In all diseases of the mouth and fauces that are ulcerative in nature, a mouth wash or gargle should be used containing carbolic acid (one to two hundred) to which a little thymol has been added.

To sweeten the breath in incurable diseases of mouth, larynx, or throat, use the following.

R Thymol.....3½ grains.
Borax.....15 grains.
Oil of Nutmeg (dissolved in one
drachm of alcohol)..... 5 minims.
Distilled Water..... 16 ounces.
M. Sig.: Rinse mouth freely or gargle often.

In tubercular conditions, bronchitis, liver, and kidney troubles, everything possible should be done to establish a healthy condition of the skin. There is nothing so essential to purify the breath in these conditions as systematic bathing and friction of the skin with a flesh brush.

For bad breath, where it is impossible to remove the cause, the following can be used, and will be found more or less effectual in disguising it: the oil of cinnamon, cardamom, mint, nutmeg, cloves; cardamom seed, anise, spice, etc. It should be re-

membered, also, that in many conditions, the proper restriction of diet will be found exceedingly beneficial.—*The Medical Brief*.

Ether Poisoned,

BY

G. W. HARVEY, M. D., DANA, CAL.

I recently attended a case that presented some very interesting pathological features, and feeling that a history of the case might be of interest and benefit to others I herein set it forth.

It was a young man of 22 summers, robust, strong and hearty up to six months ago, when he had the misfortune to get an arm broken. The attending physician thought it necessary to use an anæsthetic, and enlisting the services of a neighbour woman put him under the influence of ether. After the arm was splinted and the young man came to, the doctor remarked to him that he had "used almost four ounces of ether, or nearly twice as much as he had ever used before in a similar case."

Dating from the setting of his arm the young man never felt well. He noticed first of all that his urine looked almost like blood when he passed it, and it never from that time to the day of his death regained its normal appearance.

About three weeks after his arm was set he had a slight hæmorrhage from the lungs, and they began to stuff up with labored, asthmatic breathing and rapid pulse. It was in this condition that he came into my hands some five months after the anæsthetic was given, but dating from the hæmorrhage his breathing had become more labored and the pulse more rapid until he was respiring about forty times per minute with a temperature of $103\frac{1}{2}$ and a pulse ranging from 96 to 130.

One feature of the case was an intense internal heat that would come over him at times, and although the mercury was ranging

very close to zero and he was in an open camp house he would call for all doors and windows to be opened, that he might cool off a little.

During the last three weeks of his life there was a sound at every respiration as though the lungs were full of water, and yet he never expectorated anything save a little white phlegm occasionally; and to the very last his bowels were regular, with black stools, and there was the normal amount of urine secreted and passed, but always of a dark blood-red color, and yet in urinalysis it failed to respond to the blood test. There was also an entire absence of albumen and sugar. I tried jaborandi, veratrum, aconite, lobelia, lycopus, pilocarpine, apsis, arsenic and a host of others, but not a single remedy made the slightest impression, and he finally passed away after days of intense suffering.—*California Medical Journal*.

Acute Retention of Urine during Pregnancy an Early Symptom of Locomotor Ataxy,

BY

R. BIRNBAUM,

A woman, aged 32, was admitted to hospital on September 8, 1904. She had previously been delivered in the same ward in 1893 and 1898. On the last occasion the child was macerated, and showed signs of congenital syphilis. She had not menstruated since June, 1904, but had seemed in perfect health until September 6, when dysuria occurred, the urine escaping in small quantities and with violent straining. Simultaneously the abdomen rapidly enlarged, and the legs and vulva became oedematous.

There was considerable oedema of the legs and vulva, which extended to a less degree over the abdominal wall. The heart and lungs were normal. By straining she could pass a small quantity of urine, which contained neither albumin nor sugar. The

abdomen was distended by an oval, fluctuating tumour, which extended from the pubes to the costal arch. Foetal parts were not palpable, and the foetal heart was inaudible. Acute hydramnios was considered to be the most probable explanation of the tumour, but on catheterism nearly 175 oz. of limpid urine were drawn off, and the tumour disappeared. A vaginal examination, which was extremely painful owing to the oedematous condition of the labia, showed that the uterus corresponded in size to the fourth month of pregnancy. During the following days catheterism was several times required, but under treatment by prolonged warm baths and electricity, micturition soon became normal. The oedema of the legs subsided rapidly, but that of the vulva persisted for some time.

The writer can find no mention of oedema as a complication of retention of urine. Acute retention may be of local or nervous origin. Local causes, such as retroflexion and incarceration of the gravid uterus, stricture of the urethra, and vesical tumour or calculus, were excluded, the last by cystoscopy. There were no grounds for suspecting hysteria or neurasthenia as a cause of the sudden retention. Apart from these conditions, nervous retention is commonest in spinal complaints, such as lesions of the conus medullaris, cauda equina, transverse lesions of the cord above the centre for micturition, and locomotor ataxy and in general paralysis. Retention may also occur in cerebral affections if consciousness is lost or impaired. Usually the symptoms of these conditions indicate the nature of the retention. But if, as in this case, the retention is an early symptom of a nervous disease the diagnosis may be difficult. The woman had had syphilis 10 years previously. Further examination showed complete absence of pupil reaction to light, and diminished perception of pain, and partial anæsthesia for heat and cold with unimpaired tactile sensation in the legs. The patellar reflexes were

present, though the right side was weaker than the left. There was no latexy and Romberg's sign was absent. The patient occasionally suffered from lightning pains radiating into the legs.

The case was evidently one of incipient locomotor ataxy of syphilitic origin. The presence of the knee-jerks does not negative the diagnosis, as in a number of reported cases they were present in the early stages. Vesical disturbances occur in more than 50 per cent. of all cases of locomotor ataxy, though usually not before the ataxic stage is established. Not infrequently, however, they may be an early symptom, and, rarely, may be the first indication of nervous disease.—*Deutsche Med. Woch.*, Oct. 20, p. 1572.

SURGERY.

Suture of Wound of the Heart,

BY

EDGAR SOMERVILLE, M.D., F.R.C.S.

A man, while standing reading a newspaper in a public reading room, had a sudden impulse to take his life. He undid his waistcoat and felt for his apex beat; he then held a penknife with the large blade opened fixed to the reading-desk with his hand, and bent down upon it with his whole weight. The blade entered the chest wall between the fifth and the sixth ribs for its entire length, $2\frac{1}{2}$ in. He allowed the knife to remain in this position for about half a minute, during which time he broke out into a profuse perspiration and had a feeling of warmth all over his body. Being surprised and disappointed that he was still alive, he withdrew the knife and re-inserted it directly above the first wound, between the fourth and fifth ribs, using the same method as before and making the wound to the full extent of the blade. He left the knife in position and noticed the handle move up and down with each cardiac systole. Not satisfied with this,

he rotated the knife twice. Then a bystander removed the knife.

The writer saw him about 5 minutes after the injury. He was in a state of profound collapse, extremely pale, very faint, and perspiring profusely. Both wounds were bleeding rather freely. The heart's action was feeble, the cardiac sounds being only heard with difficulty. The pulse was barely perceptible and very irregular in time and volume. The respirations were 36. He said that he had little pain beyond a smarting in the wounds. Temporary dressings were applied, and he was removed a short distance to hospital.

An operation was commenced about 50 minutes after the injury. He was put under ether, which was preceded by chloride of ethyl so as to reduce struggling. Two punctured wounds were seen over the præcordium—the upper in the fourth and the lower in the fifth intercostal space, both being between the left parasternal and mammary lines. The upper wound was enlarged laterally in both directions, making an incision of 4 in.; a vertical incision was made joining the two wounds and continued for 2 in. below the lower wound. The two triangular flaps of skin and muscle thus made were reflected, the upper limit of the exposed area was retracted upwards and 2 wounds were found, one in the fourth interspace and the other in the fifth interspace, these corresponding to the wounds in the skin. The man being tall and having a long thorax the intercostal spaces were larger than usual, and it was not necessary to resect the ribs. The wound in the fourth interspace was enlarged and the pericardium was exposed; this also was found to be wounded and the wound was enlarged. The pericardial sac was full of blood and on removing this a wound was found in the long axis of the ventricle. The visceral layer of the pericardium had retracted, making the wound spindle-shaped. The aperture was plugged with lacerated myocardium, this laceration having probably been

produced when the knife was rotated. Blood was oozing from the wound, but the heart's action was so rapid and irregular that it was difficult to say at what period of the cycle the hæmorrhage was greatest. The lacerated cardiac muscle which was protruding was removed with scissors. The hæmorrhage then became more profuse, but was arrested by the introduction of the tip of the little finger into the wound; this had also the effect of steadying the heart for the introduction of sutures. Three interrupted silk sutures were found necessary. During the suturing the action of the heart became even more irregular and embarrassed, and the patient's condition gave rise to considerable anxiety, but after the finger had been removed and the sutures tied and a hypodermic injection of strychnine given the heart's action considerably improved. The pericardial sac was cleansed, a gauze drain was introduced, and the wound in the pericardium and intercostal muscles was closed. The lower wound in the fifth interspace was then enlarged. Both the pleura and pericardium had been opened, producing pneumo-hæmothorax and pneumo-hæmopericardium. The wounds of the pericardium and pleura were cleansed, a gauze drain was introduced, and sutures were inserted. The cutaneous incisions were closed and dressings were applied.

After the operation, which lasted three-quarters of an hour, the patient's condition was very bad. The heart's action was feeble and irregular, and the pulse was barely perceptible at the wrist. He was removed to bed, strychnine was given hypodermically, and a saline enema containing brandy was administered. In an hour he had greatly improved, the pulse being 100 and much steadier and stronger. Four hours after operation it was 80 and fairly good. Recovery followed, and healing took place by first intention.—*Lancet*, Nov. 5, p. 1278.

Vaccination under Red Light.

Mr. H. Goldman vaccinated 40 children with animal lymph in a photographic dark room, illuminated by a red lamp. The insertions, when dry, were covered with a thick, red bandage, under which, as experiments showed, sensitized photographic paper remained unaltered. In 20 children vaccination was performed on both arms. In 10 of these vaccination and the subsequent treatment were performed under red light on one arm and under the usual conditions of exposure on the other. The red bandage was not touched for 3 weeks. In 5 children the red bandage was removed after 2 days. In another 5 the red bandage was not applied until vesicles had appeared. In other cases the red bandage was removed for comparative purposes when the pustules on the untreated arms had reached their acme. The results were as follows:—

The usual signs of vaccination—severe pustulation, red areolæ, swelling of lymphatic glands, pyrexia, restlessness and insomnia—were present in every case in which the insertions were immediately exposed to daylight. But in the cases treated from the first by red light there were no inflammatory symptoms and the pustules arose from normal skin. Those insertions, which were exposed to daylight for 2 or 3 days before being covered with a red bandage, also ran a mild course. Those insertions, however, in which the red bandage was removed after 2 or 3 days, or in which it was not applied until the pustules had reached their acme, ran a course practically indistinguishable from the untreated cases.—*Wien. Klin. Woch.*, Sept. 8, p. 971.

Fracture of the Base of the Skull from an Injury received through the Mouth,

BY

W. THYNE, M. D.

A boy, aged 5, was admitted to hospital unconscious. There was twitching of the

right side of the face. The pupils were equal, dilated, and fixed, with conjugate deviation to the left. There was no optic neuritis. There was persistent vomiting. Large tracheal rales were present. The pulse was 140 and the temperature was 105.8. The history was as follows. He was standing on a snow heap holding a piece of gas piping which contained a steel umbrella rib projecting some inches. The steel rib was inserted into his mouth to imitate the bagpipes. He fell and caused the umbrella rib to penetrate the posterior wall of the pharynx. It was extracted by a bystander. There was slight oozing of blood. He appeared to recover and ate some bread-and-dripping. On the afternoon of the following day he became suddenly worse and was admitted to the hospital in the evening. At 11.30 p.m. the temperature was 107.6°; at 12.30 a.m., 107°; and at 1.30 a.m. 105.2°; after which it gradually fell to 104.8° at 12.30 p.m. on Feb. 18. It began to rise again and reached 107° at 8.30 p.m., when he died.

NECROPSY.—There were congestion of the vessels of the meninges and brain, suppurative meningitis of the base, and lacerations of the right cerebellar hemisphere adjacent to a fracture in the right posterior fossa, external to the posterior condyloid foramen. A probe was easily passed through the puncture into the mouth. The umbrella rib appeared to have passed between the occiput and transverse process of the atlas.—*Lancet*, Nov. 26, p. 1496.

Traumatic Cerebral Hæmorrhage without Fracture or External Sign of Injury,

BY

C. MANSELL MOULLIN, F.R.C.S.

On May 23, at 6.15 p.m., a man, aged 26, was admitted to the London Hospital in a state of profound concussion. He had been thrown from a motor car after collision with

an omnibus and was supposed to have struck the pavement with his head. No external sign of injury could be found. He was completely unconscious, having no corneal reflex; the pupils were equal and from 4 to 5 mm. in diameter. The pulse was 60 and slightly intermittent. Whilst the scalp was being examined he raised the hands to the back of the head. At 7.50 he had spoken, complained of pain in the head, and had vomited. The pupils reacted to light and were rather smaller than on admission. The knee-jerks were equal; the plantar reflexes were brisk. He was very drowsy, rather irritable and snored. The respirations were 18 and regular. The pulse was 60 and slightly irregular. Later he became rather noisy and more restless. The pulse rose to 80 and became somewhat bounding. The temperature was subnormal.

24th.—He was more restless, noisy, and irritable. He lay on his side and resented interference. The temperature rose to 101.4°. Vomiting occurred once.

25th and 26th.—The temperature was about 102°. The left pupil was perhaps a little larger than the right. There was no paralysis or rigidity. The left knee-jerk was just obtained.

27th.—An ecchymosis was observed about the inner angle of the right eye involving the conjunctiva. He became drowsy and had incontinence of urine. Vomiting occurred once.

28th.—At 6.15 a.m. a fit occurred and was followed by others at intervals of 15 minutes. The fifth fit began with twitching of the left side of the face, then the left arm and leg were involved. The twitching in leg and arm stopped and then the upper portion of the face, and the fit ended with twitching of the lips. The left hand was clenched. In the sixth fit, which occurred at 7.16, the same sequence was observed. Between the fits he was conscious. After the last fit there was again incontinence of urine.

29th.—Two similar fits occurred at about 10 a.m., and were followed by paresis of the left side of the face and paralysis of the left arm and leg. The deep reflexes were not increased but were perhaps even slightly diminished. At 2 p.m. he was trephined over the right facial area. No fracture was found and there was no extra-dural hæmorrhage, but on incising the dura mater a considerable clot was found below, and in front of, the trephine hole. The opening was therefore enlarged downwards and forwards. The bleeding was found to proceed from a point or points deeply situated, which could not be controlled with pressure forceps. Accordingly, gauze plugging was used, 2 tubes were inserted, and the scalp was sewn up around them. This checked the bleeding. On the 30th the tubes were removed, and the gauze cautiously (with anaesthesia) during the next few days, which were uneventful, paralysis still remaining complete. Headache was much complained of. On June 4 the paralysis was less and the headache disappeared. The left knee-jerk was absent; the right was just obtained. On the 15th there was good movement in the leg. The left knee-jerk was obtained for the first time and subsequently became exaggerated. On the 19th the facial paralysis was noted as diminishing and movement was beginning to return in the arms. Afterwards improvement was slow but uninterrupted.

Treatment throughout consisted of the application of cold to the head, purgation with calomel and croton oil when necessary, occasional administration of phenacetin and caffeine or morphine hypodermically when the headache was troublesome, early massage, and careful nursing.

The points of interest are: (1) serious damage to intracranial vessels as the result of an injury which left no external mark; (2) delay in the appearance of grave symptoms; and (3) the extent of recovery after the severe manipulation of cerebral substance necessitated.

by the operative procedures.—*Lancet*, Nov. 26, p. 1495.

OBSTETRICS AND GYNÆCOLOGY.

The Treatment of Puerperal Eclampsia by Thyroidin,

BY

OLIPHANT NICHOLSON.

In the June (1904) number of the *Annales Medico Chirurgicales du Centre*, Dr. Leon Cerf, of Angers, published a critical review dealing with the use of thyroid substance, both as a prophylactic measure in cases of impending eclampsia, and also as a remedy after convulsions have occurred. He concluded his review by expressing the hope that his colleagues would endeavour to study more fully the whole question of the relations of the thyroid gland to the pregnant state. Dr. Gomot now records (in the same journal dated January 15th 1905) an interesting case of eclampsia in which thyroid was administered.

On September 16th, 1904, he was called to a primipara, thirty-five years of age, and 7½ months pregnant. She complained of violent headache, had continual nausea, and was very drowsy. Her face was pale and the eyes were puffy. The legs were also much swollen, and the oedema extended as far as the thighs. The urine, which had been scanty for some days, became solid when it was boiled. The patient was put on an absolute milk diet, and diuretics were ordered. Next day (September 17th), eclamptic fits, as anticipated, came on. They were so violent and frequent that chloroform had to be given, and this was followed later by chloral, in an enema, every 2 hours. The quantity of albumen in the urine at this time was 12 grammes per litre. All that day the condition was very grave; the temperature was between

102° and 104°, and the pulse 115 per minute. The foetal heart sounds were still perceptible, but very weak.

On September 18th an enema of warm water was given, after which the patient became more conscious and could swallow a little liquid. Eight tablets of thyroidin (Bouty) were given during the next 24 hours, and the same dose was repeated on the following day; then six tablets were given daily. The quantity of albumen in the urine was carefully estimated while this treatment was being carried out.

On September 19th the albumen had diminished to 8 grammes per litre, and the patient's sight, which had been lost on the first day of the attack, returned. The foetus was still alive. The cervix showed no signs of commencing dilatation. On September 20th the albumen was down to 5 grammes per litre, headache was much better, and the quantity of urine was very greatly increased. The skin, previously dry, now became moist, and the temperature was normal. On October 1st the quantity of albumen in the urine had fallen to 2 grammes per litre, and at this it remained, in spite of the combination of milk diet and thyroid, up to the day of delivery, on October 15th. At the time of her confinement, the patient was in good general condition, a result, Gomot believes, of the thyroid medication, and the labour was normal. He mentions the interesting fact, already observed in a case previously recorded, that the actual labour was almost painless. The puerperium was quite normal. The child, which was born alive, weighed only 700 grammes, but has since thriven very well.

Gomot thinks that this case demonstrates the beneficial effects of thyroidin, for in spite of the very severe eclamptic fits, it was not necessary to terminate the pregnancy, and a living child was born a month later.—*Journal of Obstetrics and Gynaecology*.

On the Duration of Pregnancy in the Human Subject,

BY

BLAU AND CRISTOFOLETTI.

Von Winckel has recently re-opened the question of the duration of pregnancy, especially with regard to cases in which the child is unusually heavy and large. He takes out the cases in which such children occurred and reckons in them the duration of pregnancy, and compares the figures so obtained with the average duration in all cases. Von Winckel takes 4,000 grammes weight and 50 c. m. length to be an unusually heavy child, and out of 30,000 births he found 10,007 such children. By comparing the duration of pregnancy in these cases with the average duration of all, he comes to the conclusion that out of every 233 births in his series *one* unusually heavy child had a pregnancy duration of over 302 days. Von Winckel comes to the following conclusions:—Prolongation of pregnancy can no longer be doubted, as the pregnancy duration in unusually heavy children shows; the frequency of the latter in great lying-in charities is about 3.15 per cent., and of these 14.5 per cent., or 1 in 233 births, have an intra-uterine life of over 302 days; the frequency of all delayed births is about 2.8 per cent.; the lower duration limit of such heavy children is 240 days, the upper 336 days. To test the correctness of these figures the authors investigated the material in the clinics of Schauta and Chrobak from 1892—1901. In order to more completely compare the cases the authors have divided the children into three groups, *viz.*: those with a weight of 2,800—3,500 grammes, those of 3,500—4,000 grammes, and those of 4,000 grammes, and upwards. Out of 68,032 births there were 1,778 children of 4,000 grammes and upwards. Out of these cases there were 1,031 in which the pregnancy duration, counted from the first day of the last period, could be calculated; and in 150 this was over 300 days, and in 135 over 302 days; or 14.5 per

cent. over 300 days, and 13 per cent. over 302 days. These figures bear out v. Winckel, whose percentages were 16.3 per cent. with a duration of over 300 days, and 14.5 per cent. over 302 days. The less heavy children in the authors' statistics also bear out the statements to some extent, as there were 6.2 per cent. delayed births among the first group, and 9.3 per cent. among the second. Thus it can be seen that there is an increasing percentage of delayed births as one reckons, according to the weight of the infant. It is open to question whether the method of reckoning the pregnancy duration from the last menstrual period is sufficiently reliable for statistics of this kind, but it must be said that taking the date of cohabitation is equally open to question, as it is well known that cohabitation and conception are not by any means simultaneous. However one may criticise these statistics, it is quite clear that from a medico-legal point of view they are extremely important, and point to the possibility of the legitimacy of a child born even 336 days after regular cohabitation, especially if it was unusually heavy and large.—THOMAS G. STEVENS.—*Journal of Obstetrics and Gynaecology*.

The Relations between Epilepsy and Menstruation,

BY

MAURICE MAGUIN.

(L'Echo Medical du Nord,

December 25th, 1904.)

That there is some relationship between the function of menstruation and the occurrence of epileptic fits has been known for a long time, but there are few observations which show such an intimate connection between the two states as to prove that they have made their first appearance simultaneously, and that thereafter every menstruation has been ushered in with epileptic seizures. This is the point which makes the following case of interest:—

The patient, a single woman, 31 years of age, had always been healthy. She had no fits during infancy, but when five years old had violent fits of temper. At these times she developed a peculiar convulsive cough, in all respects resembling whooping cough. When 17 years old she had a great fright, and after that the first epileptic fit occurred. It was noted that she was then, for the first time, menstruating. Since then the fits always occurred at the menstrual periods. When 20 years old she became pregnant. The last periods before this were, as usual, accompanied by fits, but afterwards there was a complete cessation of the attacks, and throughout the whole course of pregnancy no fits occurred. The labour was normal and the child, a female, is now ten years old, and healthy. On the re-appearance of menstruation the fits returned, and afterwards each menstrual period came on with epileptic seizures, as was the case before pregnancy occurred. The seizures were typically epileptic in character, and were followed by sleep, and then mental hebetude remained for two or three days. Sometimes there was only a single fit, but generally there were two or three, and there was no micturition or weeping afterwards or other evidences which might suggest that the attacks were hysterical in origin.

The striking point in this case is the very intimate connection between the epileptic attacks and the menstrual periods. Before the establishment of menstruation the patient during her fits of violent anger, had a convulsive cough, which Maguin is disposed to regard as a form of masked epilepsy; no typical seizures occurred before the first menstrual period. The epileptic crises stopped entirely during pregnancy, and again re-appeared at each menstruation—in this case they invariably accompanied menstruation. Hence the fits made their appearance in a manner as mathematical as the occurrence of the function of menstruation; and, as the author puts it, may be looked upon as

a "cerebral discharge" accompanying the normal "genital discharge" of menstruation.—OLIPHANT NICHOLSON.—*Journal of Obstetrics and Gynaecology*.

Three Cases of Post-Operative Vomiting and the Technic of some Mechanical Means of Treatment.

BY

RICHARD F. CHASE.

(Annals of Gynaecology and Pediatrics, December, 1904. Vol. XVII. No. 12.)

CASE I. Vomited from the completion of a double salpingo-oophorectomy till the evening of the fifth day. On the afternoon of the fifth day a nutrient enema was given, some of which escaped by the abdominal wound, the result of a tear presumably in the colon or rectum. By the fifth day the patient appeared to be dying, the vomit being of a faecal nature. Several ounces of faecal matter were aspirated from the stomach, which was then thoroughly washed out and 12 ounces of salt solution left in, and from this time her recovery was uneventful.

CASE II. The vomiting came on after a hysterectomy and was due to a twist in the intestine just above the ileo-caecal valve, which was relieved by a secondary abdominal section four days later. Vomiting continued more or less after this for five days, complicated with delirium. She was treated by aspiration of stomach contents, lavage and saline solution, and recovered.

CASE III. Three days after laparotomy had uncontrollable vomiting of a faecal nature set in. Aspiration, lavage and salt solution doing no good, the abdomen was opened, an obstruction found and relieved, but the patient died whilst under the anaesthetic.

In all three cases many of the various remedies for vomiting had been tried by the mouth and rectum, but all without success.

In Case No. I lavage and introduction of salt solution at once cured the patient.

In Case No. II the result was not so brilliant, and this was due, the author thinks, to his not having used salt solution from the first.

In Case No. III vomiting stopped in five hours after the introduction of salt solution.

The author thinks the salt solution acts as a stimulant to the patient generally, and also to the intestinal wall, since it appeared to aid evacuation of the bowels. Another method of treatment in these cases is drawn attention to, that of high enemata and inflation of the colon, the latter treatment being easily carried out with a rectal tube to which an inflation tube is attached.

The author's method of giving colon injections is as follows:—Patient on right side, legs moderately flexed. Rectum is evacuated; a 30 in. stiff colon tube is anointed with olive oil, the tube is then passed till a resistance is met, a bulb of water is then gently injected. This clears and distends the gut for the passage of the tube and is repeated if another obstruction is met. When the tube has passed 24 in. its distal extremity is located by means of the stethoscope; by listening for the maximum intensity of the gurgle produced by the injection of a bulb of air or water it is usually found in the vicinity of the splenic flexure of the colon. A sufficient enema may be given with a quart or less of fluid. This method obviates the danger of rupture of the colon arising from the use of large quantities of fluid. The same method may be employed in the administration of nutrient enemata, and it possesses these advantages: (1) larger enemata, 8 to 16 ounces, may be given; (2) better absorption occurs.—COMYNS BERKELEY.—*Journal of Obstetrics and Gynecology*.

Post-operative Anuria,

BY

GIUSEPPE BETAGH.

(*Annals of Gynecology and Pediatrics*,
December 1904, Vol. XVII, No. 12.)

The author describes a case of anuria after a vaginal hysterectomy performed by Professor G. D'Urso, ventures an explanation of its cause and describes the details of an experimental research on a cadaver undertaken with a view to support his theory.

The utero-vesical and Douglas's pouch having been opened the right broad ligament was seized by two clamps from below upward and then divide, thus freeing the uterus on this side. Owing to bleeding during this part of the operation it was considered necessary to hurry and so the uterus was inverted anteriorly, the left broad ligament seized with clamps from above downwards, and the uterus removed.

In the afternoon, on passage of the catheter, no urine was found in the bladder. In the evening the same result was obtained. The general condition remained excellent but lumbar pains were complained of, especially on the left side. Repeated catheterisations failing to give any results the clamps were removed after 30 hours instead of—as was the custom—forty-eight. As soon as the clamps were removed the urine began to flow through the catheter in drops and the lumbar pains disappeared. The patient quickly recovered without any other bad symptoms.

What was the cause of the anuria? There were no operative wounds in the bladder or ureter, neither could the ureters have been caught in the clamps, since thirty hours, compression by Klemmes's clamps must have caused necrosis of the ureteral wall with a resulting uretero-vaginal fistula, and yet the anuria must have been due to the application of the clamps, as it was at once cured on their removal.

The author considers that the cause was mechanical and due to indirect compression, occlusion, or torsion of the left ureter, the right kidney failing to secrete owing to a reflex disturbance. This mechanical obstruction to the left ureter was due to the method in which the clamps were applied, since on this side they were applied from above downwards, so that when the uterus was removed they fell over and caused a twisting of the left broad ligament, whereas on the right side the clamps being applied from below upwards the right broad ligament was not twisted.—COMYNS BERKELEY.—*Journal of Obstetrics and Gynecology*.

Hydrocephalic Foetus Delivered by Spinal Tapping,

BY

J. W. BALLANTYNE, M.D., F.R.C.P., E.

A 4-para was brought to hospital on August 15, with a baby born as far as the shoulders but with the head still above the pelvic brim. During the pregnancy the patient had complained greatly of pain in the left side of the abdomen, which had prevented her from sleeping, and had noticed that the abdomen was bigger than in the previous pregnancies. Labour commenced on the evening of August 14. In the afternoon of the 15th the os was fully dilated and a transverse presentation was diagnosed. On account of the large size of the abdomen twins were suspected. At 7 p.m. the accoucheur ruptured the membranes, performed version, and brought down the feet. The body was also brought down and the arms with considerable exertion, but no efforts could extract the head. Attempts were twice made to apply the forceps without success.

She was in a state of collapse: the pulse was 140 and thready, the lips and face were pale, the nose was pinched, and the eyes were hollow. The uterus was well contracted and as large as if it contained a mature

foetus. In the upper part of the uterine tumour was a soft area which the writer thought was blood clot above the head; in the lower part he thought he detected a crackling sensation such as is given by a hydrocephalic head. The child was lying transversely in the pelvic cavity with the back to the right; the cord was not pulsating; well-ossified occipital bone could be felt and beyond that what appeared to be membrane. The writer diagnosed obstruction due to the large size of the head. Naturally he thought first of hydrocephalus, but he could not exclude rarer conditions, such as meningocele, encephalocele, cranial or facial teratoma, or dicephalus. He decided to treat the case as if it was one of hydrocephalus. Further traction on the trunk was inadvisable, for it had been practised for 2 hours until the attachment to the head was weakened. To tap the head seemed the best treatment, but perforating the occipital bone would involve manipulations which would render the state of the patient still more dangerous. Then Tarnier's operation of tapping the spinal canal in cases of retained hydrocephalic head occurred to him.

By gentle manipulation the infant's body was brought round so that the occiput lay above the symphysis pubis and the back was in the middle line anteriorly. Urine had been drawn off by the catheter, and the patient was under chloroform, but not deeply. A transverse incision was made over the space between the sixth and seventh dorsal vertebrae. The spinal canal was cut into but no fluid escaped. A silver catheter was insinuated into the spinal canal, the back of the infant being bent at the same time so as to make the spinal curves coincide with those of the catheter. It was calculated that the tip of the instrument was within the cranium, but still no fluid issued. The catheter was then turned so as to make the point press forward in the cranial cavity. Some resistance was overcome, and then clear fluid began to flow freely. When

36 oz. had been drawn off the child was easily delivered. Recovery followed. The circumference of the head was $21\frac{1}{2}$ in.

I. G. Stone has recently reported a case of spinal tapping in which he had only a soft rubber catheter. This he stiffened by placing a uterine sound within it and thus passed it up into the cranium (*Med. News*, 1897, lxx., 302). In a case recorded by Oui the manoeuvre failed, because there was a fracture of the cervical spine with separation. The advantages of the operation are obvious—operating on external and visible parts, only ordinary instruments are required, and the operation is easy. It is by no means easy or safe to perforate a hydrocephalic head behind the ear or through the occiput when prolonged traction has already been made upon the trunk, and the forceps has perhaps been thrust once or twice into the uterus.—*Brit. Med. Jour.*, Dec. 10, p. 1567.

Treatment of Prolapse of the Cord,

BY

L. WOODRUFF.

L. Woodruff has found the following method effectual if resorted to early—twisting the loop of cord upon itself, thus making a "rope" and pushing it up within the cervix out of the way of compression. It is surprising with what facility the cord, when twisted, can be replaced, and with the fingers kept above the cervix until the head descends into the pelvis.

The writer saw this method suggested in a medical journal many years ago, but it does not seem to be mentioned in works on obstetrics. In a practice extending over more than half a century he has found all other methods disappointing.—*New York Med. Jour.*, Nov. 19, p. 1001.

THERAPEUTICS.

Bread-Substitutes in Diabetes,

BY

R. T. WILLIAMSON, M.D., F.R.C.P.

In the treatment of diabetes one of the greatest difficulties is to find a satisfactory substitute for bread. But the difficulty is much less than it was a few years ago, as a number of preparations of vegetable and milk albumins can be obtained practically free from carbohydrates. Nevertheless many of the bread-substitutes now recommended by practitioners are loaded with carbohydrates. Before recommending any bread-substitute always test it for starch with a watery solution of iodine and iodide of potassium (iodine 1, potassium iodide 1, water 100). A drop on ordinary white bread gives a deep blue-black colour. (The amount of starch in white bread is about 49 per cent.) Many diabetic bread-substitutes contain so much starch that they also become blue-black with the iodine solution. Substitutes which contain half the amount of starch of ordinary bread are useless. If it is desirable to allow a little carbohydrate it is better to give ordinary bread or potatoes in addition to diabetic bread. It is necessary to test some bread-substitutes (those containing almond or cocoa-nut flour) for sugar. This can be easily done by the fermentation test, using 2 inverted test tubes, as in testing urine. In one is placed yeast and water alone, in the other yeast and water and diabetic bread. After the tubes have been kept in a warm place for 24 hours, if the one in which the bread-substitute has been inserted contains more gas than the other, the presence of sugar is indicated. The bread should be carefully broken up and well soaked in the water before the test is commenced. This method of performing the fermentation test has been previously described by the writer (*Review*, Vol. VII., p. 30). A number of bread-substitutes can now be obtained which give no reaction or only the faintest when tested for starch and

sugar. They are prepared from vegetable albumins, nuts, and milk albumins. The following are the most useful:—

I. Vegetable Albumins.

1. *Roborat* is a vegetable albumin obtained from wheat. In addition to albumin it contains fat and a little carbohydrate. Loewy and Pickardt have pointed out its value in the dietetic treatment of various diseases, and Prof. Ebstein, of Gottingen, has recommended it, in preference to other vegetable albumins, in the treatment of diabetes mellitus. The writer has had it made into small rolls in the following manner:—

Roborat, 4 oz.; butter, 1 oz.; 1 egg; $\frac{1}{4}$ oz. of German yeast; a small pinch of salt. First mix 2 tablespoonfuls of luke-warm water with the German yeast; then add the *roborat* and a little more water, and mix into a paste. Allow this to stand in a warm place for 5 minutes. During this time beat up 1 egg in 2 or 3 tablespoonfuls of water or milk, then add this to the *roborat* paste with the butter. Mix all well together and add a little more water if necessary. Place the mixture in small tins and bake for 20 minutes. The small rolls are soft; the taste is very satisfactory; but the bread contains a little starch. (Instead of using 4 oz. of *roborat*, a mixture of 2 oz. of protene and 2 oz. *roborat* may be employed.) *Roborat* may also be used in other ways in the diet of diabetic patients. In spite of the small amount of starch which *roborat* bread contains, it causes a marked diminution of the sugar excretion, and the taste is satisfactory, so that some patients like it as well as white bread. In a case of diabetes mellitus, in which the sugar excretion was practically stationary, the average daily excretion of sugar was as follows:—

Restricted diet + 8 oz. of white bread	
for 4 days	1,946 gr.
Same restricted diet + 8 oz. of <i>roborat</i>	
bread for 4 days	912 „
Same restricted diet + 8 oz. of white	
bread for 4 days	1,692 „

31

On account of the satisfactory taste, *roborat* bread may be recommended, in spite of its small amount of starch, when a restricted but not an absolutely rigid diet is desirable. A satisfactory bread, composed of almonds and *roborat* is also prepared (by F. W. Gumpert, König-strasse, 22-24, Berlin, C.) which contains only a little starch.

2. *Aleuronat* is a vegetable albuminous substance, which contains only a small percentage of carbohydrates. It has been recommended by Prof. Ebstein for the preparation of diabetic bread-substitutes. By mixing *aleuronat* and desiccated cocoa-nut powder, cakes can be easily prepared without the addition of any starch-containing material. The proportions are as follows:—Two oz. of desiccated cocoa-nut powder are mixed into a paste with a little German yeast and water. The mixture is kept in a warm place for about 20 minutes. Then 2 oz. of *aleuronat* are added and afterwards 1 egg (beaten up), water, and a little saccharine solution. The whole is well mixed, divided into cakes, and baked. These cakes give no reaction for starch or sugar. When freshly prepared they are palatable and most diabetic patients like them. They should be well buttered. Many patients like them best when they have been warmed before the fire for a few minutes. They should be freshly prepared every day or two, as after several days the taste becomes unpleasant.

During 6 days a patient's diet contained 14 oz. of ordinary white bread daily; the average daily sugar excretion was 4,143 gr. and the amount of urine 224 oz. The bread was then replaced by 14 oz. of *aleuronat* and cocoa-nut cakes daily for five days. The average daily sugar excretion was 2,150 gr. and the amount of urine 144 oz. The *aleuronat* and cocoa-nut cakes were then replaced by 14 oz. of white bread for 4 days. The sugar excreted averaged 4,585 gr. daily, and the amount of urine 221 oz.

3. *Gluten bread.* Many specimens contain so much starch that they are practically useless. They are coloured deep blue-black with a drop of iodine solution. Hence it is always important to test a sample with iodine. A few specimens are satisfactory, and contain only 2 or 2.5 per cent. of starch; with iodine solution they give only the faintest blue tint. The reliable specimens may be allowed to those diabetic patients who like the taste of the bread. A few patients like the taste of gluten bread, but most object to it, especially after using the bread for a short time.

II. BREAD-SUBSTITUTES PREPARED FROM NUTS.

Almond flour and desiccated cocoa-nut powder can be used for the preparation of diabetic biscuits. Both contain a little sugar, but this can be practically destroyed by the action of yeast.

Almond cakes. Four oz. of almond flour are mixed with a little water and German yeast; the mixture is allowed to stand in a warm place for about 20 minutes. (The yeast destroys the sugar.) Then an egg beaten up, and a little water (or a little cream and water) are added and the whole made into a paste. This is divided into cakes and baked for 15 to 30 minutes.

Cocoa-nut cakes are prepared in the same way as almond cakes, desiccated cocoa-nut powder being used.

Both almond and cocoa-nut cakes sometimes give rise to dyspepsia, owing to the large amount of fat they contain, but the dyspeptic symptoms may be prevented by taking a little alcohol (in some form) after eating the cakes.

III. Milk Albumins.

1. *Plasmon* contains 82 per cent. of proteids and is free from carbohydrates. Biscuits, free from starch and sugar, are supplied by the Plasmon Co. They contain a little almond flour and gluten flour in addition to plasmon. Some patients like them better than other

forms of diabetic bread, but the samples the writer has seen were much too hard. Plasmon can also be made into biscuits in the following manner: four oz. of plasmon, a little milk and 1 egg (beaten up). Mix all together into a paste. Divide into cobs and bake for 10 minutes, or longer. Plasmon may be dissolved in warm water or milk and used in this way as an article of diet by diabetic patients.

2. *Protene* can be made into small cobs of rolls as follows: four oz. of No. 2 protene (can be obtained from the Protene Co., 36, Welbeck Street, London, W.), 2 oz. of butter, 2 eggs. Beat all together thoroughly. Divide so as to form 8 small cobs. Bake in an oven. This bread is practically free from starch and sugar. Bread can also be obtained ready-made from the Protene Co., as well as various forms of protene biscuits.

The writer obtained the following results:—
Av. dly.
exrn. of agr.

Rigid diabetic diet + 8 oz. of white bread daily for 7 days ..	1,845 gr.
Same rigid diabetic diet + 8 oz. of protene bread in place of the white for 7 days ..	694 "
Same rigid diabetic diet + 8 oz. of white bread in place of protene bread, for 7 days ..	1,730 "

3. *Casoid Bread and Casoid Meal Bread* can be obtained from Callard & Co., Regent Street, London, W. These preparations are practically free from starch and sugar, and are composed chiefly of milk albumin.

By the use of casoid meal bread, in place of white bread, in a case of diabetes mellitus for 5 days, the daily sugar excretion diminished from 1,710 to 360 gr. On again giving white bread, in place of casoid meal bread, for 5 days, the sugar excretion rose to 1,400 gr.

Biscuits, composed chiefly of the same milk albumin, can also be obtained practi-

cally free from starch and sugar. (To these the names of Kalari biscuits and Pro-lacto biscuits have been given.) These biscuits are much used by some diabetic patients, who like them best with cheese and butter.

These bread-substitutes, except the casoid preparations, can be prepared at the patient's home, and if made by one experienced in cooking they are often excellent. For several reasons home-made preparations are to be preferred. Some of the biscuits sold are very hard, and, as diabetic patients have frequently carious teeth, are almost useless. Home-made preparations are usually quite satisfactory in this respect. It is well to allow the patient to try a number of the preparations, since it is remarkable what differences of opinion there are as to the taste of the bread-substitutes. He may be allowed to choose the one preparation or the preparations which he likes most. It is best to commence with the protene or casoid bread. After the patient has used one preparation for a time, and become tired of the taste, he may change to another.—*Medical Chronicle, Jan., p. 228.*

Röntgeno-Therapy.

BY

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Having treated some hundreds of cases with the X-ray, both for myself and other physicians, I feel at liberty to approach the subject from a practical point of view.

The X-ray, like every other therapeutic agent, has its indications, dosage, and manner of application, or administration.

To find the diseases or conditions especially susceptible to the influence of the

"rays," have taken much experimentation, its possibilities in many diseases being, as yet, unknown. I champion the effectiveness of the "Roentgen rays," not only in many superficial lesions, such as epithelioma, lupus, rodent ulcer, eczema, seborrhea, acne, acne rosacea, hyperhidrosis, hypertrichosis, angioma verucca, naevus, sycosis, favus, lentigo, and many other diseases of the skin and appendages, but also in many conditions which are deep seated in origin, such as carcinoma of the breast, stomach, and liver, catarrhal inflammation of the uterus, tubes, and ovaries, stomach, and liver, splenic leukemia, neuralgia, especially sciatic neuralgia, many tubercular infections, adhesions of the pleura and appendix, Hodgkin's disease, deep-seated ulcers, such as ulcer of stomach.

To my mind it is the *failure* of the physicians (who are decrying the use of the X-ray in these affections) to recognize the correct dosage of the light, for I find that the majority of patients coming to me, who have previously tried the X-ray without effect, show conclusively that the X-rayist who formerly had these cases was too conservative, or disregarded, or was ignorant (in giving his treatment) of: (1) idiosyncrasy, (2) accumulative action, (3) limitation of area wished exposed, (4) condition of the tube vacuum, (5) the so-called reaction, (6) time and distance of exposition, (7) application of suitable dressing.

Idiosyncrasy.—A reaction is produced in some patients in five sittings, which the same tube, same distance, same time, failed to bring about in eighteen treatments. Blondes get reaction quicker than brunettes.

Accumulative Action.—This usually is avoided by carefully noting the first symptoms of reaction, and then diminishing the time and increasing the distance, so as to get the desired effect, or by withdrawing the treatment entirely until the reaction has subsided.

Limitation of Area Wished Exposed.—That part of the surface which might be influenced by the rays, and not wished exposed, should be covered with sheet lead, which is pliable, easily cut into masks of any shape and size, and, being not over a few lines in thickness, is not disagreeably heavy.

Condition of the Tube Vacuum.—It is necessary to remember in regard to this that superficial lesions require a soft tube (low vacuum), while the deeper-seated conditions require a hard tube (high vacuum), graduating this to medium soft, medium hard, as the condition demands.

Reaction.—This is characterized by heat, redness, swelling, and pain in the proportion in which it is produced; its pathology seems to be identical with the ordinary "frost bite," and is a very valuable symptom to the X-rayist.

What beginning salivation is to the physician giving his patient mercurials, and what lacrymation and coryza is to the doctor in giving the iodides, so is the reaction to the X-rayist.

In looks it is the same as "sunburn," and, as far as the patient is concerned, feels the same, unless pushed too far, then it is that language fails description.

The time and distance of exposure varies with the particular pathological condition to be treated; for example, for removal of superfluous hair, the time of each seance is at first ten minutes, the distance three to five inches, gradually shortening the time, and increasing the distance as the symptoms of reaction make their appearance.

For deep-seated diseases, like chronic inflammation, or carcinoma of the stomach, the distance should be ten inches, time ten minutes, fifteen minutes or twenty-five minutes to the seance, as the X-rayist sees fit.

Suitable Dressing.—The best dressing I have found has been none at all. Vaseline gave me bad results, while mutton suet and other unguents are negative.

I am experimenting along this line at the present time.

The report of a few cases may be more convincing to those who think the X-ray "a fad," "a fake," or who are sceptical as to its ability to cure disease.

Case 1.—Epithelioma. Mrs. Morris H., age fifty, residence 1512, West Maple-street, Louisville, Ky.

Epithelioma situated near the hair line on back of neck, about the size of a silver half dollar; starting as a wart ten years previous, it became frequently ulcerated, due to the irritation caused by wearing standing collars; at length the growth breaking down, and taking on epitheliomatous characteristics, finally becoming so abhorrent to the patient that she sought me for treatment.

Two series of eighteen treatments, each time ten minutes, distance three inches, medium soft tube, brought about a cure, which, up to this time, almost a year since, has not reappeared.

Case 2.—Hypertrichosis. Miss Maggie Corchoran; residence, 1026 West Jefferson-street, Louisville, Ky. Previously treated by Dr. C. (an X-ray specialist in this city), without effect.

Three reactions, covering a period of six weeks, removed every hair from her face, which had been from three to five inches in length, and which gave her the appearance of "a bearded woman."

Case 3.—Acne. Mr. J. C. B., 2120 Magazine-street, Louisville, Ky. Acne over forehead, cheeks, and at corners of mouth. Then five minutes daily treatments; extra soft tube; distance four inches; produced a reaction, after which all disappeared.

Case 4.—Eczema. Baby S., 2427 Bank-Street, Louisville, Ky., Eczema involving entire face and neck, eyelids closed and matted together. A pencil point could not be placed upon a non-eczematous area. Twenty treatments of three minutes each, distance eight inches, sufficed to clear the skin of eczema.

Case 5.—Ovaritis. Mrs. B., Twentyeighth and Madison Streets, Louisville, Ky. Intense pain in ovaries, with usual train of symptoms following this condition. Thirty exposures, hard tube, fifteen minutes each, brought about a lasting cure.

Case 6.—Cattarrh of stomach. Mr. S. G., soda dispenser at T. P. Taylor's drug store, Third and Jefferson Streets, Louisville, Ky., relieved and cured, after thirty-three treatments with the hard tube; distance, ten inches; time, ten minutes, for each seance.

Why multiply cases?

I invite investigation, especially in regard to the deeper-seated diseases: splenic leukemia; valvular lesions of the heart, due to vegetations, which the X-ray will remove by absorption; cancer in any form, if treated early. Give the X-ray a place, and a high one in therapeutics. *The Medical Brief.*

Adrenalin in Gastro-intestinal Haemorrhage.

M. Schlesinger (*American Journal of the Medical Sciences*, July 1904), has treated with success two cases of gastro-intestinal haemorrhage by the internal administration of adrenalin.

The first patient was a hemophiliac with severe internal haemorrhage. Six minims of a 1:1000 solution given every hour caused a cessation of the bleeding. In twenty-four hours the patient took 7 drachms of the solution. After further administration of the adrenalin, in conjunction with gelatin, a drop

of blood obtained by puncture coagulated immediately.

The second patient had essential purpura with bleeding from various mucous membranes, including that of the stomach. The haemorrhage was stopped by the internal administration of adrenalin.

The author has employed the drug in various other forms of alimentary haemorrhage with invariable success. Hemoptysis is not influenced by this treatment. The internal administration of adrenalin has no effect upon blood-pressure.—*The Therapeutic Gazette.*

Adrenalin in Ocular Therapeutics.

Darier (quoted in the *American Journal of the Medical Sciences*, August, 1904) has found that as a means of diagnosis of beginning iritis adrenalin is very useful when there is hesitancy in instilling atropine. By means of it episcleritis may be differentiated easily from pustule of the limbus, and certain doubtful forms of conjunctivitis may be recognized as granular. From a therapeutic point of view adrenalin exaggerates the action upon the eye of various alkaloids; cocaine anesthetizes an inflamed eye without otherwise affecting the organ if adrenalin has been applied first. Combined with it cocaine will render great service in conjunctivitis, and lessen the pain of topical applications as well. It makes catheterization of the tear-duct unnecessary, for a simple injection does away with the stenotic action of the mucous membrane. When eserine or atropine fails in its usual action upon the pupil, a combination with adrenalin obviates the difficulty. It facilitates operations upon the conjunctiva because of the ischemia it produces, but after iridectomy its employment may be followed by haemorrhage into the anterior chamber. In corneal lesions, such as ulcerations, it should not be used, but in episcleritis it

produces excellent results.—*The Therapeutic Gazette*.

Adrenalin in Glaucoma.

Grandclement (quoted in the *American Journal of the Medical Sciences*, August 1904) reports an instance of severe and marked glaucoma cured by adrenalin. The treatment consisted in the instillation into the affected eye every half-hour for three consecutive days of a 1:5000 solution of adrenalin. The course and outcome of this case encourage the belief that it may be possible to cure the various forms of glaucoma by this simple means, doing away with the difficult and painful operation of iridectomy. Two points must be carefully noticed in employing this strong and dangerous vaso-constrictor: (1) The adrenalin should be instilled sufficiently long to stop momentarily the secretion of the intra-ocular fluids and to cause a perceptible diminution of the tension. (2) The production of a dangerous and irremediable hypertension should be avoided most carefully.—*The Therapeutic Gazette*.

OPHTHALMOLOGY.

Retinitis Punctata Albescens.

BY

DR. C. PASCHEFF, SOFIA, BULGARIA.

To the category of the extremely rare pathological alterations of the retina—retinitis circinata, retinitis striata, etc.,—which are not yet acknowledged by all oculists as separate clinical types, belongs also retinitis punctata albescens.

The first to draw attention to this new variety of retinitis was Mooren. In spite of the fact that the description of his case is insufficient, the impression which the retinal alterations—"the retina and chorioid seem as though they were pierced by a great quantity of small holes through which one can see the dull reflex of the sclera"—

brings clearly to the mind the clinical picture of retinitis punctata albescens, the subject of this paper.

One year after Mooren, our distinguished teacher, Prof. Gayet (France), published his case of retinitis punctata albescens, under the title: "On a Congenital Lesion of the Retina."¹ This case is considered in the present ophthalmic literature as the first well-described and true retinitis punctata albescens. The principal features of this case are the distribution of several hundreds of white spots over the whole eye-ground of both eyes, and principally about the region of the macula lutea and papilla nervi optici, situated behind the retinal blood-vessels and independently of them; night-blindness; concentric limitations of the fields of vision; as etiology—consanguinity.

Some years later, Prof. Fuchs² published a new similar case, observed in a boy twelve years of age, and endeavoured, with his well-known faculty of strict observation, to give to this kind of retinal changes a more definite form, capable of differentiating them from all other retinal inflammations with which they were very often confused, and thus to create a new typical affection of the retina. The principal features which he pointed out as characteristic of this type of retinitis are the above-mentioned white spots over the fundus of both eyes; that the affection is found generally in young individuals, and often in several members of the same family; concentric limitation of the visual fields; diminution of the central vision, and night-blindness existing from childhood. As to the etiology, he points out also to consanguinity.

1. A. Gayet. "D'une Lesion Congenitale de la Retine," *Arch. d'Ophthalmologie*, 1883, p. 231.

2. E. Fuchs. "Über zwei der Retinitis pigmentosa verwandte Krankheiten (Retinitis punctata albescens and atrophie gyrata chorioideae et retinae)," *Arch. für Augenheilkunde*, 1896, xxxii., p. 111.

Four years ago our friend Dr. Wustefeld,³ an ex-assistant Prof. of Pagenstecher, published another similar case which he had observed while voluntary assistant in the clinic of Prof. Mellinger (Basel), in a girl eight years of age. There were the same pathological fundus changes, night-blindness of long-standing, concentric limitation of the visual fields, especially by reduced light (Forster's Photometer—1/800) but unknown etiology.

Besides these three typical and similar cases we meet also in the literature of the subject those of Nettleship, observed in a young man of 21 years (Panas⁴); the others must be excluded from this group of retinitis, because they were accompanied by pigmented spots in the retina.

The case which, four years ago, we had the honour to observe in the Ophthalmic Hospital in Sofia (Bulgaria) by its clinical picture can be fully taken as a typical example of retinitis punctata albescens. It refers to a boy of 14 years old with the following history and present state:—

For the last 7 or 8 years he has suffered from night-blindness which is inconstant and appears indefinitely. Now he sees better in the evening than 5—6 years ago. He is the only member of the family and has never been ill. There is no consanguinity in the family, nor any congenital defects, but a great probability that the father has suffered from Lues. The patient is well-developed for his age, with moderately hypertrophied lymphatic glands in the neck.

Right Eye. The lacrymal organs, the palpebrae and the conjunctiva are normal; the eyeball of a normal tension; the cornea, anterior chamber, iris and pupil are also normal. The refractive media are perfectly

3. Dr. F. Wustefeld. "Zur Casuistik der Retinitis Punctata Albescens," *Zeitschrift f. Augenheilkunde*, B, iv., 1900, p. 110.

4. Panas. *Traite des Maladies des Yeux*. Vol. I.

transparent. The fundus presents the only and principal alterations.

Around the papilla, around the macula, and in the whole temporal region of the retina, are to be noticed several hundreds of small, quite separate, white spots, which lie in the deeper layers of the retina and paint the eye-ground as the stars do the celestial vault. Some of these spots are round and with clearly defined limits, others are oval, a little longer, and with faintly indefinite margins. They are scattered all over the fundus without any fixed direction, and independently of the blood-vessels, which pass over them and are quite normal. The retina has a normal aspect and presents no pigmentations, either around the mentioned spots or in the retinal empty spaces. The papilla is of a normal colour and appearance. Central vision 6/8 (Snellen), the refraction is emmetropic.

Left Eye. Here are found the same white spots in the fundus; they seem to be more numerous in the left half of the retina. The vision and refraction are the same as in the right eye. The examination of the *visual fields* gives a concentric diminution of them. The diminution is slight in degree and seems to be more manifest for white and for blue; it becomes more marked with the decrease of the light. Urine normal.

The patient was examined by the surgeon for venereal diseases attached to our hospital, and was found to suffer from Lues hereditaria, for which he was submitted to a mercurial treatment. For this purpose he remained in the section about one month and a half. When he left the hospital the night-blindness had almost disappeared, and many of the spots seemed to have lost their brilliancy and definite limits, which gave the impression that they were diminished in their number. The visual fields in the ordinary light were almost normal, but slightly diminished in a feeble light.

Here we shall mention, by the way, another similar case which we observed some time ago in the clinique of Professor Pagens-techer (Wiesbaden), where we had the honour to spend about one month and a half.

A girl of 18 years has presented herself on account of strabismus convergens. On examining the interior of the eyes we discovered that she suffered from retinitis punctata albescens. She complained also of night-blindness dating from childhood, but which seemed not to be of a great degree. The refraction in both eyes showed hypermetropia with *amblyopia ex anopsia* of the right eye. The etiology remained unknown.

These two cases which we have observed come to affirm, once more, the existence of retinitis punctata albescens as a *separate* disease of the retina, just as Professor Fuchs has described it in its principal features. That which distinguishes our first case from all the other cases described up to now, and which adds to it a special clinical interest is its etiology—the Lues. In regard to the pathological anatomy of this new kind of retinitis we know nothing positive.

Professor Gayet and Professor Fuchs localise the alterations in the pigmented retinal epithelium, which disappears in the region of the above-mentioned spots. In this way they consider them as of atrophic nature and identify the disease with retinitis pigmentosa. Professor Gayet bases his opinion upon the clinical picture which he observed in the sister of his patient, where both these forms of retinitis were present, and mixed. Dr. Wustefeld has observed the same thing in the brother of his patient.

Another hypothesis as to the anatomical nature of retinitis punctata albescens is that which admits an inflammation of the external retinal layers. In favour of this opinion speaks the only microscopical examination made of this retinitis by Wedl and Bock, who have found in the external retinal layers

small, round, separate, dispersed and empty spaces. According to them, this kind of retinitis is nothing else but an oedema of the retina.

In our case, taking into consideration its old-standing and clinical picture, we are more inclined to accept a congenital atrophic process of the pigmented retinal epithelium, than a fresh inflammatory process. In this regard we partake altogether the opinion of Professors Gayet and Fuchs.—*The Ophthalmic Review*.

DISEASES OF THE EAR.

In the *Clinical Journal* of October 19, 1904, Grant writes on this subject.

With regard to foreign bodies, the author reminds us not to believe in the presence of a foreign body until we have seen it; do not be guided by a probe, because the most fallacious feelings are produced by a probe in the ear. The author has touched thin masses of cerumen on the floor of the meatus, and they have been so hard that he has been almost convinced there was a sequestrum of bone or a stone of some sort inside the meatus. The mistake made with regard to foreign bodies is trying to take them out with forceps; of all instruments at our disposal for the purpose, a forceps is the most certain to fail. There is, it is true, a very fine pair made with detachable blades, which are introduced one above and one below the foreign body, but they do not often act well. When a foreign body is found in a child, the great thing is to give an anæsthetic. Of course, many foreign bodies will come out with syringing, but a great many will not. We must, however, be very careful in trying to remove the foreign body with an instrument, because if we fail to get it out we probably irritate the skin of the external meatus to such an extent that it swells up and makes the subsequent removal infinitely more difficult

than it was before. It is to be kept well in mind that the direction of growth of the skin of the membrane and external meatus is outward toward the meatus; just as the nail grows upward, so this skin grows in that direction (little cicatricial points on the membrana tympani have been seen to gradually work their way up oh to the roof of the meatus). This has the effect that sometimes a foreign body in the meatus that we have been unable to move has worked out to the orifice.

At the hospital the author has spent a great deal of time and trouble to extract a foreign body, and has told the mother to bring the child again in a week, ordering her to use some lead-water drops. The mother comes back in a week with the foreign body in her hand. When asked how it got out, the answer has been, "Oh, it was just at the opening, and I got it out with a hairpin." The fact is that there is this tendency to spontaneous extrusion, and if a foreign body is not likely to do harm—for instance, a bead or a little pebble—it is better to leave it alone, or at least not to be in too great a hurry to get it out, and allow the inflammation to subside. If you use an instrument for the removal of a foreign body, it should be a very fine one, and used under an anæsthetic. The author employs an instrument like an exaggerated crochet-hook with a very sharp point, and it should be put in an angular handle so that we may know which way the point is projecting. Another instrument which has also a very sharp hook serves for this purpose, and for other purposes as well; it can be coaxed beyond the foreign body, turned round, and the foreign body is gently rolled out by means of it.

The author gives in his paper a little hint which we may find very valuable. We all know the extreme difficulty of examining the interior of the ear of an infant or very young child. We must recollect that in the infant the tympanic membrane is more horizontal than it is in the adult, also that there

is no osseous meatus. The rule in examining the ear of a young child is to pull the auricle downward and backward. We all know how anxious we are when a child has the symptoms of meningitis to make out whether these are due to inflammation of the middle ear. We look into the child's ear and see the posterior wall; we may say that it is slightly congested, but we cannot say more than that. We may not realise that instead of pulling the auricle upward and backward, we should pull it downward and backward. We will then be surprised to find how good a view we get of the tympanic membrane—even in a very young infant—if this rule be followed.—*The Therapeutic Gazette*.

DISEASES OF THE THROAT.

BY

LAMBERT LACK, M.D., F.R.C.S.

The patients now shown exhibit various degrees and varieties of tubercular disease of the upper air passages.

(1) A typical example of lupus. The patient, a girl, aged 20, has suffered from this affection for twelve years. The skin of the nose and upper lip has been extensively involved. It was cured by the Finzen light, leaving great constriction of the anterior nares. The soft palate is scarred and partially adherent to the posterior wall of the pharynx, the epiglottis and arytenoids are destroyed, and the upper aperture of the larynx is recognisable only as a small round aperture about the size of a lead pencil, surrounded by firm scar tissue. The interior of the larynx cannot be seen. This case exhibits well the natural course of the disease in the upper air passages. Healing and extension take place side by side, progressing very slowly. When the patient is placed under favourable conditions, and especially when arsenic in increasing doses is given internally, arrest and healing ensues, leaving much scarring and distortion of the affected parts. In this patient the

superior aperture of the larynx was so small and caused so much difficulty in breathing that tracheotomy was necessary. An attempt will be made to dilate the larynx and to remove the tube.

(2) A case of tuberculosis of the larynx, apparently quiescent. This patient, a woman, aged about 40, has slight fibroid phthisis with tubercle bacilli in the sputum. There is a nodule on the posterior wall of the larynx the size of a horse-bean. There is no ulceration. The patient is hoarse, but has no other laryngeal symptoms. This tumour is undoubtedly tubercular, and should it at any time give rise to symptoms or show a disposition to spread, the best treatment would be to punch it out. In this way the local disease could be entirely removed.

(3) A woman, with ulceration of the left vocal cord. She has early pulmonary phthisis, and the affection of the larynx is undoubtedly tubercular. The disease produces complete aphonia, which is more marked than would be expected in simple chronic laryngitis of the same extent. The unilateral nature of the affection is also in favour of tubercle. Note also the marked anæmia of the larynx and of the soft palate—quite out of proportion to the general anæmia. The diagnosis is clinched by examination of the lungs and the finding of tubercle bacilli in the sputum.

Treatment.—Local measures should, I think be adopted. The ulceration is superficial, there is no deep tuberculous infiltration. I should recommend that the larynx be cocaineised and strong lactic acid rubbed in once or twice a week for three weeks. If this fails to effect a cure, the ulcer should be thoroughly scraped with a sharp curette, such as Her yng's, and when the bleeding has ceased chromic acid fused on the end of a probe should be applied; subsequently the larynx should be swabbed out twice a week with a 50 per cent. solution of lactic acid. This usually succeeds in effecting healing of the

ulcer, and the patient's general health is markedly improved by the removal of the local trouble, and by the restoration of the voice.

(4 and 5.) The next two cases are examples of extensive disease of the larynx; unfortunately the form most frequently met with. The disease has attacked the upper aperture of the larynx. There are the typical pear-shaped swellings produced by the oedema of the arytenoids. Both the ary-epiglottic folds and the epiglottis are also oedematous. On the surface of the oedema in one case can be seen extensive superficial worm-eaten ulceration. Little whitish-yellow tubercles can also be seen just beneath the surface of the translucent mucous membrane. These patients are suffering from all the severe symptoms usually associated with this, the most grave, complication of phthisis. There is constant pain in the throat and desire to cough, great pain on swallowing with constant desire to swallow the saliva, and great difficulty in taking sufficient nourishment. Nothing can be done to cure these patients, but much may be done in the way of alleviation. First, in a few cases where the epiglottis is especially involved, and is apparently the cause of the pain on swallowing, great relief may be obtained by removing this structure. Secondly, orthoform may be insufflated. The patient may be directed to suck up the powder into his own larynx through a glass tube. The advantages of orthoform are that it is non-poisonous, and therefore its use may be entrusted to the patient, and it may be used freely; that the anæsthetic action lasts at least 12 hours, consequently one application a day is sufficient; and it produces no ill-effects on the patient or on the local disease. It is therefore much better for this purpose than cocaine, which is dangerous because of its toxic properties and produces rapid wasting. Further, the effects of cocaine are very fleeting. It must be applied by the physician himself fifteen minutes before each meal.

Should these methods fail the following prescription is most useful :—

R.

Morphinæ Hydrochlor., $\frac{1}{4}$ — $\frac{1}{2}$ gr.

Glycerin, $\mathfrak{z}$ i.

Mucilaginis ad. $\mathfrak{z}$ i.

To be sipped slowly twenty to thirty minutes before each meal.

There is no real reason for withholding morphia. By enabling the patient to take food his strength is maintained and his life is prolonged. The relief of pain not only renders his existence more endurable, but actually prolongs it.

Lastly, food is most important. The patients can generally swallow thickened fluids better than either solids or fluids, therefore milk and soups, etc., should be

thickened with some form of starch, such as arrowroot. All irritating things should be prohibited. If there is great difficulty in administering alcohol it should be given with egg, or in extreme cases it must be administered *per rectum*.

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Original Articles.

*Uræmia: Its Symptoms, Pathology and Treatment,

BY

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INTRODUCTION.

URÆMIA is not itself a disease in the ordinary sense, but is a term used to denote a variable group of symptoms which may develop in patients who are suffering from one of the many forms of kidney disease. It is most common, no doubt, in those who suffer from Bright's disease—acute tubal, chronic tubal, and chronic interstitial nephritis—but is by no means confined to these; it may also occur in those who have lardaceous kidneys; tuberculous, calculous, and cystic renal affections; hydronephrosis; pyonephrosis; ascending, consecutive nephritis or surgical kidney, either of the chronic fibrotic or of the acute suppurative forms; it may even occur with active or passive congestion of the kidneys; and, without disease of the kidneys themselves, when the paths of outflow of the urine are obstructed, as when a pelvic growth has invaded the lower ends of both ureters.

*Specially contributed to "The Antiseptic."

VARIETIES OF URÆMIA.

There is no sound basis on which to rely in dividing cases of uræmia into two or more kinds. Whatever the underlying pathology, the symptoms are for the most part attributable to interference with the nervous system. This is more obvious in some instances, where coma and convulsions are the prominent objective signs; less obvious in other cases, for example when vomiting, or dyspnoea-uræmic "asthma"—is the chief complaint. Variable though the symptoms may be, so little is really known as to the pathology of the condition that it is possible neither to say that the fundamental cause is different in each variety, nor that the same ultimate condition may produce symptoms of one sort in one patient, and apparently quite other symptoms in another.

Nevertheless, from the chemical point of view, five different varieties of uræmia occur, though possibly these may be reduced into three main groups. The five are:—

Fulminating uræmia.

Acute uræmia.

Eclampsia of pregnancy and the puerperium.

Chronic uræmia.

Latent uræmia.

LATENT URÆMIA.

This, the rarest form, is of particular interest. It is necessarily rare because the conditions needed are themselves rare. It results from complete obstruction and suppression of the urine, such as would follow experimental ligature of both ureters. Nature seldom obstructs both ureters simultaneously, but in cases of malignant disease of the cervix uteri, with wide-spreading infiltration of neighbouring structures, both ureters have sometimes become completely blocked; the same effect results occasionally from impaction of a calculus in one ureter when the kidney of the opposite side has become a mere functionless sac from calculus disease; or again when one kidney has been inadvertently excised from a patient whose other kidney has been absent, or atrophied, or disintegrated by tuberculous, cystic, or other disease. Rare though the conditions are, latent uræmia is the inevitable result; and of peculiar interest is the fact that the symptoms are at first conspicuous by their absence. Hence the epithet "latent." The patient will live for seven, ten, or even fourteen days without expelling any urine; the fact that no urine is being passed may lead to medical advice being sought, but there will not necessarily be any symptoms at all, apart from those due to the malignant disease, or calculus. Of course, if a ureteral calculus be at the root of the mischief, there may be acute attacks of pain from ureteral colic; or if there be malignant disease in the pelvis, the patient may be already ill and under medical supervision on that account; but typical uræmic symptoms may be in complete abeyance until the very end. The sufferer usually remains conscious for many days, and may even be up and about; there is little or no headache; vomiting is usually absent if there be no colic; there may be

slight weakness and lassitude, with a tendency to somnolence and an ineptitude for mental exertion, the pupils contract and the temperature, in the absence of suppurative lesion, tends to do subnormal; these comparatively trivial symptoms may be the sole evidence of an exceedingly grave state of affairs. The complete absence of passage of urine is the main symptom, the bladder at the same time not becoming distended by retention, and the end is inevitably fatal unless operative measures are possible for the restoration of the paths of urine outflow. After some days of complete suppression, the drowsiness deepens into lethargy and coma; Cheyne-Stokes' respiratory phenomena appear; convulsions are not a prominent symptom; and the end usually comes by rapid respiratory failure, alarming in its acuteness compared to the preceding calm.

ACUTE URÆMIA.

The symptoms of acute uræmia are almost entirely nervous; they may come on rapidly, without warning; more often there are premonitory signs. Of the latter, drowsiness is perhaps the most frequent. Drowsiness may occur in patients suffering from renal disease, without acute uræmia necessarily following; but in all such cases it is a dangerous sign, and, if continuous and marked, must be regarded as itself uræmic even if graver symptoms do not ensue.

Great diminution in the volume of urine passed is another dangerous sign. In the absence of obstruction to the main paths of urine outflow the cause is different to that of latent uræmia, and acute uræmic symptoms may succeed without any latent period. There are many factors which may, either together or independently, lead to a drop in the daily urine output to as little as ten

ounces, five ounces, or even none at all. Some of these are the following:—

1. *Acute congestion of the tuft of capillaries in each Malpighian Glomerulus.* The capillaries are enclosed in a hollow globe—Bowman's capsule—so that there is a limit to their power of expansion. When the tuft is acutely distended with blood, the ingress and egress of blood by the afferent and efferent vessels will be impeded or even stopped, in much the same way as the neck of a hernia stops the ingress or egress of bowel contents when the hernia becomes strangulated. Heidenhaim has shewn that the secretion of urine depends more upon the rate of blood flow through the kidney than upon the blood pressure, provided the latter exceed a certain minimum; and that when blood flow ceases, urine secretion stops, no matter what the blood pressure in the renal vessels may be. The fluid part of the urine comes mainly from the glomeruli. Hence obstruction to the flow through the glomerular vessels, by turbulence of the capillary tufts, will be a potent factor in causing the urine volume to diminish, or even in causing the elimination of urine to cease entirely.

2. *Cloudy swelling of the renal epithelial cells.*—As the result of this, each kidney cell becomes larger than it normally should be. In the Bowman's capsules of the glomeruli, the lining cells should be flat, having very little thickness. When inflamed, they swell up and become elliptical or semiglobular. The effect of this will be two-fold. In the first place, they will diminish the space available for the congested capillaries of the contained tuft, and thus augment the blood-stasis factor already described. In the second place, the fluid of the urine has to pass from the

blood vessels to the lymph spaces, and from the lymph spaces through the cells of Bowman's capsules into the lumen of the tubules. Whether the process be normally "vital" or mechanical, it must be more difficult for this fluid to pass through the altered cloudy-swollen epithelium than through the natural flat-cells. In addition, the cells of the convoluted and other renal tubules, being larger than in health, bulge inwards in such a way as to diminish the lumen, so that the paths by which the urine which may still be eliminated from the glomeruli has to flow away are obstructed and made difficult.

3. *Catarrh of the tubal epithelial cells.* Not only is each renal cell swollen and cloudy, there is also a multiplication of cells, with shedding off of many into the interior of the tubes. Such shed, catarrhal, cells become bound together in a hyaline matrix to form casts, which so fill the tubules as to become moulded to their shape. The urine excreted higher up has an obstruction to its passage, and can only pass down into the pelvis of the kidney by washing out these tubal casts in front of it.

4. *Exudation of inflammatory lymph.* How much inflammatory lymph is exuded in cases of kidney inflammation is not well known; but as much as there is will be less watery than the usual lymph which bathes the renal tissues; hence there will be greater difficulty in withdrawing water from it, and the urine must consequently diminish in amount.

5. *Loss of fluids by the alimentary canal and by the skin.* The principle of treatment of Bright's disease is to increase the activity of skin and bowel, in order to relieve the kidneys of part of their work.

When such treatment is carried far, particularly when purgation is followed by severe diarrhoea, so much fluid may be removed that comparatively little remains to pass through the kidneys.

Should vomiting occur as well as diarrhoea, the loss of fluid other than by the kidney will be still further augmented, and the volume of urine becomes less still.

6. *Accumulation of dropsical fluids in the tissues.* This may be part of a water-logging from cardiac failure, as mentioned below. The dropsy may also be part of a general renal anasarca without heart failure; the result, apparently, of the efforts of Nature to render less noxious the toxins of the kidney disease by diluting them with as much water as possible. With heart failure, the dropsy is most marked in the most dependent parts and those furthest from the heart, particularly the legs; in renal anasarca the dropsy is universal; its effects will show most in those places where the connective tissue is loosest, for example, in the penis, scrotum, eyelids, and lumbar regions; though gravity also plays its part and leads to œdema in the legs.

From whichever cause this accumulation of dropsical fluid occurs, it will withdraw from the circulation some of the water which might otherwise be eliminated by the kidneys; and thus be a factor in diminishing the amount of urine passed.

7. *Cardiac failure.* One of the early results of kidney disease is to produce an increased blood pressure. How this is brought about is not well understood. The consequence, however, is that an increased driving force is required. The left ventricle dilates and hypertrophies,

and the heart may perform all the work required of it for years. In other cases compensation fails sooner or later. The amount of urine excreted consequently falls, as it will do with any other cause of cardiac failure.

8. *Nervous inhibition.* This is a vague expression, and no clear idea of its meaning can be given. There is a nervous influence which tends to give rest to inflamed organs; examples of this are the rigid abdomen with general peritonitis, and the deficient movement of that side of the chest where there is a pleurisy. The exact nature of this reflex nervous influence is quite obscure. In some cases of nephritis the diminution in the amount of urine excreted seems too sudden and too great to be explained by any of the preceding factors, and one is driven to suppose that the nervous system has something to do with it. One calls it nervous inhibition, but what one really means one does not know. The function of the excreting organ appeared to be depressed or absent. That this depression of kidney function may occur reflexly in healthy kidneys is well known after certain surgical operations.

A third sign of imminent danger is *Amaurosis*. By this term is understood a blindness without gross disease of the visual apparatus. Without albuminuric retinitis, without hæmorrhages, without any objective changes in the ocular fundus the patient complains, in broad daylight, that everything seems to be coming over dark. Objects at any distance cannot be distinguished; presently reading becomes impossible; large objects near at hand may still be seen, or even these may become lost in the darkness which seems to come over the patient. Consciousness

may be retained; the amaurosis or functional blindness may pass away without further development of uræmia; more usually coma and convulsions supervene.

A fourth prodromal symptom is involuntary twitching of the limbs or trunk. Every now and then the patient, lying drowsily in bed, may give a spasmodic start or twitch with one or other arm or leg, or his whole body may give a sudden jump. The neuromuscular system is in a state of unstable equilibrium; general convulsions are impending; some of the muscles "go off," if one may say so, before the rest are quite ready for the general discharge.

Whether preceded by premonitory symptoms or not, the most striking event in acute uræmia is the occurrence of convulsions, with loss of consciousness. The paroxysms are identical with those of epilepsy, but without the cry. There is a tonic stage with cessation of respiration and increasing cyanosis; followed by a clonic stage, with biting of the tongue, foaming at the mouth, involuntary passage of dejecta; and coma persists after the active convulsion has subsided. The temperature may rise several degrees during the paroxysm, reaching 102° F. or 104° F. or even 107° F. During the coma which follows, the temperature frequently falls below normal, to 97° F. or even 95° F.

In cases of uræmia, unlike those of epilepsy, the fits are very apt to recur in rapid succession. Before the insensibility has passed off after one uræmic paroxysm, another sets in, and thus half a dozen or more may occur one after another. This condition is naturally very grave, though recovery is by no means impossible.

Occasionally, instead of the uræmic fit having the typical epileptiform character, its symptoms are of a different kind. In certain instances it may take the form of sudden maniacal frenzy or delirium; in others it may simulate a hemiplegia of sudden onset, with no gross lesion to be found on post mortem to account for it.

FULMINATING URÆMIA.

This variety differs from the acute only in the sudden onset and swift course of the symptoms. The patient, not obviously in acute danger a few minutes before, may or may not pass through a short stage of delirium, and become drowsy and rapidly comatose. There may or may not be fits. The pupils are contracted, the knee-jerks exaggerated, the temperature subnormal. In an hour, or a few hours, death ensues.

(To be continued.)

*Remarks on some Common Diseases in Young Children,

BY

SURGEON-MAJOR R. E. WRAFTER, B.M.S.
(RETIRED).

Dehra Dun.

1. *ENURESIS* (nocturnal incontinence of urine) is a functional rather than an organic disease, for in the most typical and obstinate cases there is never any appreciable pathological change to account for it. It has been known from the earliest times; it seems to occur in all countries and among all classes. It is more common among boys than girls, and although it is mostly found between the ages of four and ten years, it does occur in older children, persisting up to fifteen or sixteen years of age, and even longer. There are many facts in the history of the complaint which seem to suggest that it is due to some altered

*Specially contributed to "The Antiseptic."

nerve relationship between the detrusor urine muscle and the sphincter vesicle. Dr. Dittel believes that in young children the less developed condition of the prostate gland which surrounds the neck of the bladder may have something to do with it. Lebert says a local atony associated with increased sensitiveness of the neck of the bladder is the cause. All we know for certain concerning the physiology of micturition is that it is a reflex action, which, however, is partially under the control of the will. When this reflex action is unduly active during the day, it can for a while be controlled by the will; but during the night, while the will is asleep, there is nothing to control it, and hence occasional incontinence. In Foster's "Physiology" we find it stated that "the so-called nocturnal incontinence is in reality an easily excited and frequently repeated reflex action." This is really all that is known about the pathology, or rather the physiology, of pure uncomplicated nocturnal incontinence of urine. Among the predisposing causes, one of the oldest to which reference is made is very profound sleep. It is well known that sleep varies in different individuals, and hence the common expressions of "light sleepers" and "heavy sleepers." It is thought that children, who sleep very profoundly on the back (dorsal decubitus), do not answer to the calls which Nature makes; nor is this entirely confined to children, for adults occasionally, either after a debauch or excessive fatigue, are known to pass urine unconsciously in bed during the night; as a rule this does not take place until previous warnings, which have failed to waken the sleeper, have completely tired out the sphincter vesica muscle situated at the neck of the bladder, whose office it is to close the aperture around which

it is placed. Then they generally dream of being for a long time unable to find a convenient place for the purpose, and having succeeded at last without waking up, allow the urine to escape involuntarily; such cases will have probably come within the experience of every one; and although we cannot get any reliable information from children as to whether this unconscious cerebration takes place previous to the act of micturating, it is not unfair to imagine that it often does occur. Fear or indolence may be a cause; some children are naturally timid, and dare not get up. Often, however, the incontinence is due to irritation of neighbouring organs or parts, and its removal is then quickly followed by a cessation of the incontinence. It may be well just to refer to some of these extraneous causes: in doing so, we will strictly confine ourselves to such as have come under our own observation sufficiently often to prove—to all thinking at least—that the association is something more than coincidence; of this class of causes preputial irritation is by far the most common. On examination the prepuce may be found elongated with a contracted orifice perhaps, and to be more or less adherent to the glans penis. In other cases without adhesion there is a collection of secretion beneath it in the coronal sulcus. These preputial irregularities give rise to other symptoms than nocturnal incontinence. They cause diurnal incontinence; that is, they give rise to an irritability of the bladder, which leads to frequent micturition and to incontinence if anything prevent the immediate humour of the desire to micturate. Partial priapism is of frequent occurrence in such cases, and this leads to the idea of a voluntary masturbation, when such is really not the case. Irritation within the hip joint is another cause of reflex inconti-

nence which shows itself chiefly at night. It almost invariably occurs before the age of puberty. In a few this incontinence has been almost the first symptom which has attracted attention; it seems to come within the same category as the involuntary startings in the sleep, which are so well known in connection with hip disease. Disease of the spine, when situated in the lower dorsal or in the lumbar region, not infrequently gives rise to urinary irritation, which practically amounts to incontinence. Calculus in the kidney, or ureters, or in the bladder, is another cause acting much in the same way as those previously mentioned; while the calculus is on its way through the ureter to the bladder, the incontinence is purely reflex; but after the stone has reached the bladder it may act mechanically. Thus, in a case observed, the child had the greatest difficulty to pass urine during the day, when standing; but at night in bed passed large quantities of fluid without pain or difficulty. It would seem probable, in this case, that the stone rolled away from the neck of the bladder as the child lay in bed and that then the overfilled viscus quickly emptied itself.

Worms in the Rectum or Vagina.

Many cases of incontinence due to this cause have come under our notice. The *ascaris vermicularis* (the common thread-worm) sometimes infests the rectum to an enormous extent, and it finds its way also into the vagina, causing great irritation. In any given case it is well, therefore, to inquire as to this cause; conditions of the urine seem to be the cause in a few cases, perhaps by a too acid state of the secretion; it is sometimes connected with an irritable condition of the nervous system, causing the child to wake frightened and screaming, as described under

convulsions; peculiarities in the drinking-water, or diet, are occasionally responsible. Thus children in whom the predisposition may already exist accustomed to a soft water become liable to incontinence while drinking a very hard, or chalky water, due to the soluble salts of lime.

Treatment. Whether this disorder has, or has not, an appreciable cause, a child ought never to be punished; still less ought it to be laughed at and held up to ridicule. We have come to the conclusion that punishments tend to confirm and strengthen the habit rather than to cure it. If any of the causes to which reference has been made, or others, are present, our first care must naturally be their removal. If a contracted preputial orifice is the cause, it must be either removed or dilated; when there is disease in the hip-joint or in the spine we must direct our chief attention to these parts, for the incontinence may quickly disappear when the irritation producing it is removed. In the case of stone in the ureter, or pelvis of the kidney, sedatives will frequently be found beneficial. Tincture of Belladonna in appropriate doses, with Bicarbonate of Potash and Infusion of Buchu, is an excellent mixture. If there be a calculus in the bladder it must of course be removed. If the rectum is found to contain *ascaris vermicularis* they should be got rid of. Enemata of warm salt-water will be found a simple but efficient means of accomplishing this. In short, remove any obvious cause which can be found, or may be suspected. There still remain for consideration the cases in which no immediate causes can be found, and these cases are the most obstinate and the most difficult to influence. In the first place our attention must be directed to the

general health of the patient, for, as a rule, it is below par, but whether as a cause or a consequence we could not say. Quinine and Iron, Cinchona bark or Strychnina, should be given according to circumstances, and combined with them, or separately, deadly nightshade in some form or other. Troussseau used to prescribe the extract in the form of a pill; others prefer the tincture. In either case the drug must be persevered with for a considerable time. Large doses may be given if the quantity be increased gradually. Some have known quite young children take heroic doses of the Tincture Belladonna three or four times a day without any toxic effects. We must allow that of all drugs Atropa used to be considered the most useful in such cases, but now Tinctura Lycopodii has been found very valuable in cases of frequent micturition, and irritation or spasm of the bladder when not diseased. Baths will also be found useful. We may commence by ordering a warm sitz-bath every night just before going to bed. In such cases the body must be well dried afterwards to thoroughly re-establish circulation. In some cases a cold sponge bath in the morning is more efficacious; especially bathing the loins, and using a rough towel afterwards, or a cold douche, directed on to the spine, may be tried. Counter-irritants applied over the lumbar part of the spine have sometimes effected a cure when other and milder measures seemed to have failed. Lastly, electricity, either to the rectum or to the vagina, may be tried in very obstinate cases; a weak current should be used, as these parts are sensitive. In almost all cases change of air, to the seaside or to the hills if possible, will be found beneficial by strengthening the constitution and improving the general health. Care must be exercised with the

diet; late suppers should be strenuously forbidden, and little or no fluid should be taken for two or three hours before bed-time. It is a good practice also to wake up children troubled with this disease every two or three hours, and make them get out of bed to urinate. Great perseverance will be required: all hastiness must be avoided, while firmness is, however, necessary.

2. Glandular enlargements in the neck.

This is one of the commonest forms of disease in children, and, at the same time, one of the least satisfactory to treat. Unfortunately the neck is largely supplied with lymphatic glands, and as this part of the body is much exposed to external influences, it is not surprising that we should often meet with disease in them. Moreover, as the neck is open to view, scars of old disease, or chronic swelling of the glands are particularly liable to be observed; hence it is desirable to detect disease early, and, if possible, eradicate it before any permanent disfigurement has resulted. Primary disease of the lymphatic glands is very rare; it forms but a very small percentage of the total cases which come under observation. Nevertheless, it is very well that it should be early recognised when it does occur, and as this has to be done chiefly by the method of exclusion, it will be best first of all to consider the various causes which lead to secondary enlargement. Then, after having excluded these cases, the remainder will probably represent those of primary disease. And if, in such cases, together with the spontaneous lymphatic enlargement in the neck, there should occur swellings in other gland regions, enlargement of the spleen, febrile attacks, great anaemia and prostration, and increase of the colourless blood corpuscles, the diagnosis would be almost complete.

Secondary enlargements and affections of these glands. It has already been said that the neck is largely supplied with lymphatic glands; we may add that they are placed comparatively superficial, and that in some constitutions they seem exceedingly prone to take on a low form of inflammation, and to enlarge in response to very slight causes. This predisposition is expressed in the word *strumous*, and the term will be applied in this sense. The glands may however, enlarge when there is no such special tendency, in consequence of long continued or active irritation of parts, with which the glands, by means of the lymphatic vessels, are in connection. The glands are divided into a superficial and a deep set; it is with the former that we have to deal chiefly. They are found pretty constantly in definite regions namely, the occipital region, behind the cranial attachment of the sterno-mastoid muscle; behind the ear, either in front of or over the anterior border of the sterno-mastoid; in front of the ear, over the parotid gland; and below the lower jaw, in the submaxillary region, where they are the largest and most numerous. Lower down, the glands seem to follow the course of the external jugular vein, beneath the platysma myoides, being most abundant just above the clavicle behind the margin of the sterno-mastoid muscle. All these lymphatics however intercommunicate, not only among themselves, but with the deeper set, and with those coming from the chest and axilla. In seeking for a possible source of irritation it is well to bear this fact in mind, for otherwise we may at first fail to find it; and we should also remember that inflammation once set up, may spread elsewhere by mere continuity of tissue. The varieties of glandular enlargement, as has

before been suggested, may conveniently be divided into two chief classes: (a) Primary disease; Lymphadenoma, or lymphoma, (b) Secondary disease; Adenitis, which may be either acute or chronic, these two latter conditions may run one into the other, or an abscess may quickly form, discharge and heal up, leaving few, if any traces behind. Such a termination is by far the most favourable one, and it were to be wished that the majority of glandular abscesses belonged to this class.

An acute abscess of this kind is either due to some active irritation of the part in which the lymphatic radicles commence; or it may appear to originate spontaneously—that is, the exact cause cannot be ascertained. Some have seen many such cases in young infants, coming on rather suddenly and attaining a considerable size. They often cause great distress, and, by pressure, may implicate the larynx. A favourite position is just below and behind the angle of the inferior maxilla; in other cases they occur over the anterior triangle of the neck. The skin quickly reddens and they discharge themselves. It saves both time and suffering to puncture them with a small tenotomy knife directly, fluctuation is apparent, and before the skin is involved, for there is then less scar and less danger of the pus burrowing to neighbouring parts, or of adjacent glands becoming affected. After a free evacuation of the pus, an application of antiseptic dressing, is much preferable to the poultice, which is so frequently used. It would be more correct, in some cases, to call these abscesses peri-glandular; for after evacuating them, we have occasionally seen the lymphatic gland in an open cavity, as though it had been dissected out. As regards the more chronic form of glandular inflammation, it may either

terminate directly in (1) ulceration, or in (2) caseation (cheesy) with subsequent softening and ulceration, or in (3) hypertrophy. This group of cases constitutes a disease for which the collective name of scrofula has long been employed, the word being in fact derived from scrofula or struma, king's evil. In attempting to explain the condition we are obliged to fall back on the stereotyped phrase, that scrofula is a constitutional peculiarity; hence the expression lymphatic temperament or dyscrasia. Notwithstanding there can be no doubt that some children are much more liable to the disease than others, and that it is most obstinate in its course, even when the patients are placed under favourable circumstances for their recovery. We have divided the group into three classes, but it is not always easy to draw the line between one and another. In some cases the glands inflame; but the inflammation is of a low type and ends in ulceration rather than suppuration. In others, the glands gradually swell; then, after a while, the inflammatory product caseates; later, this caseation softens and breaks down. The skin next becomes involved, and after perforation has taken place, the hyperplasia is partially thrown off by suppuration; the remainder, however, takes on a form of slow, but persistent ulceration, which leads to destruction of adjacent glands and skin. These heal only after many months, leaving unsightly scars on the surface, and beneath it, perhaps, indurated and partially calcareous glands, as an indelible index of the processes which have taken place. Every surgeon may be acquainted with such cases, for they are most troublesome and intractable to manage. The third variety—hypertrophy of the glands—is another, though somewhat less frequent termina-

tion of this inflammatory process. In these cases it would seem as though the new growth tended to originate rather than to break down. But the distinction between this and the last mentioned form is more apparent than real. For if these glands were to be examined, it would often be found that they are undergoing a very slow caseum, and that they differ from the foregoing in the rate of change rather than in any well marked pathological feature.

Causation or Etiology. In speaking of these swellings and abscesses as "Secondary" affections of the glands, a primary disease of some part or other is of course implied. We will now briefly mention some of the diseases which most commonly predispose to them; for we hold it of the greatest importance to remove the cause, even before attempting to treat the effects.

The Occipital Glands. The most common cause is eczema on the hinder part of the scalp. In hospital practice, this eczema not infrequently is due to pediculi and the scratching to which they give rise; it is well known that pediculi infest the back part of the scalp by preference, for they are more out of sight and therefore less likely to be molested. The glands behind the ear correspond with the pinna or auricle and the lateral and hinder part of the scalp, and inflame or enlarge in response to irritations from these parts. The Parotid Glands, the largest of the salivary glands, correspond with the lateral fore part of the face and eyelids. The most common disease is eczema of the scalp or forehead: chronic ringworm on the face or of the head will occasionally cause them to inflame. Tinea tarsi (inflamed state of the margins of the eyelids) not seldom acts as

a predisposing cause, and some have seen a few cases in which strumous cornitis was the primary lesion. An unhealthy condition of the pituitary membrane of the nose will sometimes affect the superficial parotid glands, but whether directly or by extension from the deeper set we can hardly say. The superficial glands in the neck proper inflame from a variety of causes. Among others may be mentioned otorrhœa, especially when the discharge is chronic, for in addition to the source whence it comes, its continued presence causes a kind of eczema of and around the external auditory meatus, which gradually affects the nearest lymphatics, most frequently we think those along the external jugular vein. If not due to the direct irritation of the adjacent skin, these glands may enlarge by a spread of the inflammatory process from neighbouring glands, either those already referred to, or others in the axilla, with which they freely communicate, and which, for obvious reasons are frequently affected. Finally, it must be mentioned intracranial disease, or disease at the base of the skull, outside the cavity which contains the brain, its membranes, and vessels. These cases are quite outside the range of treatment and may be dismissed with the mere mention. Caries of the nasal bones—syphilitic or otherwise—may give rise to glandular enlargement; but they frequently fail to attract much attention, owing to the more obvious symptoms with which they are associated. By far the most common—as also the most intractable and unsightly—are ulceration and enlargements of the submaxillary glands, which lie in a fossa of the inner face of the lower jaw-bone, near its angle. Considering their connection, this is not remarkable, for the lymphatics of the pharynx, tonsils,

mouth, tongue and lips, all communicate with them. In young children these parts are very liable to irritations, and it is just this form of low inflammation, long continued and often repeated, which most frequently leads to chronic enlargements. Thus chronic pharyngitis is a very common disease in so-called scrofulous children. It is in fact a chronic catarrhal condition of the muciparous glands, which are so numerous in this part; and this, also, is one of the commonest antecedents of hypertrophy of the tonsils, which, again, in their turn, keep up the glandular irritation. Sometimes the inflammation begins in the tonsils primarily and causes them to enlarge. In other cases stomatitis is the commencement; in other cases, again, decaying teeth or sore gums are the primary predisposing causes. We have said sufficient to show the desirability, in all cases, of searching for the original source of the inflammation, for if it be still existent it must be removed before we can expect any great benefit to follow our treatment. On the other hand we must not forget that these secondary affections of glands not infrequently come on some time after the primary disease (of which they are the sequels) has disappeared. In the latter case they would come under the so-called "residual" irritations which Sir James Paget has so well described. It may be months before the effects begin to show themselves, but in all cases it is well to take cognisance of the original disease, as that may influence treatment considerably, besides being an important factor in the differential diagnosis of primary disease of the lymphatics. As regards the acute forms, their cause is generally sufficiently obvious, and their treatment must go hand in hand with it. Syphilitic erup-

tions about the face and mouth, as also injuries, must not be forgotten among the common predisposing causes. Nor should we omit to mention the exanthemata, acting in some cases apparently quite apart from the local manifestations with which they,—especially measles and scarlet fever or scarlatina (not common in India)—are not seldom accompanied. Typhoid fever comes within the same category.

Treatment. As a general rule, it may be said that an effect will cease as soon as the cause is removed, therefore our first care must be to remove any cause which seems to keep up or extend the irritation; if it be eczema or pediculi or otorrhœa, or pharyngitis, or ozena, or irritation in the nose, or a general catarrh, our efforts must be directed to the cure of these diseases; and, having succeeded, in eight cases out of ten probably the glands will slowly disappear without any local treatment. Remembering always, that the scrofulous habit is a predisposing cause, we should, of course, let our treatment include general as well as local remedies, which latter would probably fail without them. Of all drugs, oleum morrhuæ is the most generally useful; and it is now-a-days made in such agreeable forms that few children can seriously object to take it. Leslie's almonized oil, or Allen and Hanbury's "perfected oil," will be found agreeable modes of administering it. The ordinary cod-liver oil floated on warm coffee or milk may be swallowed without leaving scarcely any taste behind. Next in importance comes iron, and its preparations; their value may be increased by combining them with glycerine. The new form of dialysed iron (Squire's) is an excellent preparation, and interferes with the digestive processes less than some of the other ferruginous preparations. Iodide of Potassium is useful in many

cases. Its action, however, must be watched, for it tends in some children to produce iodism and rather severe catarrhal symptoms, which aggravates, more than cures, glandular enlargements. As regards Iodine itself, the above remark equally applies. But where Iodine does not disagree, it is a valuable drug, not only for internal administration, but also for external application. If objected to by the mouth, in the ordinary form (Acidum Hydriodicum) introduced by Dr. Buchanan, it may be given as an inhalation, by mixing a little of the tincture with hot water and then inhaling the steam. Locally it may be applied in watery solutions, either in the form of a gargle, or of a spray, or as a lotion. It should always be applied locally to the primary lesion (whatever form be adopted) whenever this is possible, and not to the enlarged or inflamed gland itself. This is of importance, but it is seldom done; the gland is painted with the "inevitable tincture of iodine" until the surrounding skin is actually excoriated—a condition which itself is sufficient to inflame the glands, and which is almost certain to aggravate them should they be already inflamed. Iodine, to be of service, should, if possible, be applied to that part of the skin or surface in which the lymphatic radicles connected with the diseased glands themselves originate. Thus, when the scalp has been the seat of a chronic inflammation which has passed off, leaving the occipital or cervical glands enlarged, let a moderate amount of weak Iodine solution, or paint be applied to it; in this way the iodine is absorbed by the lymphatic radicles, and is carried directly into the glands, just as was the original source of the inflammation. In children with a specific family history, Iodide of Potassium is especially indicated and

useful, and if there is any good suspicion of congenital syphilis, mercurial inunctions will occasionally work marvels. Change of air—sea or hill air, if possible—is useful and ought to be recommended and tried in all chronic cases. As regards operative interference, if caseation or suppuration is suspected, it is well to puncture the glands and let out the pus or gaseous matter; and this should be done early, before the adjacent skin has become involved. It must be remembered that the glands remain for a long time discrete, and that therefore each softening gland must have an exit opening for itself. The skin once inflamed becomes involved in the same ulcerative process as the gland itself, which may, and often does, persist for years, and leaves ugly scars behind, and hence we should incise before this takes place. For the more chronic form of glandular disease with hypertrophic enlargement, excision with the knife has been proposed and carried out. The indications for operative extirpation may be summed up as follows: 1. A very chronic condition of twelve months' to two years' duration, during which the glands have slowly grown, without any obvious continued cause for this, the original cause having long ceased to act. 2. The glands being conspicuous and superficial. 3. The disease being local. 4. The general health being good. 5. The ordinary remedies having failed, including the hypodermic treatment with acetic acid, supposed the most useful to bring about resolution. We have no hesitation in recommending extirpation in these cases, and under the above conditions; for the operation is not dangerous, and the linear scar, which alone remains afterwards, is far less conspicuous than the irregular scars which

invariably attest spontaneous ulceration. Besides this, we think it is decidedly advantageous for the patient—especially if any phthisical family history be obtained—to remove all this caseous material; for one can never say how soon it may begin to increase, or when a tuberculosis may not commence, by an infective-process, from these admittedly dangerous centres, the propriety of entering further upon the subject of primary disease of the lymphatic system is unnecessary. It is, fortunately, a rare disease and, as already stated, it has to be diagnosed by a process of exclusion, rather than by any symptoms which, in its earlier stages, are special to this disease itself.

Cases and Comments.

A Case of Syphilitic Disease of the Spinal Cord,

BY

M. G. NAIDU, M. B.
Hyderabad (Deccan).

THE following are the notes of a case brought before a Special Board of Military Surgeons at the Staff Hospital, Hyderabad (Deccan) on the 12th of Khurdad (7th month) 1314 Fasli corresponding to 15th April 1905 A. D.,* and, as the case presents some features of interest, I think it is worthy of record.

Name—Cassim Ali.

Occupation—Trooper, 1st Imperial Lancers.

Age—35 years.

Service—15 years.

* (As the dates in the Hospital registers are given on the Fasli-moon-system, the above corresponding Christian date may be noted with advantage).

[JUNE,

Residence—Asufnagar (a very healthy locality).

Character—Good, hard working and honest.

Habits. { Tobacco—in moderation.
Alcohol—*Nil*.

He was a strong well-made man at one time but his present illness has made him weak and thin.

HISTORY—There is no trace of any nervous disease in the family and no history of any serious injury to the spine or head. He has had a few falls off his horse, as must be expected of a sowar, but none with any serious effects.

On the 16th Amerdad (9th month) 1312 Fasli, *i.e.*, about two years ago, he came to the hospital complaining of pain in the back. The Regimental Medical Officer kept him under observation for Lumbago, and returned him to work the next day. Five days later, *i.e.*, on the 21st Amerdad 1312 Fasli, he was admitted for chancre (said to have appeared ten days earlier) which was touched with pure nitric acid. The record says that he was discharged the next day. There is no information as to whether the sore was hard or soft, nor why he was not kept longer in the hospital or internal remedies administered. My own impression is— for being on special duty at the time, the patient was in charge of a colleague of mine—that even on the 16th—the date of his first admission—he had the chancre, but hid it by a trick so common in our experience, that is Kummerka-darad (back ache), and that he absconded from the hospital after the cauterisation either from fear of its repetition or of some other operation and got himself treated outside. This unfortunately is a frequent occurrence; and in the olden days, I re-

gret to say, the Medical Officers themselves countenanced such conduct in their regimental patients. I sincerely trust such is not the case now.

On the 19th Sherawar (10th month) 1312 Fasli, I saw him for the first time with a profuse multiform rash of the characteristic copper colour, and inflammation of the fauces. The patient said the rash and the sore throat appeared four days before admission, *i.e.*, you will observe, exactly four weeks after the primary sore. There were two typical reniform ulcers on the tonsils quite symmetrical, one on either side. I put him on mercury at once, in the form recommended by Hutchinson.

Pulv. Doverii gr. iii.

Hydrarg. c. creta gr. ii. every third

hour, and touched his throat with glycer. hydrarg. (2 grs. to 3. i).

(I cannot help remarking here that if this course had been adopted earlier and a previous four weeks not allowed to slip by, this man would not have appeared before you to-day. Of course it was the patient's own fault, and the Medical Officer must be absolved from all blame or responsibility.)

The treatment was steadily continued up to the 8th Meliir (11th month) 1312 Fasli, by which time the rash had disappeared, and the throat had become normal. No salivation had occurred. The patient however got tired of the hospital, and as he was apparently well and fit to work, he was at his own request discharged from the hospital and sent on duty with the strict injunction that he must continue the treatment (that is, the above powders, one t. d.) until further orders. It is needless to say that, like a

1905.]

261

true Indian, he kept up the treatment perfunctorily for some time, and then neglected it altogether. Nor did he come to me for observation from time to time as he was asked to do.

I find an entry on the 26th Aban (12th month) 1312 Fasli, when he came to the hospital complaining of lumbar pain, he was given the mercurial powders again and then disappeared. Since then, he has never been to the hospital, nor has he had any medicine, and according to his own statement, he has been in robust health, and doing his work steadily.

On the 23rd Bahmon (3rd month) 1314 Fasli he felt severe pain in the dorsal region of the spine, shooting up to the neck, and this pain gradually passed down to the lumbar region, leaving a sense of formication in both intrascapular regions. He was admitted into the hospital on the 25th of that month and was given.

Liq. Hydrarg Perch 3i.

Pot. Iodid Gr. X.

Aqua ad. 3i—t. d.

After a week of this treatment, he felt well enough to go back to work though the 'back ache' had not quite disappeared. Of course the treatment was again interrupted, and it was entirely the fault of the patient. (Even at this late period if the treatment had been steadily continued and vigorously pushed, I believe this unfortunate man may have escaped the present dire effects of the syphilitic poison.)

On Monday last 10th April, he walked into the hospital with an unsteady gait and complained to me of pain and stiffness in the back over the lumbar region and inability to walk freely as the toes of his left foot caught in the ground. The pain and stiffness, he said, began 14 days

before and the locomotor difficulty the day before he came to me. The pains were worse at night.

EXAMINATION:—

Nervous system. Pain is referred to the dorsal and lumbar spine of a severe shooting and lancinating character rendered worse by movement; stiffness of the whole spine; formication and tingling in the scapular region. The pain shoots down the left thighs to the toes. On the right side it is not so severe. There is tenderness also over and about the spine. There is in fact severe rachialgia. There is no girdle pain.

Intellectual and emotional functions normal; memory good; no delusions; special senses normal; pupils equal and react to light and distance normally; tactile sensibility normal. I have not been able to use an æsthesiometer, but he can appreciate pin pricks on both sides to an equal extent. He however complains of a numb feeling in the left leg.

Locomotor system. There is no atrophy of the muscles of the lower limbs. There is a certain amount of stiffness of the muscles, especially of the left leg and thigh. There is slight co-ordination of the lower limbs—at least it appears so on account of the stiffness probably. He can walk along a line with some difficulty. There is no inco-ordination of the arm muscles. Romberg's symptom is absent. He feels giddy but does not fall. It would appear therefore that the muscular sense is normal. The muscles of the hands are strong, but those of the legs are weak, especially of the left side. Kernig's sign is markedly present on the left side but I believe this is spurious and due simply to stiffness of muscles. The gait as you see is peculiar. It is a mixture of the spastic and

ataxic with a preponderance of the spastic. The foot also drops, probably from weakness of the dorsal flexors. The toes drag and the foot (left) is jerked forward and upward in advancing the leg.

Plantar reflex is greatly increased on the left side and slightly on the right. There is no elbow jerk. The knee jerk is very much exaggerated on the left side and above normal on the right. Ankle clonus was marked on the left side and slight on the right on the 12th instant, but on the 13th I could not elicit any on either side, and as you see it is entirely absent to-day. Electrical reactions are normal. There is no reaction of degeneration. (I cannot account for this extraordinary disappearance of ankle clonus, nor can I obtain any light on the subject from books on neurology.)

Diagnosis.—Byrom Bramwell says "None of us like to admit that a case beats us. Some people never make this admission; they make a point of giving a positive opinion as to the nature of every case which they come across; but they are the people who know least about medicine, and who make the biggest mistakes. The most accurate, careful and experienced clinicians often find it necessary to hesitate and give a guarded opinion." It is because I could not answer all the questions arising out of this case that I brought the case before you. What is the lesion? Where is the lesion? Is it syphilis or is it a disease of the nervous system independent of it? Is it central or peripheral? These are the questions to be answered and when answered will give the diagnosis between peripheral neuritis, ataxic paraplegia, spastic paralysis, general paralysis of the insane in its earlier stages, myelitis, meningitis and

syphiloma of the cord. Byrom Bramwell says syphilis is not so common a cause of primary spastic paraplegia as of locomotor ataxia, unless it be through gummatous myelitis. Cornil states that syphilitic affections of the spinal cord are much more rare than of brain or cranial nerves. Circumscribed gummata are rarer than diffuse gummatous infiltration of meninges and lymph spaces. Gowers describes three forms of degenerations of spinal cord produced by syphilis (1) by syphilitic growth (2) by chronic syphilitic meningitis (3) inflammations of the cord producing degenerations which however do not differ from the ordinary degenerations.

The pain points to meningitis by its quantity and quality as also do the stiffness and tenderness. Against myelitis are the following facts of the case:—The sensory symptoms are not marked. There is no atrophy; no bladder or rectal trouble; no trophic changes.

Prognosis. This would depend on our answering the question—Is it syphilis?—in the affirmative. If syphilis, is it of the 2nd or 3rd stage? The prognosis and treatment must be guided by the stage. The prognosis also depends on whether the degeneration is due to arteritis or to gumma. The former is said to be hopeless and the latter more amenable to treatment. In any case treatment is only of avail when the nerve tissues are not destroyed. Many cases are on record where severe symptoms of syphilitic spinal disease have disappeared under appropriate treatment. Permanent if more or less complete cures have been effected by antisiphilitic remedies. (Vide Jonathan Hutchinson on Syphilis.)

Treatment. Is it to be mercury or iodide? If mercury, in what form,

THE ANTISEPTIC.

JUNE 1905.

The so-called plague preventive measures.

WE have had the plague in India now for over eight years, and evidently it has come to stay. The Government and the Municipal sanitary authorities are doing their best to prevent the spread of plague. We admit that they are carrying on the fight under unfavourable conditions. On the one hand they have to combat a disease the exact method of the spread of which is but imperfectly understood; and on the other hand they have to deal with a population not readily amenable to sanitary discipline, but easily excited into a condition of panic. The difficulties are great, but they are being met with courage, perseverance and good temper. We only wish that there was a little more imagination on the part of those who are responsible for the drafting of the so-called plague regulations. At a meeting of the Madras Municipal Corporation when the question of keeping the emigration depots outside the Municipal limits was being discussed, Commissioner after Commissioner got up and waxed eloquent on the excellence of the existing arrangements for detecting any cases of plague that may be imported into Madras and for isolat-

would you recommend it? Iodide of potassium he has been swallowing in large doses. He cannot stand more than 30 grains three times a day and 90 grains a day have not done him any good. I propose to try mercurial inunctions (3 ss. of blue ointment every night increasing to ʒi) and will report progress later.

NOTE (15th May 1905)—The majority of members present diagnosed the case as syphilitic myelitis of a limited character and irregular extent, and recommended treatment by mercurial inunction combined with large doses of potassium iodide internally. Under this treatment, the patient has greatly improved. He can walk freely and even run. The reflex irritability of the lower limbs has greatly diminished and the pain and stiffness in the back has entirely disappeared. He has still left a certain amount of weakness and stiffness in the lower limbs, especially on the left side, and it seems impossible to say definitely how much further his recovery will advance and how much of his muscular power will remain permanently impaired—in other words, how much of the substance of his spinal cord is permanently damaged.

EDITORIAL NOTICE.

The Editor will always be pleased to receive communications on matters of importance to the profession for publication in "The Antiseptic."

Articles, letters, and all communications intended for publication, and books for review, should be addressed to the Editor, "Lady Napier Villa," Egmore.

All communications relating to advertisements, subscriptions, and other business matters to be addressed to the Manager, 323, Thambu Chetty Street, B. T. Madras.

ing and treating them. A little more imagination would have convinced them that detecting an imported case of plague and removing it to a suitable plague hospital is just like shutting the stable doors after the horse is stolen. The mischief is already done. The patient has acted as a medium for carrying the plague germs from an infected into a non-infected area, which mischief cannot be undone however carefully he may be isolated afterwards. It is the old saying of prevention being better than cure. However some people think that emigration depots are about the best antidotes to plague and we have no time to waste in arguments with them. They have had their way and Madras has had a number of indigenous cases of plague. All that is ancient history and we have no desire to reopen that controversy, at all events, for the present. The immediate cause of this article was an ocular demonstration we had the other day of the working of the plague regulations of the Ceylon Government. We had to cross over from Tuticorin to Colombo. At Tuticorin we were met by the Ceylon plague officers with the query "do you come from any plague infected area?" We replied that we came from the City of Madras which, so far as we knew, had not been declared infected. "But the port of Madras is infected and you can't draw any sharp line of demarcation between the Port and the City of Madras" was the prompt reply of the plague officer. We had to admit the reasonableness of the plague officer's position and we assured him that we were not in any way responsible for the notification which separated the Port from the City of Madras. It was our turn to interrogate the plague officer. "What do you propose to do with me, Sir? will you let me cross over to Colombo or are you going to detain me here?" we ventured to put in. "You are a first class passenger, you can cross over: we only detain 3rd class passengers here," was the polite reply of the plague officer. That solved the difficulty so far as we were concerned, but we were rather curious to see the working of the Ceylon plague regulations and so we watched the work of the plague officer. The system is simplicity itself. The plague officer simply works at the railway ticket of the passenger. If it is either a first or second class ticket then the passenger is permitted to cross over to Ceylon. But if the passenger has a third class railway ticket he is prevented from crossing over. We saw several second class passengers with exceptionally dirty looking bundles of clothes being permitted to cross over. And we saw one very respectable gentleman who travelled in the third class while his wife travelled in the second class being told that he cannot cross over but that his wife could if she liked to do so alone. That is what we call the absolute want of imagination in framing plague regulations. The

idea no doubt is good. The third class passengers as a class are poorer and dirtier than the passengers of the other two classes, and therefore if only a portion of the passengers are to be detained then the third class passengers are the men to be detained. So far so good. But then comes a disturbing element in the shape of unpleasant facts. A good many of the second class passengers were no better than the third class passengers. Some who usually travel third had gone to the expense of a few rupees more in order to save a delay of 10 days at Tuticorin. And then what is the use of looking at the railway ticket to ascertain the cleanly or other habits of the passenger. His luggage will supply more valuable evidence on that point, and we have always been of opinion that disinfection of dirty clothes carried about by passengers would be far more effective in the way of preventing the spread of plague than the system of personal passporting.

And then the apparel often proclaims the man and very often supplies a clue to the probable whereabouts of the plague bacillus. Will a first or second class railway ticket disinfect the dirty and often stinking clothes of its owner? Another weak point in the classification of passengers by the aid of their railway ticket is the servant question. The master travelling in the first class is of course permitted to proceed on his journey. Immediately after he is 'passed' by the plague officer he be-

gins his manoeuvres to get his servant passed too. He begins by having a quiet chat with the medical officer about the heat of the day and the roughness of the sea and the god-forsaken aspect of Tuticorin and winds up with a very apologetic request, couched in the most polite and seductive tones. "Will you be so very kind as to let my servant come with me. I am absolutely helpless without my servant. I wouldn't know where to look for a single thing without him. And he is an exceptionally clean servant—the best I have had since I came to India," and so on. What is the poor plague officer to do but to reply that "it is against the rules but as a special case I would let you take your servant." This of course is followed by the expression of profuse thanks and "it is very good of you I am sure," and similiar "conventional lies of modern civilization." But what about the plague bacillus? It goes on with its steady march visiting new places and attacking fresh cities, taking full advantage on the way of "calamities of nature and the weaknesses of men."

Dr. T. M. Nair, M.D., the Editor of "The Antiseptic," left Madras on the 17th of May for England via Colombo, to attend the Annual Meeting of the British Medical Association to be held at Leicester next July. He is expected here early in August.

Our Contemporaries.

MEDICINE.

The Value of Fats for Tuberculous Patients.

Rene Laufer declares that the most definite and constant influence of fats is the same on tuberculous patients as it is on normal individuals, consisting in the retention and preservation of nitrogenous material. The author has observed the effects of the administration of fats in two sets of tuberculous patients. To the first set he gave large doses—150 gr. to 200 gr. daily. These fats were in the form of cod-liver oil, butter, and plain oil. To the other set of patients he gave these fats in moderate quantities—100 to 150 gr. In the first set the curve of weight rose at first in a rapid and remarkable manner, then reaching a level and remaining stationary for a time, it finally fell, sometimes below the original weight. This was due to digestive troubles, or to the loss of appetite for other foods, or, finally, to the fact that the fat was not utilized, but was passed out in the faeces without being changed. In the second set of patients, those who received moderate doses, the curve of weight slowly rose, but in a progressive and continuous manner, so that the benefit was lasting. The dose of 100 gr. to 150 gr., according to the susceptibility of the patient, appears to be the maximum quantity that is really beneficial.—*Le Bulletin Medical*.

Absorption of Pleuritic Effusion and Oedema, followed by Convulsions,

BY

F. MARGONI.

A man, aged 69, was admitted to hospital. For some months he had noticed in the evenings slight oedema of the ankles. A month before admission he began to suffer from dyspnoea and polydipsia. There were

general arterio-sclerosis, enlargement of the cardiac and hepatic areas, pulmonary rales right pleuritic effusion, oedema of the ankles and slight albuminuria and glycosuria. A milk diet was prescribed. On the third day he became excited and was seized with clonic convulsions which began in the right leg and extended to the right thigh and arm, and were accompanied by conjugate deviation of the eyes to the right. The fit lasted only a few minutes and was accompanied by loss of consciousness. It was not followed by paralysis. The pleuritic effusion and the oedema of the ankles were found to have disappeared; the quantity of urine had not increased. On the following days there were similar attacks, which did not involve loss of consciousness. They were generally confined to the right leg and the lips. They were accompanied by congestion of the face, and were favourably influenced by the application of leeches to the mastoid regions. The patient completely recovered.

The writer thinks that the convulsions were due to absorption into the blood from the effusions of toxins which were not promptly eliminated by the kidneys.—*Il. Policlinico*, Oct. 1., p. 1264.

Hypodermic Injection of Strychnine Nitrate in the Treatment of Progressive Muscular Atrophy.

SANGER BROWN in the *Medical Record* of August 6, 1904, writes as follows:—

To whom belongs the credit of originating this method and first asserting or demonstrating its value is not known, but since it came to the notice of the author he has embraced every opportunity of using it, and while his results have not been so happy as Professor Gowers's, they have nevertheless been highly satisfactory in some instances, and prompt the author to publish his clinical

notes. Furthermore, judging from conversation with his confreres, and the perusal of current medical literature, the author believes this measure of treatment has not received anything like the attention it deserves.

For an adult the dose should be 1/25 of a grain once daily for six weeks, resumed after an intermission of two weeks, and so on until several courses have been taken. Though many patients can bear a larger dose than this without exhibiting unpleasant symptoms, the author has had better results when he did not yield to the impulse sometimes experienced to administer a larger quantity. Possibly a certain amount of the drug might act as a tonic, and restorative to the degenerating neurons, while more might accelerate the process of decay.

It appears that no other form of strychnine than the nitrate given hypodermically, and no form whatever, not even the nitrate itself, given by the mouth, can influence the course of the disease favorably. That the nitrate is a comparatively volatile substance, and that it is not exposed to the action of the digestive secretions, is somewhat suggestive of a possible specific incidence when given subcutaneously.

Under what conditions shall Mothers with Albuminuria be allowed to nurse their Infants?

An interesting discussion was held at the thirteenth Congress of Internal Medicine of Padua, during which the author reviewed the question as to whether an albuminuric mother should be allowed to nurse her child. Pinard, Budin, and their school maintain that it is safe to allow such mothers to nurse their infants, but the author does not think that their statistics form a trustworthy basis for conclusions in this matter. The institutions with which these observers are connected are lying-in asylums in which the infants are not observed for any length of time.

On the other hand, a number of cases are on record in which infants who have been nursed by albuminuric mothers have been under observation for a long time, and developed eclampsia, tetany, epiglottic spasm, or fatal hepatitis with jaundice. In one case, observed by the author himself, there was a diffuse oedema as the result of nursing from a mother who had been suffering from what apparently was a simple and transient albuminuria. All these cases show that the milk of such mothers may prove toxic for the infants, and that we should be very careful, at all events, how we allow such mothers to nurse their infants. At the first sign of any disturbances on the part of the nursing infant, the milk should be discontinued, and whenever the mother shows the presence of true Bright's disease, the infant should be permanently weaned.—*Archives of Pediatrics*.

Incontinence of Faeces in Children,

BY

M. OSTHEIMER.

Though incontinence of urine is common in childhood, incontinence of faeces has been seldom described; only about a dozen cases have been recorded. They may be divided into those in which some cause was found, and those in which the disorder was ascribed to the general nervous condition of the child. The second group has been subdivided into cases persisting from infancy, and cases in which the condition appeared suddenly, in children over the age of 3 years. The cause was either general, such as wasting disease, epilepsy, general paralysis, or the infectious fevers; or local, such as stretching of the sphincter from prolapse of the rectum or impaction of faeces or operations near the anus. In 3 cases the incontinence was due to distension of the rectum with faeces in cases of chronic constipation. Incontinence began in a boy, aged 6, after constant constipation. At the age of 9, when he came under observation, the sphincter was found relaxed.

(Wallace, *St. Bartholomew's Hosp. Reports*, 1888, p. 260). Riviere reports a similar case in a girl, aged 12, in whom incontinence was first noticed at 9; the rectum was evidently distended (*Med. Moderne*, 1898, ix, 308). Castor oil enemata were given for a week daily and permanent recovery followed. In 2 cases the incontinence had existed since infancy without known cause. Mendenhall reported a case in a boy, aged 16 years. The incontinence began at the age of 6 months, after an attack of constipation. Under strychnine and ergot he eventually acquired control over the motions. In a similar case in a girl, aged 13, recovery took place under this treatment. The sphincter was relaxed. A case of incontinence of both fæces and urine which existed from infancy in a boy, aged 8, is reported by Griffiths (*Archives of Pediatrics*, 1899). Under increasing doses of tinct. belladonnæ for 6 weeks the incontinence of fæces disappeared, but nocturnal enuresis persisted. He was very nervous and had choreiform twitching with nocturnal and diurnal enuresis. Three months later the incontinence of fæces recurred, but disappeared again under treatment. In 4 cases there was incontinence of fæces alone. In 1, a boy, aged 7, after over-study suddenly developed incontinence of fæces. The sphincter appeared normal. After 3 weeks of treatment (fresh air and the administration of ergot) recovery took place. In 2 other cases the incontinence was due to the same cause. In the text-books there are few references to incontinence of fæces in children. Goodhart and Still state that the patients nearly always show some mental instability. The following cases have been observed by the writer.

CASE 1.—An emaciated boy, aged 10, was seen. At 7 he had diphtheria and 6 months later scarlatina. Thereafter he lost weight and power in all his muscles. He had difficulty in swallowing and fluid regurgitated through his nose. Incontinence of fæces had existed for 2 years. Under nutritious

diet, fresh air and tonics he recovered in 6 months.

CASE 2.—A big strong boy, aged 6½, was seen. Until the age of 4 he had both nocturnal and diurnal enuresis. Nine months before he was seen he suddenly lost control of the anal and vesical sphincters, after having been kept in-doors for several weeks. The anal sphincter seemed normal; the prepuce was very long but without adhesions. Under fresh air, exercise, atropine, and strychnine he at once improved. Three relapses followed; recovery rapidly took place under strychnine and atropine (½ gr. of each daily).

CASE 3.—A healthy-looking well-developed boy, aged 4½, had had incontinence of fæces and urine for a year. There were paroxysms of pain on micturition and hæmaturia. Under good food, fresh air, and strychnine the incontinence of fæces disappeared in 10 days but the incontinence of urine persisted. A vesical calculus was found and removed and he completely recovered.—*University of Pennsylvania Med. Bulletin*, Feb., p. 405.

Tobacco Deafness,

BY

DR. DELIE

CASE 1.—A boy, aged 13, whose hearing had always been good, developed slight deafness with loud noises of different kinds in the ear, and some vertigo. He was pale and thin and complained of dimness of sight. A tuning-fork placed on the vertex was heard normally, over the mastoid the duration of audibility was shortened. Low-pitched sounds were heard longer than high-pitched. The writer could hear a tuning-fork vibrating in the air for 23 seconds longer than the patient. There was no visible morbid change in the middle ear, nose or throat. The boy smoked 20-30 cigarettes a day. The writer diagnosed nicotine poisoning affecting the ears, and forbade tobacco. In 4 weeks the hearing was quite normal.

CASE 2.—A workman, aged 18, took to chewing tobacco. His mouth was rarely without a plug. Even when drinking he retained it, holding it between the jaw and the cheek. One day he was suddenly seized with vertigo and sickness, which lasted some days and left deafness behind. At first the deafness was profound, but it gradually improved without disappearing altogether. In the morning he could hear better than at night. He noticed that tobacco made him ill; he chewed less. When he came to hospital the vertigo had almost disappeared, but he complained of musical noises in the ears and hardness of hearing. The tuning-fork in the vertex was heard feebly on the right side, and on the left side there was a prolongation of hearing over the mastoid. There was marked diminution of hearing by aerial conduction, especially in the left ear. The tympanum, nose, and naso-pharynx were normal. A catheter examination gave a negative result. The writer diagnosed a severe affection of the internal ear, worse on the left than the right side, due to nicotine poisoning. A cautious prognosis was given in view of the sudden appearance of the symptoms which might be due to a lesion of some terminal branches of the auditory nerve. Tobacco was forbidden, 8 injections of pilocarpine were given, the body was massaged daily, and iodine was administered. After 2 months there was marked improvement, especially on the right side. A weak galvanic current was then used. Hearing on the right side was completely recovered, but on the left only about a third was regained.

CASE 3.—A young student in whose family there was aural sclerosis, and who had been operated upon for adenoids, came regularly to have his hearing tested. His middle ears showed incipient sclerosis. One day he complained of a sudden increase of deafness, with abnormal sounds, which continued, and 12 days later were aggravated. There was feebleness of hearing for medium

tones and upper tones. He smoked a great deal. Tobacco was forbidden, and iodine was administered. After some weeks the noises in the ear became intermittent, but the patient never recovered the hearing which he had before this exacerbation.

CASES 4 TO 8.—In 4 persons predisposed by heredity to aural sclerosis the abuse of tobacco had a manifest influence in causing an early development of the changes of that disease. Two youths, aged 20, who had always a cigar or cigarette in their mouths, lost in less than two years half of their hearing power and developed tinnitus, the intensity of which was out of proportion to the structural change in the ears. One of them, by strict abstinence from tobacco, was able to recover a little of his hearing, but he lost it gradually on resuming the cigarette. The second was a slave to tobacco and rapidly sacrificed his hearing, so that at 28 he was as deaf as a patient of 40 with sclerosis.

CASE 9.—A girl of 14, whose mother was deaf from sclerosis and whose brother was a deaf mute, began to smoke cigarettes at 17, the smoke of which she inhaled and blew through her nose. At 19, she heard a tuning-fork over the mastoids with difficulty. Some notes of the piano she could not hear at all, but she could hear conversation better than noises. Strong tuning-fork vibrations caused pain in being conducted through the air. There was slight vertigo if she smoked much. She gave up tobacco, but though treatment arrested the rapid progress of her deafness it did not improve her hearing.

The writer concludes that tobacco has a direct and selective action on the auditory nerves. Persons with a tendency to ear troubles should not smoke. If there is any hereditary tendency to sclerosis, smoking should be forbidden, especially to the young. Association with other poisons, e.g., alcohol or lead, increases the toxic effect of tobacco.—*Rev. Hebd. de Laryngologie, Otologie et de Rhinologie*, Jan. 28, p. 97.

Ulceration of the Frænum of the Tongue,

BY

MOUCHET.

This is a rare form of sublingual ulceration which has been chiefly described by Riga of Naples, in 1881, and after whom the disease is sometimes named. In a mild form it occurs in infants between the ages of 6 to 18 months. The ulcer varies from the size of a lentil to that of a half-franc piece and is situated on the frænum of the tongue from which it projects slightly. The edges are regular and the surface is covered with a greyish false membrane which is difficult to remove and is quickly reproduced if untreated. The characteristic feature of this ulcer is that it is solitary and usually unaccompanied by enlargement of the glands. There may be some salivation but no impairment of the general health. A more serious form is observed in children suffering from gastro-enteritis. In these cases the symptoms are those of the abdominal condition, the ulcer being similar to that present in the milder form. The ulcer described by Riga resembles no other lesion except the ulcer of the frænum, which occurs in whooping-cough from the pressure of the lower incisors during the paroxysms of coughing. Little is known as to the nature of this condition, except its connection with gastro-enteritis in badly-fed children. When intestinal symptoms are absent the writer regards the ulceration as due to purely local causes, such as the mechanical irritation of the frænum during suckling from pressure against the sharp border of the gum or lower incisors. There is little or no tendency to spontaneous healing, so that in all cases treatment is necessary.

The ulcer should be touched every 2 or 3 days with nitrate of silver or tincture of iodine. Should these fail it may be necessary to excise the ulcerated area and suture the resulting wound, as has been done in two

cases by Broca. In an infant who had suffered from this condition in its simple form for 6 weeks, the child's mother spontaneously pointed to the median lower incisor tooth as the cause of the ulcer. This tooth had been cut only some days before the ulcer was first observed, and had been so sharp and pointed that the mother had endeavoured to file it down at one side. As the ulcer did not improve after 3 cauterizations the writer removed the tooth and healing took place in 5 days.—*Gaz. des Hopitaux*, 5 Jan., p. 3.

German Specific against Seasickness.

Bright-red spectacles, accompanied by the internal use of calomel, furnish a new German specific against seasickness. Seasickness is due to a lack of blood in the brain, while (according to Epstein's investigations) the effect of red is to send blood to this organ. By looking at one point for some time through red glasses the patient is cured.—*The Dietetic and Hygienic Gazette*.

SURGERY.

Surgical Treatment of Chronic Dysentery.

The practice of subjecting inveterate cases of dysentery to through-and-through colonic irrigations by means of an artificial opening made into the large bowel at or near the position of the cæcum is a procedure which naturally suggested itself by the post-mortem lesions found in the fatal cases, and one which has been adopted many times, and apparently with a gratifying degree of success, if conclusions drawn from the scattered published cases can be considered convincing. It will be borne in mind that Weir proposed a most ingenious modification in surgical technique, in that he apparently discovered a useful function for the appendix. In place of performing a colosto-

my in persistent dysentery, he advocated the suturing of the appendix to the parietal wound, and the utilization of this organ for the purpose of practising through-and-through irrigations. Such a procedure is an extremely simple one, and leaves an opening which is easily and safely closed by subsequent operation.

Macdonald (*New York and Philadelphia Medical Journal*, Nov. 5, 1904) reports two cases in which chronic dysentery was treated by surgical methods. The first one had lost 60 pounds in weight, and had been subjected to most faithful treatment by high enemata, antiseptics, astringents, and opiates by the mouth, and by careful regulation of the diet. The disease had lasted about seven months when he was operated upon. Through a colostomy opening potassium permanganate irrigations were practised twice daily. Two gallons of 1:10,000 solution were used. The patient's recovery was complete, though some difficulty was experienced in closing a fæcal fistula. The second patient had suffered from dysentery for three years. He had lost over 70 pounds.

As a result of this experience Macdonald concludes that all chronic cases of dysentery should be operated on at once. He expresses a prophecy to the effect that the operation of colostomy will in the future be just as common as wiring a fractured bone.

Although the tendency of medicine is steadily toward surgery, it is to be doubted that the practitioner will recognize the need for a prompt opening of the bowel in dysenteric cases until at least a prolonged and faithful trial of approved medical methods has proved absolutely futile.—*Therapeutic Gazette*.

Suture of the Brachial Artery,

BY

DR. GLAUNER.

Suture of the brachial artery was first successfully practised by Lambert and Hallowell, towards the end of the eighteenth century, but fell into oblivion. Recently it has been revived (*Review*, 1900, p. 538, and 1901, p. 441).

A youth, aged 16, on Sept. 2, accidentally stabbed himself with a knife above the left elbow, while the arm was flexed. There was considerable arterial hæmorrhage, and two handkerchiefs which had been knotted round the arm were saturated with blood. The radial pulse was absent. A rubber tube was tied round the arm below the deltoid muscle. At and parallel to the inner border of the biceps and a finger-breadth above the elbow was a cutaneous wound $\frac{1}{2}$ in. in length. Nothing but clot was visible. As on loosening the tourniquet arterial hæmorrhage recurred, the wound was prolonged upwards for nearly an inch, and 2 incisions, each $\frac{3}{4}$ in. long, were made on either side of and at right angles to its lower end in the form of an inverted T. The writer was without assistance, but the edges were satisfactorily retracted by the weight of 2 forceps one on either side. The clot was removed and some superficial veins were ligatured. The median nerve was exposed and on its outer side was the brachial artery and the 2 venæ comites, one of which had been divided. The artery had not been divided in its continuity, but was perforated for a distance of $\frac{3}{4}$ in. on its anterior wall. In order to avoid the danger of gangrene the writer decided to suture the wound rather than to ligature the vessel. The wound was closed by continuous suture, 4 stitches being required, and one interrupted suture at the upper end. The sutures included the intima. Conjunctiva needles and No. 0 catgut were employed. A stout catgut ligature was loosely placed round the vessel above and below the wound, and the ends were left

long so that if necessary immediate ligature might be practicable. On removal of the tourniquet there was slight hæmorrhage from the needle-tracks and the wound. After compression with iodoform gauze for about a minute the hæmorrhage continued and the writer almost decided to tighten the ligatures. But after further applying pressure for two minutes the hæmorrhage ceased. The catgut had become swollen and had plugged the needle-tracks. The untightened ligatures were left long and the unclosed cutaneous wound was dressed with gauze. The arm was fixed at a right angle. The radial artery was plainly perceptible and remained so. There was no further hæmorrhage and, on Sept. 5, when the dressings were changed, the wound was granulating. The 4 ends of the catgut ligatures were cut short. If the arm was extended the pulse became smaller and scarcely perceptible. The arm was kept fixed at right angles for a fortnight more. The left radial pulse was smaller, and the left hand was colder than the right. In 3 weeks the wound had healed. There was never any oedema.

A year later the brachial pulse was plainly perceptible in the upper half of the former incision. When the arm was flexed the left radial pulse was practically equal to the right, but when extended it was almost abolished. Pressure on the distal end of the cicatrix caused cessation of the left radial pulse as long as it was continued. These facts showed that the brachial artery was permeable at the site of the wound. For if the radial pulse depended on the formation of a collateral circulation it would not be influenced by extension of the arm or pressure on the cicatrix. There was no sign of a traumatic aneurysm. The writer attributes his success to the fact that no forceps were used to grasp the artery during its suture, and especially to the fact that the intima was not touched except by the needles. Forceps are unnecessary if a continuous suture is used.—*Deutsche Med. Woch.*, Nov. 3, 1904, p. 1649.

Operative Treatment of Prolapse of the Rectum.

Becker has performed Rehn's operation for prolapse of the rectum on eleven patients. A circular incision is made around the anus at the mucocutaneous junction. The mucous membrane is dissected free from the remainder of the prolapsed rectum. Five or six sutures are then introduced through the skin at the anal margin to fold up and secure the prolapsed muscular coat just within, or above, the more or less relaxed external sphincter which serves to support it. The mucous coat is then trimmed off and united to the cutaneous margin. The line of suture is covered with a thick layer of dermatol in two-per-cent boric solution. Four of the patients were adult males, and seven were children from two to four years of age, having a prolapse from 6 to 10 centimeters in length. All the cases were cured and have remained free from recurrence.

OBSTETRICS AND GYNÆCOLOGY.

Chyluria Complicating Pregnancy.

Dr. J. C. Holdich Leicester, I.M.S., read a short communication on a case of chyluria in an Eurasian, 18 years of age. She had been married 8 months, and had advanced to the 8th month in pregnancy. She presented herself for treatment at the Eden Hospital for Women, Calcutta, on account of severe pain on micturition. The urine had become milky for the first time on the previous day. For 5 months she had had a swelling in the right thigh, which had occasionally given rise to pain. The swelling felt like an enlarged gland in the femoral ring; it quickly subsided. On examining the urine drawn by catheter, it was milky white in colour, with a faint pink tint, and contained some white sediment. Specific gravity 1.022, faintly acid; albumen $\frac{1}{4}$; traces of blood; chyle present; phosphates in excess.

On microscopic examination, besides phosphates, oxalates, and blood corpuscles, bladder epithelium and several filaria embryos were found. The urine was found to clot shortly after being passed, but soon broke down again and remained fluid. Both the labour and the puerperium passed naturally except for a rise of temperature to 101.8° F. on the 6th day after delivery. The urine as a rule continued to preserve its milkiness. The blood was examined on three separate occasions, and on each was found to be swarming with filaria embryos. The case resisted all treatment, whether of diet, drugs or posture, and the condition of the urine remained practically the same throughout. The patient's general condition showed improvement during the time she was in hospital. In the author's opinion there was little doubt that in this case the pregnancy was the exciting cause of the chyluria, the pelvic lymphatics having been previously affected by filarial obstruction of the thoracic duct.—*The Journal of Obstetrics and Gynecology*.

Threatened Abortion from Eruption of the Wisdom Teeth,

BY

GURRIN-VALMALE.

A woman, aged 27, had suffered 2 years before in the course of her first pregnancy, from severe neuralgia due to the eruption of the upper wisdom teeth. In the sixth month of her second pregnancy she was seized with severe headache with a temperature of 101.6°. Pain in the back extending to the hypogastrium accompanied by a slight discharge of blood from the vagina quickly followed. Uterine contractions could be distinctly perceived, but the cervix was not altered. The condition was attributed to influenza, and she was given morphia and antipyrin. On the following day the headache was less but there was some difficulty in swallowing. On the third day the lower wisdom teeth were observed perforating the gum. The symp-

toms then rapidly subsided.—*Montpellier Medical*, Feb. 12, p. 162.

Bathing during the Menstrual Period.

Edgar concludes in the *American Journal of Obstetrics* for September, 1904, that all forms of bathing during the menstrual period are largely a matter of habit, and usually can be acquired by cautious and gentle progression, but not for every woman does this hold good, and surf bathing, where the body surface remains chilled for some time, should always be excepted.

A daily tepid sponge bath (85° to 92° F.) during the menstrual period is not only a harmless proceeding, but is demanded by the rules of hygiene.

In the majority if not all women, tepid (85° to 92° F.) sponge bathing after the establishment of the menstrual flow, namely second or third day, is a perfectly safe practice.

Further, in most women the habit of using the tepid shower or tub bath after the first day or two of the flow can with safety be acquired.

Delivery of Twins with an Interval of Seventeen Days.

Paulin (quoted in the *Interstate Medical Journal*, July, 1904) reports the case of a married woman of twenty-five who was delivered of a living child, and soon thereafter of a normal placenta, during the eighth month of her second pregnancy. A second fetus was distinctly palpable, its heart sounds being clear and loud. Some soft tissue could be felt in the vagina, and adjoining it on the left a cervix was found, comparatively hard and firm, its external orifice being partially closed. The examining finger could not pass through the cervical canal.

Labor pains stopped completely, and the woman went to sleep. The next day no uterine contractions could be observed. There were no lochia, nor any signs of the secretion of milk. Nine days later the patient left the bed.

Sixteen days after the delivery of the first child the membranes of the other fetus ruptured suddenly, and the next morning another living child was born. The placenta was shortly afterwards expelled. Like the first, the second puerperium took an absolutely normal course. This time the breasts soon became engorged, and milk was secreted in sufficient quantities for both children. An examination a few weeks later showed that the uterine cavity was divided into two sections by a broad septum, the presence of which was ascertained with the uterine sound. On palpation the uterus did not show any anomalies.

Menstrual Pains of Virgins— Treatment.

Several days before the expected menstrual period Touvenaint (quoted in the *Therapeutic Review*, August, 1904) prescribes, three times daily, 15 drops of the fluid extract of *senecio vulgaris* in a hot infusion of lemons. As soon as the menstrual period appears the patient is put to bed, poultices containing laudanum applied to the abdomen, and suppositories containing 1-15 grain each of extract of *cannabis indica* and *belladonna* are inserted. Enemata containing laudanum are also advised, or 10 drops each of tincture of *viburnum prunifolium* and *piscidia erythrina* is given four times daily in a hot infusion. For the lumbar pains friction is used with:

Chloroform, 10 grammes;
Oil of musk,
Essence of cloves, aa 5 grammes;
Ether, 15 grammes;
Alcohol, 90 grammes.

Pregnancy and Labour in Primiparae of 13, 14, 15, and 16 years,

BY
GACHE.

Annales de Gynecol. et d'Obstet., December, 1904.

The author gives his experience with regard to pregnancy and labour at the Rawson Hospital, Buenos Ayres. His observations include 91 cases. He concludes that women of 13, 14, 15 and 16 years are not more exposed than others to risks of abortion or complications of pregnancy. Only four cases of contracted pelvis were noted, in three of which forceps were applied with good results. Labour in cases of girls aged 13-16 was generally normal, and was rarely prolonged. In the 91 cases (primiparae), 85 were vertex, five breech, and one aborted at three months. Forceps were necessary six times, three for slight pelvic contraction, and three for some prolongation of labour. Vulvo-vaginal and perineal lesions were rare and healed rapidly. No abnormal insertions of the placenta were noted, and the labours were in all cases normal. The mean weight of the foetuses was 3,039 grammes, the proportion of sexes being 44 boys and 45 girls.—C. HUBERT ROBERTS.

A Case of Unilateral Compression of the Ureter during Pregnancy, with severe general Symptoms,

BY
AHLEFELDER.

Monats. fur Geburts. und Gynakol. Bd. xxi., Ht. 3.

As compression of the ureter during pregnancy has always been looked upon as one of the possible ætiological factors in the causation of eclampsia, it is interesting to note a case in which compression undoubtedly occurred and yet no eclampsia resulted.

The patient, 26 years old, had been confined one year previously, and at the end of

that pregnancy suffered from high fever and severe pain in the right lumbar region. The condition was so serious that peri-nephritic abscess was diagnosed, and the kidney was exposed and incised. No pus nor any other obvious lesion of the kidney, was found, and so the wound was closed. Three days later the child was born without difficulty, the temperature having fallen in the meanwhile. Although the patient had afterwards a thrombosis of the veins of one leg with a pyæmic temperature, she made a good recovery. One year later the patient again had an attack of severe pain in the right lumbar region, with a rigor and high fever, being then in the ninth month of pregnancy. This time an elastic tumour could be felt in the renal region, but its outlines could not be mapped out on account of the pregnant uterus. The diagnosis of compression of the right ureter was made, and on this account it was determined to empty the uterus as quickly as possible. This was carried out by introducing an India-rubber metureur into the uterus. In four hours the bag was expelled and an hour later the foetus was born. The pain improved after this and the temperature fell to normal. The kidney tumour, however, remained just the same until after the fourth day, when the patient was permitted to adopt many changes of position. Then it was found that the tumour suddenly collapsed and the bladder, which had been previously emptied by catheter, suddenly filled up. The urine which was drawn off was of the specific gravity of 1023, acid in reaction and contained no albumen or sugar, but after centrifugalisation contained bladder epithelium, epithelium from the pelvis of the kidney, renal casts, leucocytes, and some red-blood corpuscles.

The fact that in this case the urine showed no signs of infection is interesting, considering the high temperature before the emptying of the uterus. It is not possible in the present state of our knowledge to

say why there should be fever with such a condition of damming up of the urine by ureteral compression. The condition seems to be somewhat parallel to that of "urethral fever" after slight operations. There can be no doubt, however, that ureteral compression during pregnancy is an important cause of pyelitis, in which case it would appear that the infection travels somehow by way of the intestine. It is of great interest, too, to note that the ureteral compression occurred not only in the first but also in the second pregnancy, a point directly antagonistic to the usual view.—THOS. G. STEVENS.

The Prophylactic Treatment of Post-Partum Haemorrhage due to Uterine Inertia,

BY
D'ERCHIA.

La Ginecologia, September 30th, 1904.

Hæmorrhage, due to inertia of the uterus, sometimes puts the patient into very serious danger, unless the method of plugging recommended by Duhrssen is properly carried out at the right time. In order to avoid this method of treatment, or, at any rate, to enable one to employ it to a limited extent only, the author advises the use of ergotin, given hypodermically before the second stage of labour. He publishes observations on 36 cases, treated in his Geneva Clinic, and in his private practice, in none of which he had any special anxiety. He used Bonjean's ergotin in doses varying from 3 to 11 grains. The clinical and experimental investigations of Acconci, and those of Martinetti and others, on the action of ergotin in cases of uterine inertia, support this method of treatment, but it should be used with some caution. Among the different preparations of ergotin, some, such as those of Tarnet, may produce, even in small doses, a real tetany of the uterine muscle. According to the author Bonjean's ergotin, given

hypodermically, before the second stage is in progress, renders the use of plugging for subsequent hæmorrhage seldom necessary, and thus limits to unusually severe cases a method of treatment, which requires great care in asepsis and antisepsis.—OLIPHANT NICHOLSON.

A Case of Repeated Eclampsia,

BY

CARACCIO.

Arte Ostetrica, Vol. xxiii., No. 20.

The clinical history of the patient showed that out of eight pregnancies, six were accompanied by eclampsia. The last pregnancy terminated fatally, and at the necropsy the left kidney was found to be in a state of advanced chronic nephritis, while the right showed traces of acute nephritis. These facts, in the author's opinion, explain why the eclamptic condition repeated itself in so many pregnancies. The case is also interesting from another point of view, from the appearance of the eclamptic symptoms very early in gestation—almost always at the third or fourth month. The case deserves consideration because the attacks noted in the last pregnancy were not typically eclamptic, but more closely resembled uræmic seizures. Still, in this special instance, the facts lead one to conclude that the case was really one of eclampsia of the rare and exceptional form, where coma was the most marked feature.—OLIPHANT NICHOLSON.

Injuries due to Gynæcological Examinations,

BY

HOWARD A. KELLY.

The subject of injuries due to gynæcological examination has received little notice. The injury may be due to the delicate nature of the tissues or to roughness in examination. A thin-walled papillary cyst, a vascular cystic sarcoma of the ovary, an extra-uterine pregnancy, or a pelvic abscess may be ruptured into the peritoneal cavity. Small

effusions of blood may be produced under the skin of the abdomen from bruising. The writer has never seen a case of injury to the vagina, but he has seen 4 cases of perforation of the rectum which is a much more delicate structure. All occurred in his hospital practice during the last 15 years. The examiners were not inexperienced students but competent assistants and, in one case, himself.

CASE 1.—A married woman, aged 52, was placed under ether in order to be curetted for menorrhagia. During examination the finger was pushed through the rectum into the peritoneal cavity. An incision was at once made in the posterior fornix. A vertical rent was found in the rectum 4 cm. above the cervix. It was closed with fine silk sutures and recovery followed.

CASE 2.—A married woman, aged 63, had cystitis. Under ether an examination of the pelvic organs was made and they were found to be normal. The finger was pushed through the rectum into Douglas's pouch. An operation was performed similar to that in the previous case and an iodoform gauze drain was brought out through the vagina. She recovered with a fæcal fistula which closed spontaneously.

CASE 3.—A woman, aged 58, had a large left ovarian cyst widely adherent to the intestines and the omentum. During examination, before the anaesthetic was given, the writer pushed his finger through the rectum into the peritoneal cavity. The abdominal incision for ovariectomy was made, the tumour was removed, and the rectal tear was sutured. No soiling of the peritoneum was apparent and drainage was not used. Recovery was uneventful.

CASE 4.—A woman, aged 28, suffering from menorrhagia was anaesthetised for curetting. In the course of a rectal examination the finger was pushed into the perito-

neal cavity. A piece of gauze was pushed through the opening and brought out at the anus. Next day, there were symptoms of peritonitis. The abdomen was opened, the tear was sutured, and the pelvis was drained. The patient slowly recovered.

The writer attributes these accidents to the age of the patients and the weakened muscular tone of the bowel. In 3 of the cases the average age was 57. He recommends that in all cases the peritoneum should be opened and the rent sutured from the peritoneal side. Two layers of fine silk sutures are better than one. An iodoform gauze drain should be inserted through the vaginal vault. The most convenient route is through the posterior fornix unless the abdomen is about to be opened, but if the perineum and the vagina are rigid and contracted an abdominal incision would be preferable. In either case the operator must be skilful in sewing at a distance with long instruments. The sutures should be well placed, penetrating the rectum as far as the mucosa, and accurate apposition should be secured. As a rule no food but albumin water should be given for from 5 to 7 days. The anus should be thoroughly dilated and if a rectal tube can be tolerated it will carry off the gases and keep the parts at rest.

To avoid such injuries rectal examinations should be made with the utmost gentleness. It is well to empty the bowel before hand. If the patient is then placed in the genupectoral position and a speculum is introduced so as to secure a maximum of distension with air, on placing the patient in the dorsal position the rectum will be found expanded and in closer relation to the pelvic structures. The examiner should avoid the natural impulse to invaginate the wall of the rectal ampulla on the finger and push it high in the pelvis. He will not commit this error if, after introducing the finger into the ampulla, he next seeks the so-called "third sphincter"—the rectal valves behind

the cervix. The finger should be introduced between these, then up into the pelvis where the bowel lies in contact with the posterior surface of the uterus and left broad ligament. The examiner should be at ease and the fingers should be flexible during the examination. If the whole arm is made rigid in the effort to push in the perineum in order to gain a few cm., the hand also is apt to become rigid. The writer avoids rigidity of the arm by resting his elbow against his hip and pushing his arm from the hip.

THERAPEUTICS.

Treatment of Ringworm of the Scalp by the X-rays,

BY

R. SABOURAUD AND HENRI NOIRE.

In 1896 Sabouraud pointed out that no cure for ringworm of the scalp was known, and indicated that the obstacle to treatment was the inaccessibility of the roots of the hairs which could not be reached by any external antiseptic. Since then he has tried to find an agent capable of suspending for a time the activity of the papilla which produces the hair and has experimented with the toxins of depilatory organisms, and with the salts of thallium, but without success. Radiotherapy has, however, given him good results. He derived his current from static machines, and measured carefully the amount of x-rays applied by Holzknechts' radiometer, or by a platinocyanide of barium radiometer invented by himself. In this way he was able to avoid dermatitis. One application of the rays of sufficient strength to convert a test-paper impregnated with platino-cyanide of barium to the tint of B. of Sabouraud's radiometer is enough to produce epilation. Before treatment the nature of the organism was determined, and the number of affected spots counted. If there were not more than 5, tincture of iodine was painted round each and the hair was cut with scissors. The rays were applied to each spot separately. If

there were more than 5 spots, complete epilation was performed in the following way. Six large circles were described on the scalp—2 on the temples, 1 on the vertex, 2 parietal and 1 occipital, and to each of these areas and the spaces between them the rays were applied. When a spot had been treated it was covered with a disc of lead held on by an elastic band, and so protected from the rays applied to adjacent spots. Every night after the beginning of treatment an ointment of 10 gm. of oil of cade in 25 of lanoline was applied to the scalp, and washed off in the morning. After the washing, a lotion of alcohol (60 per cent.), 90 gm., and 10 gm. of fresh tincture of iodine was rubbed in. This prevents the falling out of hairs, which are loaded with living parasites, from infecting adjacent areas. Sometimes a crop of impetiginous pustules breaks out on the edge of the areas treated. This disappears on treatment with a lotion of precipitated sulphur, 10 gr., 90 per cent. alcohol 10 gr. and distilled water 80 gr. At the end of 30 days the scalp is thoroughly examined and if there is no ringworm present the child receives a certificate to allow it to attend school; but it must report itself every 15 days until the new hair has grown again.

At first a scalp under treatment shows no change; but about the seventh day there is a slight erythema over the area to which the rays have been applied, which gives place in about 4 days to a faint pigmentation. About the fifteenth day the hairs begin to drop out and depilation is then rapid, the area soon becoming bald. The rays do not act as parasitocides, for cultural experiments prove the hairs shed to be full of living organisms. The hair grows again slowly.

This method of treating ringworm has enormous advantages. It is speedy and sure: a child is cured in about 3 months instead of 2 years. In Paris, where children with ringworm are kept in special hospital schools, Sabouraud estimates that he has saved the

city 1,500,000 francs.—*Presse Medicale*, Dec. 28, p. 825.

Treatment of Leukæmia by the X-rays,

BY

PROF. C. BOZZOLO.

A girl, aged 22, suffered in May, 1903, from dyspepsia, palpitation of the heart, and amenorrhoea. Two months later she noticed swelling of the abdomen. At the end of September she had right pleurisy which was followed by left hæmorrhagic pleurisy. On examination she was found to be very pale; the spleen was much enlarged and hard, and extended downwards to the pubes and to the right as far as the anterior superior spine of the ileum. The temperature ranged from 103.1° to 104°. The hæmoglobin was 35 per cent., the red corpuscles numbered 2,800,000 and the white 14,000 per cm. Of the latter 51 per cent. were polynuclear neutrophiles; 8.8, eosinophiles; 14.7, myelocytes; 22.5, lymphocytes; 1.1, basophiles; and 2.2, transition forms. Some of the red corpuscles were nucleated.

Treatment with the x-rays was begun on Jan. 19, 1904, the applications being made to the splenic region, the elbows, and the knees. The temperature fell and 18 days later became normal. The splenic dulness diminished, and 5 months after the first application extended internally to an inch on the left of the median line and inferiorly to above the level of the umbilicus. Three months after the first application the leucocytes were reduced to 10,000; the myelocytes had disappeared, and the polynuclear neutrophiles, hæmoglobin, and red corpuscles were normal. The general health was much improved, the patient could work all day, and menstruation returned and took place regularly. However, about the time of the report some myelocytes re-appeared in the blood and the writer apprehends a relapse.—*Giornale della R. Accademia di Medicina id Torino*, July-Aug.

Administration of Water before giving Chloroform to prevent Vomiting.

Professor Denuce has discovered a simple method of preventing vomiting after administration of chloroform—the administration of water before the anæsthetic is given. During the induction of anæsthesia acts of deglutition take place and result in the swallowing of air charged with chloroform. The chloroform irritates the mucous membrane of the stomach, which according to the usual practice is empty, and causes vomiting. Hence the efficacy of lavage of the stomach in the treatment of the vomiting. The writer's idea was to prevent the vomiting by not allowing the chloroform vapour to come in contact with the mucous membrane of the stomach. This he accomplishes by having the stomach full of fluid instead of empty. The usual practice is to withhold fluids before the administration of chloroform from fear of vomiting and the passage of the vomited matter into the air passages. But most troublesome vomiting may occur with an empty stomach, and the vomiting of a small quantity of water would not be attended with much danger. Moreover, as suggested, the presence of chloroform in an empty stomach is probably the most frequent cause of the vomiting. In attempting to ensure the presence of fluid in the stomach it must be remembered that liquids may be quickly absorbed from the stomach or pass into the intestine.

After several trials the writer adopted the following method. An hour and a half before the operation he gives the patient a "large glass" of water (200 gm.). The dose is repeated every half-hour until the time of operation, when the last one is taken. Thus in all 4 glasses are taken. The writer's results exceeded his expectations. Many of the operations were long and complicated and included double ovariectomy, radical cure of inguinal hernia, and operation for hydatid

cyst of the liver, but in none did vomiting occur.—*Gaz. Hebdom des Sciences Med de Bordeaux*, Dec. 25.

Carbolic Acid in Vomiting,

BY

M. DILLS, M. D.,
Carlisle, Ky.

I desire to call attention to the administration of carbolic acid in cases of vomiting. I care not from what cause.

Clinical.—A patient with extreme nausea, pain in stomach and bowels; stomach irritable and vomits everything taken; cause frequently unknown. Dissolve one minim carbolic acid, pure, in ten minims alcohol. Put this in half-glass of water, and give teaspoonful every thirty minutes until patient is relieved.

In sub-acute troubles we so often find in children with diarrhoea, I find nothing equal to this. Here is a remedy too much neglected. You know its properties, do not hesitate to give it. You will be well paid for the trouble.—*The Medical Brief*.

The Therapeutic Value of Relaxing Climates.

There is a widespread failure to recognize that other elements than purity of atmosphere have to be considered before the therapeutic value of any particular climate can be appreciated, says Dr. Leonard Williams (*Edin. Med. Jour.*). Such factors as moisture, sunshine and exposure all take their share in influencing metabolic changes, and hence ought to be considered in the effort to guide the application of climatic treatment in any individual case. The usual "bracing climate" generally advised is without doubt refreshing and stimulating to persons in moderately good health; on the other hand, it may exercise a disastrous influence in certain pathological conditions. For chronic invalids, and particularly those

suffering from chronic pulmonary or renal troubles, or chronic heart or nervous disease, Dr. Williams would advise a "relaxing climate." Its action is to decrease metabolism and to lower generally the activity of, the vital processes. For instance, among pulmonary affections take emphysema. The moisture of the atmosphere in a "relaxing climate" acts as a sedative to the respiratory passages and, by minimizing changes in temperature, protects the patient from the extremes to which, in a "bracing climate," he would probably be exposed. Similarly in chronic renal disease the relaxing climate both diminishes the amount of waste material produced in the tissues and assists the action of the skin and lungs in their compensatory excretory function. Hence the work of the damaged kidneys is diminished and the dangerous complications which are associated with renal disease are delayed. Again, in chronic cardiac disease the lowered function and diminished blood-pressure which attend on life in a relaxing climate relieve the strain on the cardiac muscle, and so favor its possibilities of endurance. In the treatment of the degenerative processes which affect the central nervous system the relaxing climate is the only safe medium. The vital forces have to be conserved so that the unfavorable movement of the morbid process may be checked. In neurasthenia and hysteria the therapeutic problem, so far as climate is concerned, is less simple. Temperamental considerations and local circumstances must be borne in mind, as also the mental attitude and reaction of the patient. The possibilities or otherwise in reference to suitable baths and other mechanical methods of treatment are also guiding influences in the selection of a suitable climatic station, and this more particularly in cases of chronic renal and chronic cardiac disease.—*The Dietetic and Hygienic Gazette.*

The Therapy of Cholagogues,

BY

J. C. DENSTEN, PH.D., M. D.,
Scranton, Pa.

A "cholagogue" is any medicine which will evacuate "bile."

Now the simple fact of evacuating bile does not explain the great therapeutic benefit derived from the administration of cholagogues in many diseases.

We who have practised medicine for a number of years have learned from experience that in treating all fevers, and especially those of malarial origin, it is a cholagogue which becomes pre-requisite to all other treatment in order to prove more efficient in after-treatment.

In a case of intermittent fever, for instance, we have found empirically that to give quinine without first administering a cholagogue, is practically to fail in a cure, and the etiology of this particular therapy is evident when we know the therapeutic value of bile.

Bile is an antiseptic—an antitoxin—and a bactericide, and it has been ordained specifically, from the beginning of animal creation, as a part and parcel of all animals containing a liver, with the express purpose of giving to the alimentary canal a natural antitoxin—germicide and antiseptic—for the promotion of health.

When the liver becomes sluggish and fails to manufacture a requisite amount of bile sufficient to antisepticise daily the aliments, then it is that fevers and various diseases are engendered. So we have learned that effective treatment of diseases, especially fevers, should be directed first to stimulating the liver, increasing and evacuating bile into the alimentary canal, to clean up, antisepticise and evacuate from the canal all sepsis and bacteria, which have given

rise to the disease. When this is thoroughly and efficiently done there is an abortion of the dreaded disease and prognostications are favourable toward a speedy recovery.

The most efficient and effective cholagogue perhaps to be found in the physician's armamentarium is hydrgr. chlorid., mite, which should be given in small doses (one-tenth to one-fourth grain) every fifteen to thirty minutes, combined with soda bicarbonate as an adjunct.

In this form of administration three grains of calomel will prove more efficient as a cholagogue than the ten grains at one dose given by our preceptors.

Podophyllin is largely prescribed and is efficient in emptying the small intestines and as a cholagogue bears the same therapeutic relation to the vegetable as calomel does to the mineral kingdom.

About twelve to fifteen hours after beginning the administration of a cholagogue, especially calomel, there should be a flushing of Nature's sewer with some saline or liquid magnesia.

Hippocrates, the "Father of Medicine," gained all his knowledge empirically, and arrived at conclusions by intuition, the only means at his disposal being by observation. He possessed no knowledge of either anatomy or physiology, yet his treatises on description of diseases and methods of observation are in line with modern medicine. He said: "We must extract the rules of practical medicine, not from the sequelæ of consequences, no matter how probable, but from experience directed by reasoning," and this philosophy is as true to-day as it was then—four hundred and twenty years before Christ.

Theory is often a good thing to possess, but practical experience makes one more perfect. Theory may be hypothetical, and

as such, if followed, may end in failure. Medical theories make a practitioner feel more confidence in himself in the pursuit of first practice, perhaps, and a physician when lost may find himself by consulting theories, but the empirical knowledge obtained by and through applied practice and observation is lasting, truthful experience, which leads up to confidence and perfection, and the sooner the student of medicine gets down to experimental practice the sooner will he be fitted, by experience, for the curing of diseases.

In many countries and even among savages and barbarians, the natives have learned by experience to give bile as an antidote to bites of venomous snakes, with undoubted success and lasting cures. It has been reported and substantiated that hydrophobia has lost its terrors to the natives of Bengal since they have discovered an antidote in the feeding to the one bitten a portion of the yet warm liver of the slaughtered dog or animal which inflicted the bite or wound, the bile in the liver acting as an antitoxin. Bile has been proved an effective immunizer by several scientific investigators and Nature and common sense have been trying to teach us the intended use of bile since man's creation and it may be regarded as an axiom that there is a specific purpose in every act, production and phenomenon of Nature. Therefore, bile being a normal, natural production of the liver a certain amount of it is daily necessary for health, within our alimentary canal; and when from any cause there is insufficient of this substance to sufficiently antisepticise the tract, bacteria accumulate, sepsis results and disease is the sequelæ. When we, therefore, suspect bile to be deficient, we may reproduce sufficient by the stimulating action of a cholagogue.—*The Medical Brief.*

OPHTHALMOLOGY.

The Non-Operative Treatment of Trachoma.

DR. F. J. PARKER (in *Medical Record*) advises as follows: After thorough cocainization, the everted lids are rubbed hard three times a week with a cotton applicator dipped in bichloride 1-500. At home iced cloths and drops of an organic silver compound morning and night. After the conjunctiva has become smooth, treatment is continued by the application of a solution of tannic acid in glycerine, forty grains to the ounce. In the variety with hard follicles the copper sulphate crayon is applied to the conjunctiva, excess being washed away with boric acid. In the third stage, with cicatricial contraction of the lids and pannus, the writer recommends rubbing the conjunctival surface with castor oil, and making superficial linear scarifications with the knife. Copper crayon is also useful. Pannus should be treated by hot applications and atropin. Larger vessels may be divided at the corneal margin by the actual cautery.

The following slip is advised to be given to all trachoma cases, and will be found to be of much use in large clinics: *Instructions to those having Trachoma*.—Trachoma is a contagious disease of the eyelids, which if neglected will cause suffering and injury to the sight. To avoid infecting others, those having the disease should observe carefully the following instructions:

1. They should have their own towels, handkerchiefs, wash cloths and toilet articles, which under no circumstances should be used by others
2. They should sleep alone.
3. Avoid rubbing or touching the eyes, as the contagion may be carried on the fingers, and infect others through articles handled.
4. The hands should be cleaned often with soap and water.

5. Treatment should be attended to regularly, and continued until pronounced cured by the physician.—*The Canadian Practitioner and Review*.

Foreign Bodies in the Eyes of Children.

In the *British Journal of Diseases of Children* for November, 1904, Stephenson gives the following advice on this subject. He says that nine times out of ten the foreign body lodges on the inner surface of the upper lid, in a small groove (the subtarsal sinus) which runs parallel with the free border of the eyelid. Pain and discomfort are then considerable, owing to the cornea being continually fretted by the movement of the upper eyelid. Removal is quite a simple affair. It is merely necessary to evert the eyelid, and to lift off the substance with the point of the small instrument sold for the purpose, and known as the "corneal spud." A piece of damp cotton-wool, twisted to a point, may also be employed for the purpose in the absence of a more formal instrument. A very remarkable case was reported by William Mackenzie in his "Practical Treatise on the Diseases of the Eye" (fourth edition, 1854, p. 231). A child was brought suffering from severe inflammation of one eye, accompanied by a purulent secretion. From under the edge of the upper lid there projected a black, roundish body, which at first view even so acute an observer as Mackenzie thought might be a protrusion of the part of the iris through an ulcer of the cornea. His surprise was great when, on cautiously raising the upper eyelid, he found this was a case not of figurative but of real myoecephalon. A common house-fly had been firmly lodged for eight days between the eyeball and the upper eyelids, its head projecting in such a way as to produce the appearance described.

Foreign bodies, as already said, may lodge in the sulcus that lies above the upper eye-

lid, the superior cul-de-sac, and in that position they give rise to little discomfort and may readily be overlooked. In the latter event the most anomalous appearance may be met with, particularly when the substance has been present for several weeks or months. A child, aged five years, presented a red and fleshy mass, as big as a peanut, growing out of the eye, and springing from the outer end of the upper conjunctival sac. Under an anesthetic the author snipped away the growth, and found at its point of origin from the conjunctiva a bit of straw nearly half an inch in length. He has met with several similar cases, without exception in young children. Dr. Deschamps, of Grenoble, has recently pointed out that in practically every case of so-called polypus of the conjunctiva that has fallen under his notice a small embedded foreign body has been the cause of the mischief. While it is true that in most cases these polypi originate from the superior cul-de-sac, yet he recently met a case where such a growth was situated in the ocular conjunctiva, 6 millimeters or so from the edge of the cornea. The appearance presented was that of a fleshy mass, the diameter of which measured 4 millimeters. It was removed, and a little piece of bristle from a bass broom found to lie at its root.

A foreign body, usually an eyelash, may lodge in the upper or lower punctum lacrymale, a position where it may lead to considerable irritation of the eye. The author has twice removed cilia from the lower punctum. At the Ophthalmic School it was not an uncommon event to remove short hairs from the puncta of boys a day or two after the barber had visited the institution. Certainly, in the author's experience, foreign bodies in the puncta are not so rare as current statements might lead one to think.

A slight injury of the cornea, such as is inflicted by a foreign body, is in elderly persons with unsound tear-passages the common cause of one of the most destructive forms of

corneal ulceration, the so-called *ulcus serpens* or *hypopyon-keratitis*. We distinguish between foreign substances embedded superficially and deeply in the cornea. The former, much the more common, should be removed as soon as they are found, the eye having first been rendered insensitive by a few drops of cocaine, 2 per cent. and adrenalin hydrochloride 1:1000. In very young children a general anesthetic, however, will almost certainly be required. The substance is taken away with the corneal spud or by means of the twisted wool mentioned before.

It is with deeply embedded bodies, however, that mistakes in diagnosis and treatment are likely to arise in children. A rule might be formulated, namely, that whenever you come across in a child a lesion of the cornea that does not resemble any ordinary speck, infiltration, or ulcer, suspect the existence of a foreign body, and do not allow the patient to leave without satisfying yourself as to the truth or falsity of that view. A few weeks ago a child of two and three-quarters years was brought to the author with the statement that a speck had been noticed on one eye for several days. Upon examination he found a grayish, semilunar figure at the centre of the cornea. It resembled no lesion that he was familiar with. Under ethyl chloride he removed a paring from a child's nail, which was rather deeply embedded in the substance of the cornea. On the 18th of February last a small boy, aged 4 years, was brought to him at the Northeastern Hospital for Children on account of a speck, which had been noticed for about a week, on the right eye. The eye was red, and showed a degree of photophobia. In the lower inner segment of the cornea lay a yellowish humped mass, presenting a curiously dry appearance. It was surrounded by a distinct groove in the tissue of the cornea. The mass extended from the limbus 4 millimeters into the tissue of the cornea. Under ethyl chloride it was readily detached with the aid of a cataract needle,

when it proved to be a seed-husk. The writer has had somewhat similar experiences with the operculum of the periwinkle, elytra of certain insects, and other singular foreign bodies.

Diseases of the Throat and Nose,

BY

H. LAMBERT LACK, M.D., F. R. C. S.
Inoperable Sarcoma of the Tonsil.

This patient, a man, aged about 60, has suffered from sarcoma of the tonsil for at least twelve years. Six years ago he was under my care and was then in a very similar condition to that now seen. The left tonsil is a hard smooth mass as large as a hen's egg. It presses on the Eustachian orifice, causing deafness, and nearly fills the pharynx, causing some difficulty in swallowing, and slight dyspnoea. There is no ulceration and little pain. There is a large hard mass of glands in the anterior triangle of the neck on the same side. The glands are adherent to the sterno-mastoid, to the skin and to the surrounding structures. The case is a typical example of the slow-growing fibroid sarcoma which may be met with in this region. Even six years ago the disease was far too extensive to remove.

Epithelioma of Tonsil—Operation— Recovery.

The patient, a man, aged 68, was first seen eighteen months ago. Six months previously he had suffered from increasing pain in the throat, causing great difficulty in swallowing. On examination a large ulcer was found on the left tonsil extending on to the adjacent part of the palate inwards as far as the middle line, and forwards nearly up to the hard palate. The ulcer was very superficial, the edges but slightly raised. There were a few enlarged glands in the anterior triangle. As the patient did not improve on anti-syphilitic treatment, a piece of the ulcer was removed for microscopical examination, which confirmed the diagnosis of epithelioma.

The following operation was performed:—

(1) The anterior triangle was cleared out, glands, fat, and fascia removed, and the large vessels defined. Temporary ligatures were placed around the common, external and internal carotids, but were not tightened; (2) laryngotomy was performed, and a large sponge placed in the back of the pharynx; (3) The cheek was slit back from the angle of the mouth to the ramus of the jaw; (4) the growth with a sufficient margin of healthy tissue was clipped away with scissors through the mouth.

The chief dangers of all these large operations on the upper air passages are the immediate loss of blood from cutting a large vessel, and the entrance of blood into the upper air passages during the anæsthetic which may cause immediate suffocation, subsequently give rise to septic pneumonia. These dangers are prevented by the laryngotomy, which allows firm plugging of the pharynx, by the free access to the site of operation obtained by splitting the cheek, and by the temporary ligatures placed on the carotids, which enables these vessels to be tied immediately in case they should be accidentally cut. These preliminary procedures also allow the actual removal of the primary seat of the disease to be carried out boldly and expeditiously. I have performed four similar operations during the present year.

A Series of Cases showing the Deformity of the Chest and the Irregularities of the Jaws and Teeth which result from Nasal Obstruction.

In most of the cases an extremely high, narrow, palatal arch is seen in the upper jaw, the so-called V-shaped or gothic arch. The alveolar arch is also V-shaped instead of having the normal horse-shoe shape. The sides of the arch are approximated, especially in the neighbourhood of the first molar and bicuspid teeth, and its anterior part is pointed and pushed forward, so that

the upper incisor teeth project in front of the lower. This gives rise to the so-called overhung bite. In some of the patients the pointing of the arch is carried to such an extent that the inner surfaces of the central incisor teeth are turned towards each other.

The causes of the high arch of the palate and the narrowing of the upper jaw, are probably as follows: (1) When the mouth is open there is a constant lateral compression of the palate, due to the tension of the soft tissues of the cheeks; (2) when the mouth is shut and the teeth are in contact, there is a constant upward pressure on the ends of the palatal arch, which tends to flatten it out; when the mouth is open this pressure is removed, and, consequently, the palate tends to have a higher arch; (3) when the mouth is closed the tongue is in contact with the hard palate all round, except for a small quadrilateral space near its centre; this space is probably a partial vacuum, and maintains the closure of the mouth without muscular exertion; this partial vacuum naturally tends to depress the centre of the palate; (4) The tongue being normally in contact with the upper alveolar arch all round may exert a lateral pressure. When the mouth is open the tongue falls away from the hard palate, and this lateral pressure is removed. If it be objected that the action of these causes is very feeble, it must be remembered that they are constantly in action for many years and during the time in which the jaws and face are actively developed. It is only when nasal obstruction begins in early life, at 4 or 5 years or earlier, and is long continued, that these deformities are produced. The associated deformity, the V-shaped alveolar arch, results from the same lateral compression of the jaw. The overhung bite is frequently seen in nasal obstruction, and in some of these patients there is half to three-quarters of an inch interval between the upper and the lower incisors.

Associated with these deformities there is often a general ill-development of both jaws,

which results in crowding of the teeth. In the worst cases the teeth form two rows, some, usually the canines, erupting either in front of or behind the other teeth. Normally, at about 5 years of age the temporary teeth become spaced, that is, small intervals appear between them, so that, when the small temporary teeth fall out, there is room in the jaw for the larger permanent teeth. If the jaws do not develop, the teeth remain crowded, and when they fall out there may be no room for the permanent teeth to erupt. In one case of protrusion of the upper incisor teeth which I show, the patient has been under the care of a dentist who had mechanically overcome the deformity, and the patient had worn a retention plate for six months. The nasal obstruction, however, had not been removed, and, as soon as the retention plate was omitted, the deformity recurred. If the adenoids had been removed first this disappointing result would not have happened.

Tertiary Syphilis, or Malignant Disease of the Tonsil.

The patient, a man, aged 53, complained of soreness and neuralgic pains on the left side of the throat for the past three months. He has lost weight considerably.

On examination, a deep excavated ulcer was seen in the position of the left tonsil. The anterior pillar of the fauces and adjacent part of the arch were destroyed; the posterior pillar was thickened with reddish granulations. There was a hard fixed gland under the upper part of the sterno-mastoid.

The diagnosis lies between tertiary syphilis and malignant disease of the tonsil.

In favour of malignant disease is the amount of pain, the enlarged hard gland, which is not particularly tender on pressure (therefore probably not septic), the steady progress of the disease, the absence of other signs or of a history of syphilis.

In favour of syphilis is the deep excavation, the absence of tumour and of thickened edges to the ulcer. This latter point is not conclusive, as an epithelioma in this region is apt to be very superficial, and to have hardly perceptible margins. For this reason a diagnostic mistake is not uncommon.

The diagnosis can be readily made. The patient should be given potassium iodide in 20-grain doses three times daily, and its effect watched. If the improvement within a week, or at most within a fortnight, is not so marked that the diagnosis is certain, a small piece from the edge of the ulcer should be removed for microscopical examination.

The early diagnosis is very important, as at present the growth could be removed by a combined external and internal operation with a fair prospect of success.

A Case of Meniere's Disease.

A young man suffering from attacks of giddiness lasting ten to thirty minutes, preceded and accompanied by buzzing in the ears, and usually ending with sickness. The patient remarks that the room seems to turn round, the movement gradually getting quicker and quicker. A sensation of objects turning round the patient is extremely suggestive of aural vertigo. The buzzing in the left ear and the unilateral deafness confirm this diagnosis. Testing with tuning-forks should give indications of internal ear or nerve deafness. On examination the drums appeared normal.

The patient should take bromides in some form, or large doses of hydrobromic acid. If the attacks increase in severity, repeated blistering over the mastoid should be tried.

Lupus of the Nose.

The patient, a child of 12, had a large mass of tubercular tissue projecting from the cartilaginous septum on the left side, almost occluding the left nostril. The tissue was pale and oedematous-looking; there was no ulceration.

On the right side of the septum there was a small ulcer on the corresponding position. No other part is affected. This is a frequent site for the starting-point of lupus, infection probably taking place through one of the cracks or fissures so common in this region, or inoculation is produced by picking with the finger. The present case is known to be of at least a year's duration, but the area affected is as yet no larger than a shilling, and the septum is not even perforated.

The diagnosis is made by the indolent appearance of the ulcer, the absence of slough or signs of active inflammation, the pale oedematous appearance of the granulations and the slow progress of the disease.

As much of the disease as possible should be removed by scraping. Subsequently any signs of recurrence should be treated by the application of a caustic such as chromic acid or nitrate of silver. The Finsen light cannot be applied to the interior of the nose, X-rays have no beneficial effect, but it is probable that radium may prove of use in these cases. This method of treatment we are at present trying at the London Hospital.

Lupus affecting both the Hard and Soft Palate.

A girl, aged 24, discovered more or less accidentally a year ago, that she had extensive lupus of the palate.

There is no pain, no discharge, and the disease makes very slow progress. These signs and the absence of marked ulceration and necrosis render the diagnosis easy. Little reddish nodules are seen all over the palate, in places slowly breaking down, and being replaced by fibrous tissue.

This patient has been treated by the local application of chromic acid and lactic acid, and with the internal administration of arsenic in gradually increasing doses. She has slowly improved.

Restoration of the Bridge of the Nose by Paraffin Injections.

The patients, two young girls, had each been the subject of typical "saddle-back" deformity of the nose.

Paraffin wax with a melting point of 115° F., was melted in a water bath maintained at 140° F., and injected subcutaneously over the bridge of the nose. The result in these two cases is excellent, but the operation requires great care, and is attended with considerable risk. The chief point is to prevent the paraffin spreading into regions where it is not wanted. Two assistants are required, one to prevent the paraffin spreading over the sides of the nose, and thus producing increased width of the nose, or possibly spreading into the eyelids, and another to prevent it spreading up on to the forehead. The second great point is to inject too little rather than too much; more can be added, but it is extremely difficult to take any away. I have seen severe deformity caused by injecting too much paraffin in an attempt to remedy a very small defect.

Complete Paralysis of the Left Recurrent Nerve.

This patient has the peculiar weak voice and toneless cough characteristic of the affection. The left cord is completely immobile in the cadaveric position. The right cord moves across the middle line in phonation. The cause, a somewhat unusual one, was the pressure of a hard adenoma of the left lobe of the thyroid. This was removed ten years ago, but the nerve has never recovered.

Thyro-hyoid Cyst.

The patient, a woman, had a tumour about the size of a walnut over the thyroid cartilage somewhat to the left side of the middle line. From the tumour a hard band could be felt extending upwards and passing under the hyoid bone near the middle line. The tumour is probably a cyst in connection with the thyro-hyoid duct.

our is probably a cyst in connection with the thyro-hyoid duct.

Syphilitic Disease of the Tongue and Larynx.

There is much thickening of the anterior part of the tongue with deep furrows. The tongue feels hard, there is no ulceration, no pain, and very little of the typical superficial glossitis. There is a small excrescence on the tongue side of the epiglottis. The arytenoids are swollen; the vocal cords and ventricular bands are covered by papillary excrescences.

The case is a somewhat unusual one, mainly characterised by overgrowth, without much destruction.

Iodide of potassium has remarkably little effect upon this condition, but the patient has improved somewhat under mercury.—*The Polyclinic.*

OTOLOGY.

Earache.

Makuen contributes an exceedingly interesting paper under the above title, calling attention to the fact that earache is generally a condition far-reaching in its effect upon the function of hearing.

The common causes of earache he mentions are: foreign body in the external auditory canal, furunculosis or boils in the same region, inflammatory exudate in the middle ear, and reflected pains due to intranasal irritation, dental caries, tonsillar abscess, peritonsillar abscess, pharyngeal ulcers, and the neuralgias.

Attention is called to the fact that a foreign body sometimes becomes embedded in the tympanic cavity and gets beyond the line of vision. As a rule, when diagnosis has been made, the foreign body should be removed by the syringe. This instrument should hold at least four ounces, and should have a small nozzle, so that the stream may be directed, under the guidance

of the eye with reflected light, above and behind the foreign body, the desired ear being grasped by the free hand and drawn firmly upward and backward. Instrumental attempts to remove foreign bodies from the ears of struggling children should never be made.

Furunculosis of the external auditory canal sometimes causes excruciating pain. Poultices do more harm than good. Dry heat in the form of sand-bags is serviceable. These should be made conical in shape, so that they may be inserted as far as possible in the canal, and they should be kept hot. In mild cases a 10-per-cent carbolated glycerin solution may be dropped in the ear and retained by a plug, to give relief.

Free incision in the region of the inflammation, followed by the immediate application of hot sterile water, is the most efficient way of relieving pain. Incision must be deep, and preceded by a thorough irrigation with 1:2000 bichloride solution, after which the meatus is filled with carbolated glycerin solution for a few minutes, and then packed lightly with a sterile gauze drain.

The commonest cause of earache is acute otitis media. If the symptoms are not severe, almost immediate relief may be obtained by the use of the carbolated glycerin solution. A small pencil of cotton should be made to fit into the cavity, and this should be saturated with the solution, and its tip placed in contact with the inflamed drum membrane. In mild cases of middle-ear congestions this serves to abort the disease. Should it fail, as indicated by the increased severity of the symptoms, especially the pain, the drum membrane must be incised with sufficient freedom to admit of the best possible drainage. The operation is a simple one, and can be successfully performed by the general practitioner. The ordinary antiseptic precautions should be taken. A small-bladed, long-shanked knife is used.

The incision should be made from the point of greatest bulging down to the floor of the tympanic cavity. The knife should not be driven in so far as to injure the round window. Brief general anæsthesia is generally required, especially with children. In adults no anæsthesia is necessary, although some degree of local anæsthesia may be obtained by local applications of some solution containing cocaine.

The discharge and blood are swabbed by means of sterilized cotton pledgets. A narrow strip of antiseptic gauze is placed in the canal with its end in slight contact with the incised drum. Abundant and free dressing is applied, which is renewed as rapidly as it becomes soaked. On the second or third day the dressing is removed, and the cavity swabbed out, and a smaller dressing applied. Complete cure may be expected in from two days to two weeks. This prompt incision gives immediate relief, shortens the duration of the disease, and lessens the probability of such unfortunate complications as mastoid, and intracranial disease.—*Pennsylvania, Medical Journal* Sept. 04.

DERMATOLOGY.

Recovery from Leprosy—Imperfect Development of the Disease,

BY

JONATHAN HUTCHINSON, LL.D., F.R.S.

We have recently demonstrated at the Polyclinic several cases of recovery from leprosy. I will record the particulars of one of them.

Mrs. H., a married woman, aged 28, came to me on July 3, 1900. Her complaint was that she had two patches of skin disease, one on her right forearm and the other on her right thigh, which were quite numb. Her expression was, "I can stick pins into them and feel nothing." I found the patches quite characteristic of maculo-anæsthetic

leprosy, and they had been present, she said, one of them for four and the other for three years. Each was as large as the palm of an adult hand. They were of brownish colour, slightly lichenoid and scaly at their borders, but smooth and pale in their centres.

Mrs. H. assured me that she had none elsewhere, and for this I was obliged to accept her testimony. She was pale and thin, but not out of health. All the facial muscles on the right side were weak, and, although she could shut both eyes, the lids of the right eye were closed only feebly. I could see no evidence of neuritis in either hand, nor were the ulnar nerves appreciably enlarged. The patch which she had first noticed was that on her thigh, and she described it as a bluish-white discoloration, which was chiefly visible after a bath. Mrs. H. was, I ascertained, of English parentage, but had been born in Jamaica, and had resided most of her life in Hayti. She had three living children. She was aware that there was leprosy amongst all classes, both in Jamaica and Hayti, but none of her acquaintances had suffered, and as far as she knew she had never been exposed to risk of contagion. Her husband, who came with her, was in good health, and so also her children. She had through life been accustomed to eat a good deal of salt cod, which was, she said, an ordinary article of diet in the islands. An aunt and a sister were very liable to nettle-rash after eating fish. I prescribed an ointment containing chrysophanic acid for the patches and gave a mixture containing quinine and arsenic, but my chief recommendation was absolute abstinence from fish.

Mrs. H.'s first visit to me was in July, 1900, and I did not see her again till four years later. On August 2, 1904, she again called on me. She was in good health, and the patches had so far disappeared that they might have been easily overlooked. They were still numb, but by no means so defective

in sensation as they had formerly been. No new patches had formed anywhere, nor had any symptoms of neuritis been developed. The defect in the muscles of the right half of her face was still easily recognised during conversation, but she had no inconvenience from it, and could close both eyes. She had borne a fourth child since her first visit, and had nursed it for ten months. It was now more than three years old, and as yet quite healthy.

This case may be described as one of abortive or incompletely developed leprosy. The long duration of the patches, their loss of sensation, and the association with facial paresis, however, must be regarded as substantiating the diagnosis, even for those who had not the opportunity which I had for observing the characteristic features which they presented. It is remarkable that all the phenomena occurred on the same side of the body, but this is a feature which I have observed in other cases.

I regretted very much that I had not warned Mrs. H. not to suckle her child, but at the time that I first saw her I had not realised the danger in this direction. It may be hoped, however, that the child is comparatively safe, since probably the bacillus has been of late very sparingly present, if at all.

Urticaria Pigmentosa Due to Insect Bites.

We have, as you well know, taken much interest recently in the demonstration of the results of insect bites. My belief is that the whole group of infantile eruptions which go under the names of prurigo urticans, strophulus pruriginosus, urticaria pigmentosa, lichen pruriginosus, etc., etc., are one and all caused by the bites of insects. We must distinguish between those caused by bugs and those from fleas. Those from the latter are more acutely erythematous, much more like urticaria than are the dusky ill-margined blotches which are due to bugs.

We have just seen for a second time a child in whom urticaria pigmentosa is in the process of development. The mother has brought her to us to-day in order to show some new spots. Very few new ones had occurred for some months until a few nights ago, when these appeared. The old ones remain much as they were. We placed the portrait taken four months ago by the side of the patient, and could observe but little difference. I may add that the arrangement, etc., is so like Dr. Radcliffe Crocker's plate, that you might almost mistake them. The new spots are only two or three in number, and one of them presents the ordinary features of an insect bite very definitely. There is a central puncture and an erythematous area around it. Thus we get almost conclusive evidence of the correctness of the diagnosis.—*The Polyclinic*.

Treatment of Eczema.

Eczema is a non-contagious inflammatory skin disease characterized by redness, itching, infiltration, tendency to moisture, crusting, cracking and scaling of the skin.

According to Dr. H. Tyldesley, *Med. Brief*, that while eczema may arise from a local cause the existence of the disease is a manifest indication of some blood dyscrasia. That this is true, we have only to call to mind any case and analyze it. A woman will say that she washed her clothes, and the soap irritated her hands, and the eczema appeared. But if her blood had been normal, she would have gone along without the eczema, as she had done before. The soap only now had caused the irritation. In France this view has long dominated the thought of dermatologists, and in the United States we have some of the ablest clinicians who hold the same opinion. The treatment

of eczema must therefore be local and constitutional. Every case must be carefully studied with the view of eliciting all the elements that require therapeutic attention. In the beginning with a case of eczema it is necessary to give the patient exemption from the intense itching that is present in all cases. In fact, the average patient will not remain loyal if this distressing factor is not given a quietus. Local and constitutional treatment are to be instituted as soon as the case is taken in hand. For some time I have used echthol in the treatment of eczema, and it has brought me a larger degree of success than I have been able to attain by any other means. Echthol corrects more readily the dyscrasia of the blood than any other agent that can be found in eczema. I first used it in treatment of small pox cases that I had on hand last year. It appeared to me that, as echthol rendered small-pox mild, it would perhaps correct the dyscrasia that was present in patients with eczema. I tried it and found it very valuable. I give echthol in doses of a teaspoonful every three hours and continue it until the patient is well. But the internal use of echthol in no wise completes the treatment. It must also be used locally. It has proved very valuable in quieting the itching, which is so very distressing. I have patients bathe the eczematous patches with echthol every four or six hours, according to the severity of the itching. I instruct the patient to apply the remedy freely, soaking slowly the entire diseased surface. The echthol exerts an antiphlogistic and antipruritic effect that is gratifying to the patient, and which expedites resolution. The treatment of the disease in this way has proven so successful that I now rely upon it, to the exclusion of all other means of treatment.—*The Dietetic and Hygienic Gazette*.



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Original Articles.

*Uræmia: Its Symptoms, Pathology and Treatment, PART II.

BY

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(Continued from page 251, Vol. ii, No. 6.)

ECLAMPSIA OF PREGNANCY AND THE PUERPERIUM.

THE symptoms are the same as those of acute uræmia, namely headache and drowsiness, amaurosis, suppression of urine, muscular twitchings, recurrent convulsions and coma. It may be asked why there should be a separate heading for this group of cases; and at the present day most observers would agree that eclampsia of pregnancy is really acute uræmia. It was Lever, in the *Guy's Hospital Reports* for 1842, who pointed out that albumen was present in the urine of almost every pregnant or puerperal woman who had eclampsia; but this albuminuria is in some way different from that of other affections of the kidney. There is very often anasarca; casts are present in the urine; the symptoms are

those of acute nephritis; and yet there are points of difference between pregnancy and puerperal cases and those of ordinary acute nephritis.

The first point of distinction is that the albuminuria and dropsy are directly dependent on the pregnancy. As soon as the uterus is emptied, whether prematurely or at term, the albuminuria rapidly clears up, the anasarca subsides, evidence of kidney affection disappears. The patient may remain free from any renal symptoms if she do not again become pregnant. Another pregnancy is more than likely to cause recurrence of albuminuria and dropsy, the trouble again subsiding when the child is born; disappearing in the intervals, to recur with each successive pregnancy.

The second point of distinction is the better prognosis in the eclampsia of pregnancy compared, with that of ordinary acute uræmia. The convulsions cease almost instantaneously when the uterus is evacuated. The child is very often dead; the mother in very many cases recovers completely.

CHRONIC URÆMIA.

In patients suffering from chronic uræmia the symptoms are less obviously connected with the central nervous system. The lungs or the digestive organs may

* Specially contributed to "The Antiseptic."

appear to be the parts affected. It is not unlikely, however, that even in such cases the starting point of the symptoms is often, if not always, in the brain.

The evidently cerebral symptoms usually consist of *headache, giddiness, drowsiness, or inability to sleep*. These may all occur in the same patient, possibly a business man just past middle life, active and energetic hitherto, strenuously engaged at his office all day long. The headache in the morning, the attacks of giddiness coming on spontaneously or upon some slight extra exertion, the drowsiness during the day time when he wishes to exert all his mental vigour, the inability to sleep at night in spite of his drowsy condition in the day—these are not uncommon symptoms which lead him to consult a medical man who examines the urine and correctly diagnoses a granular kidney. Such chronic uræmic symptoms may continue, with or without intermissions, for months or years.

In other cases the symptoms may be pulmonary. Paroxysmal attacks of dyspnoea, more frequent during the night than in the day, may so closely resemble those of another form of paroxysmal dyspnoea that they have been termed *uraemic asthma*.

The skin, again, may be the site of trouble. Eczema and acute dermatitis sometimes occur. It is known that much urea may be excreted by the sweat in Bright's disease, and this may be the irritant which causes the skin eruption. Short of any visible skin changes there is sometimes intense *itching* or pruritis, which renders the patient miserable.

The gastro-intestinal tract may seem to be at fault. Uræmic *vomiting* is common.

At first it may occur only at long intervals; in the morning when the stomach is empty; later it may be more frequent; the patient who, having always been strong and well for years, begins to have attacks of sickness apparently without cause, will naturally consult a medical adviser; it may be difficult at first to exclude a cerebral tumour, but the possibility of chronic uræmia must not be forgotten. *Hiccough* is a rare symptom, but may be very distressing. *Diarrhœa* is not uncommon, and often accompanies vomiting. It may come on spontaneously; more often it follows the action of some purge.

PATHOLOGY OF URÆMIA.

At the very outset of a discussion upon the Pathology of Uræmia, it must be stated that nothing definite is actually known about it at all. There have been many theories put forward; each has been tested by experiment; the result has been to exclude a number of suggested causes, without discovering the real one yet.

There have been, broadly speaking, two distinct groups of causes that have been looked to to account for the production of uræmic symptoms, namely:—

- I. Physical conditions within the cranium.
- II. Chemical or toxic changes in the blood.

PHYSICAL CONDITIONS AS CAUSES OF URÆMIA.

Tranbe, many years ago, attempted to explain uræmia by concurrence of hydræmia and increase of arterial pressure in producing cerebral œdema and consequent anæmia of the brain.

Cerebral Cœdema—is no doubt found in some cases of fatal uræmia; but many

fatal cases occur in which no such œdema is present. The œdema may be present without convulsions in other conditions than uræmia. The œdema of the brain, when it occurs in uræmia, is quite possibly the result rather than the cause of the convulsive seizures. Sometimes minute spots of hæmorrhage are found in greater or less numbers in the substance of the brain. It seems likely that these also are produced by the disturbance of the intracranial circulation which the uræmic paroxysms cannot but produce; their occurrence, moreover, is too exceptional to admit of their being regarded as causal.

Cerebral Anæmia—will undoubtedly produce many of the effects so often seen in uræmia. Convulsions, epileptiform fits, Cheyne-Stoke's breathing, coma, can all be brought about by experimental ligature of one or more of the cerebral arteries. It is possible that cerebral anæmia is responsible for some of the phenomena of uræmia. It is not easy, however, to understand how the brain can be anæmic in Bright's disease. Roy's experiments have shown that there are no vaso-motor nerves to the cerebral arterioles. In Bright's disease the blood pressure is usually high. A high blood pressure should drive more blood than usual into vessels that have no nervous mechanism for diminishing their lumen. The exact state of the cerebral vessels in uræmia is not known, but theory suggests that they must be fuller of blood than usual. If there were exudations from them, and œdema, resulting from the high pressure, there would not be room within the closed cranium for more blood as well as for the œdema fluid; so that when œdema was marked there would be anæmia of the brain notwithstanding a high arterial blood pressure; but œdema of the

brain, as has been mentioned, is by no means constantly found in fatal cases of uræmia; it therefore seems likely that uræmia may occur without cerebral anæmia.

Nevertheless, when it is remembered that venesection, or a spontaneous hæmorrhage such as severe epistaxis, will frequently relieve at the same time both the increased blood pressure and the uræmic symptoms of a patient, it cannot but be felt that the mechanical conditions of the circulation play at least some part in their pathology.

CHEMICAL CONDITIONS AS CAUSES OF URÆMIA.

It is generally believed that some poison or toxine is the fundamental cause of uræmia. The nature of this toxine is quite unknown.

There are three possible sources from which it may be derived:—

- I. It may be one of the constituents of normal urine.
- II. It may be a substance related to one of the constituents of normal urine.
- III. It may be some substance not connected with normal urine at all.

In regard to the cause being the retention in the body of some substance normally excreted, nothing could seem more likely. The name, uræmia, is based upon this supposition. The difficulty is to discover what the retained body is. Urea suggests itself. The blood of a healthy man contains about 0.015 per cent of urea. When the kidneys are diseased, this amount readily rises to 0.15 per cent, and in uræmia 0.4 or even 0.5 per cent has been found. Urea has been found in the various secretions of uræmic patients;

in the saliva, in the matters vomited from the stomach, in the motions, in the expectoration of concomitant bronchitis or pneumonia. It may be secreted in large quantities from the skin. Dr. Taylor, in the Guy's Hospital Reports for 1874, records the case of a patient in whom, two days before death, the face, neck, and hands were covered with white powdery masses of urea.

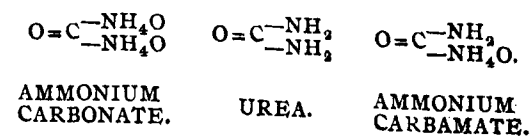
There is no doubt whatever that urea may accumulate in the blood-tissues in uræmia, but there is no proof that urea is itself the cause of the uræmic symptoms. Indeed there is evidence to the contrary. Large quantities of urea can be injected into the vessels of healthy dogs without producing any severe symptoms. Urea by itself is not the toxic body. In man, the occurrence and the severity of the paroxysms bear us necessary relation to the quantity of urine excreted; the blood may become waded with urea, without uræmia developing. This is strikingly seen in cases of latent uræmia, mentioned above. With bilateral obstructive suppression of the urine, urea is prevented from escaping, yet symptoms of uræmia are absent for days until just before the fatal ending.

The characters of the urine in cases of Bright's disease, at the time when uræmia develops, differ in different cases. As a rule, the renal secretion has been much diminished for some days. It may be even suppressed. Sometimes, however, there has been a normal flow of urine. Sometimes the quantity of urine and of urea may be above the normal. In one published case seventy ounces of urine were passed on each of the three days immediately preceding uræmia.

One point, in connection with the frequent fall of urea before and during uræmic attacks, must always be borne in mind: namely that the patient is severely ill, and is eating little. The less proteid eaten, the less, naturally, will be the amount of urea passed. In one published case, where the nitrogen metabolism was long and carefully investigated, there was a great fall in the urea when the patient became uræmic; but the fall was conclusively shown to be caused, not by retention of urea in the system, but merely by the diminution in nitrogenous food consumed.

Urea, then, does not seem to be the uræmic poison. Still less is known about uric acid, hippuric acid, creatin in other or normal urinary constituents, in relation to the causation of uræmia. It may be that not one only, but several together may be the cause; in other words, it may be that it is impossible to single out any single ingredient of the urine as the uræmic toxine, but that the uræmic state must be ascribed to the retention of all the solid constituents of the urine together. We can only answer: "We do not know."

Turning now to the question whether some substance allied to urea may not be the uræmic toxine, two products of nitrogen metabolism come to mind. Each is known to be converted by the liver, normally, into urea. They are *ammonium carbonate* and *ammonium carbamate*. Their relationship to one another and to urea is shewn by the graphic formulæ:—



It has been shewn that injection of ammonium carbonate into the vessels of

dogs is followed by convulsions, coma and death. But convulsions, coma, death do not constitute uræmia. Many other substances besides ammonium carbonate will produce the same symptoms in dogs. Moreover, ammonium carbonate has been looked for in the blood of uræmic patients, and has either not been found at all, or else in such small quantities that it cannot be accounted for the causal factor in uræmia.

One clinical fact was formerly adduced in favour of the ammonium carbonate theory of uræmia. This is that, on holding a glass rod moistened with hydrochloric acid near the mouth of a uræmic patient, the presence of ammonia could be recognised in the expired air by the white fumes of chloride of ammonium that were found. It has been proved that many uræmic patients fail to give this sign, whilst many other patients, for example, those suffering from severe typhoid fever, have given it. The ammonia in such cases is derived, not from the air in the lungs, but from the decomposing food and saliva in the sordes of the mouth.

The liver has sometimes been experimentally thrown out of the circulation by joining the portal vein direct to the inferior vena cava in dogs. After the operation the animal, though previously gentle and obedient, becomes bad-tempered, obstinate, irritable, restless, and liable to maniacal outbursts and convulsions. This condition comes on about ten days after the operation, and with the convulsions consciousness is lost. Recurrent convulsions lead to coma and death, the end being accelerated by giving proteid food. Besides these symptoms, the dog may suffer from vomiting and diarrhoea. The clinical picture, therefore, is closely similar to that observed in uræmia.

In human beings there is one disease which destroys the functions of the liver almost as effectually as the experimental method in dogs; this disease is *acute yellow atrophy of the liver*, in which disorganisation of the liver substance is extreme. The symptoms are in many respects similar to those of uræmia: these are urine changes, and vomiting, convulsions and coma, speedily ending in death.

The urine changes which are common both to acute yellow atrophy of the liver, and to the experiments which shut the liver out of the circulation, are these: there is a great diminution in the amount of urea passed, and an increase in the amido-compounds which should be converted into urea by the liver. Leucin and tyrotine appear in the urine; and ammonia is present in excess. The ammonia is present in the form of carbamate; it has therefore been suggested that ammonium carbamate may also be the cause of the similar symptoms seen in uræmia.

The reply to the suggestion can only be, at present, that "we do not know." No excess of ammonia, either as carbamate, or as carbonate, has been proved to occur in the blood and tissues of uræmic patients. The evidence therefore is more against than in favour of either of these bodies being the uræmic poison.

Lastly, it has been suggested that the kidneys are not employed solely in excreting urine, but that they have also an internal secretory function. Some experiments of Rose Bradford's are held to indicate this. When the whole of one kidney and part of the other have been excised, it has been found that, far from there being less elimination, more nitrogen is excreted than was the case before the operations; whilst at the same time the animal rapidly wastes, goes down-hill,

and dies. The cause of death is not known; it seems that it is not due to defective elimination and it has been suggested that too little kidney substance is left to supply some internal secretion which is necessary for the proper metabolism in the rest of the body. Other organs are believed to have internal secretions; that of the thyroid gland is almost certainly established; those of the pancreas and liver seem probable.

In the case of the kidney an internal secretion is hypothetical; but deficiency of such internal secretion by diseased kidneys, with consequent errors of metabolism in other tissues, has been put forward as one of the theories of uræmia.

It will thus be seen that nothing is known as to the pathology of uræmia; all is theoretical; but it seems possible that the condition is due to some unknown toxic substance circulating in the blood and is accentuated by abnormal physical conditions of the circulation.

A word or two must still be said about the pathology of puerperal albuminuria and eclampsia. When actual Bright's disease is not present the condition is evidently dependent in some way upon the pregnant uterus. The different views as to the pathology may be summarised as follows:—

(1) That it is due to pressure upon the renal views by the gravid uterus, with consequent congestion and cyanosis.

(2) That it is due to pressure of the enlarged uterus upon the ureters, and consequent partial suppression.

(3) That it is due to the increased work thrown upon the kidneys by their having to excrete the waste products both of mother and of foetus.

(4) That it is due to the increased arterial tension which is usual in pregnancy.

(5) That it is due to a reflex nervous influence starting from the pregnant uterus as a source of irritation.

(6) That it is due to a special pathogenic germ.

(7) That it is due to inflammatory processes in the placenta, of which little is known, giving rise to a toxine which passes into the general circulation.

Whether any, or all, of these hypothetical factors may assist in the production of eclampsia, is not known. All that can be said is that this form of uræmia is associated with pregnancy, and whether it is toxic or not it is aggravated by the presence of the enlarged uterus with its foetus.

(To be continued.)

* INTRODUCTION TO A

DISCUSSION ON PROSTATECTOMY,

BY

REGINALD HARRISON, F.R.C.S.

PRELIMINARY.

I HAVE much pleasure in responding to your request that I would open a discussion on perineal and suprapubic methods of prostatectomy.

It is hardly necessary for me to remind this Society that for some years past no practical subject has occupied surgical attention more than that having for its object improvement in the treatment of certain forms of prostatic hypertrophy when they occasion serious obstruction to the natural expulsion of urine from the body. It may now be said that stage has been reached in the history of these en-

* A lecture delivered at the Medical Society of London and sent to "The Antiseptic" for publication.

deavours when by the continued though somewhat disconnected efforts of many colleagues, past and present, results have been obtained which have proved of great advantage in this class of diseases and distinctly mark surgical progress.

Though presenting an academic interest I do not propose referring to the somewhat warmly contested subject of the prostatic capsule, and I shall therefore confine remarks to clinical matters.

The surgical treatment of prostatic obstruction, as it occurs in the enlarged or adenomatous gland, may be discussed under three headings: (1) By catheterism alone as practised by the surgeon or the patient himself; (2) by perineal; and (3) by supra-prostatectomy. The first method we are not directly concerned with this evening further than to remark that where it suffices for the wants and comfort of the individual the necessity or expediency for the removal of the prostate are not likely to arise. Much more can now be done by strict antiseptic precautions to keep persons within this limit, and there can be no question that many have thus been able to enjoy long and useful lives without taking the risk of an operation such as the removal of the prostate entails, whatever the degree may be. Though fully recognising the force of this consideration, which has had prominence given to it by Mr. Buckston Browne, Mr. Herring and others, there can be no doubt that it is not possible to keep all prostatic cases within these limits.

Difficulty in the use of the catheter, pain, frequent and unrelieved desire, the continued formation of vesical stone in spite of its repeated removal by lithotripsy, hæmorrhage, broken sleep and unrest, cystitis and offensive urine, in addition to

other local and general states of sepsis, represent conditions which, when persistent, no catheter even with its modern accessories can adequately abate.

It is in cases coming within this category that prostatectomy, using this term in a general sense, has been followed by striking and beneficial results. Opinions are divided as to the respective merits and their application of the perineal and suprapubic methods, and it is to this point I wish this evening more especially to direct attention.

PERINEAL PROSTATECTOMY.

Perineal prostatectomy has for some years been largely practised both in France and America, but hitherto has not found much favour in this country. It is, I believe, of only limited application, and in my own practice has been almost entirely confined to some partial removals of the gland. For instance, by this route pendulous outgrowths of what is known as the middle lobe of the prostate, which by acting as a ball-valve and thus obstructing micturition, may be dealt with, with satisfactory results.

Again, this method may be utilised for the enucleation of large isolated unilateral adenomas of the prostate, such as those occasionally met with in the course of perineal lithotomies, on the lines advocated in a paper I read before the Royal Medico-Chirurgical Society in 1882.

Complete extirpation of the prostate can be effected by the perineal way, and many excellent results have been obtained and published by Professors Albarran, of Paris, and Young, of Baltimore, and other surgeons.

Amongst the advantages claimed for this method of operating is that the eja-

culatory ducts may be preserved intact. I do not, I confess, see where this comes in when the object of the proceeding is the complete removal of the prostate, which is generally regarded as a genital gland.

I have reason to think from cases that have come under my observation that some degree of incontinence of urine is not very uncommon after a completed perineal prostatectomy. In this respect, resembling what sometimes happened in the days when lateral lithotomy was commonly practised. This casualty was then considered due to a too free division of the prostate and sphincter of the bladder, and the detriment invariably proved of a permanent nature.

Reviewing his experience of seventy-three patients operated upon by him by median perineal prostatectomy, Dr. George E. Goodfellow, of San Francisco, makes the following statement relative to incontinence of urine and this operation: "Usually at first complete control of the bladder is regained, but afterwards, when the patient begins to get about, a partial incontinence supervenes, that is to say, there is inability to retain urine when the desire to urinate comes, with some dribbling afterwards, and if the patient becomes tired there is actual incontinence. In a number of cases this has lasted about four months, but usually in men of about seventy" (*Journal American Med. Association*, December, 1903). Other surgeons record a somewhat similar experience.

In estimating the value of perineal prostatectomy I do not think I can better express my own views upon this point than in the words of Dr. William White, of Philadelphia. In his review of these proceedings, after describing Mr. Freyer's

method, he says: "Past experience does not justify the expectation that the results of prostatectomy by the perineal route will compare favourably with those of total enucleation" (*Annals of Surgery*, December, 1904).

COMPLETE SUPRA-PROSTATECTOMY.

Turning now to the most recent development of supra-prostatectomy, as practised by my colleague, Mr. Freyer, I again find myself in agreement with Dr. White, who speaks of it "as the operation of choice in the majority of cases." It will hardly be necessary to point out in detail the many advantages connected with this method of operating.

In the first place, the operation may be completed with a knife, aided by the fingers, in a very few minutes. This is due to the bladder and prostate being approached from their most accessible position where there is little or no risk of encountering hæmorrhage or of permanently damaging the sphincter or retentive apparatus of the bladder. The latter is, so to speak, out of harm's way, as the results of this operation amply testify.

There is no call, when operating by the suprapubic route, for the ingenious instruments, such as those devised by Dr. Parker Syme, of New York, and Dr. Young, of Baltimore, for drawing the prostate down within reach of the operator's finger, as is the case when the gland is approached by the perineal way.

There is another consideration relative to the technique of the operation, which is of much importance. If you examine a number of specimens of the prostate removed entire by supra-prostatectomy a certain proportion will be found—I do not say all—where the prostatic, or even membranous urethra, has been destroyed or

torn across in the course of the enucleation of the gland.

This circumstance has not infrequently called forth the comment that a urethral stricture of a cicatricial kind must necessarily follow. Such, however, contrary to all expectation and experience derived from the observation of other lacerations and ruptures of the male urethra, in whatever part of the canal occurring, has not been the case.

The explanation for this I offered in the Lettsomian Lectures I had the honour of delivering before this Society, in 1888. I then endeavoured to show in discussing the cause of traumatic urethral stricture, that the density and contractility of the scar left after a complete or partial rupture from violence or laceration of the male urethra was in an inverse ratio to the direct drainage provided for the wound. Where the latter was ample and free, as after well-planned surgical incisions of the urethra, for instance, by perineal section or for lithotomy, no stricture followed; whereas, on the other hand, after casual wounds, where no drainage was provided, or it was imperfect, a dense contractile stricture of the urethra at the seat of injury invariably followed.

No more striking evidence of the completeness of the bladder drainage in supra-prostatectomy can be found, I believe, than in the fact that though the prostatic and membranous portions of the urethra are liable to, and often do, receive damage, yet hitherto we have had no sufficient evidence that stricture follows entire enucleation.

In selecting the perineal in preference to the suprapubic route too much credit has been attached to a belief that the former

affords better drainage than the latter, and thus favours a more rapid convalescence. I have never found difficulty or delay in healing with the suprapubic route provided that the drainage is sufficiently ample.

In two of my earlier cases of supra-prostatectomy perineal urine drainage had been previously and temporarily provided for urgent suppurative cystitis and retention of urine, but no advantage followed this preliminary so far as the healing of the prostatectomy wound was concerned.

VESICAL STONE AND SUPRA-PROSTATECTOMY.

There yet remains to be mentioned a still more cogent reason for selecting the suprapubic method when the prostate, from its size or for other reasons, to which I have referred, seriously obstructs the natural function of the bladder.

With a large prostate present it is quite impossible to certainly determine in every instance beforehand by any other means than by freely opening it in front what the bladder may contain in a narrow-necked valvular sac. Putrid urine or an undetected stone not infrequently occupy these receptacles.

The sound, the cystoscope, the X-rays and digital exploration by the perineal route have frequently failed to detect these and other sources of serious bladder infection and diseases which are not uncommon sequences of obstruction in front.

How often has it happened that a supra-prostatectomy has also been the means of bringing to light unsuspected stones contained within saccules and pouches of a presumed healthy bladder. Nor is it uncommon to find as age advances and the prostate enlarges, the obstruction thus

caused "traps" concretions and small stones which would otherwise escape naturally, and detains them for further increase in size within what Mr. Buckston Browne so well described some years ago as the post-prostatic pouch. These considerations are of much importance in determining the precise nature of the operation that should be selected for the removal of the prostate.

In making this reference to supra-prostatectomy in cases where vesical stone is known or suspected to co-exist with much enlargement of the prostate, I do not think it is at all likely to supersede lithotripsy in cases of stone occurring for the first time, but where stone in the bladder constantly recurs with this condition an additional reason is furnished for selecting supra-prostatectomy in place of repeated operations by litholapaxy alone.

Within the last few years I have met with several instances where vesical stone recurrences have apparently been stopped and a normal state of the bladder substituted after the prostate has thus been removed. There can be no doubt that in many instances the enlarged prostate proves to be the determining cause of stone in the bladder, as well as of its recurrence.

PARTIAL SUPRA-PROSTATECTOMIES.

Partial supra-prostatectomies have not, on the whole, proved a success. Instances are recorded by Mr. Freyer where, after partial removals in this way, he subsequently, after varying intervals, enucleated what had been left behind by previous operators with good results. And by this is meant that not only was the cause of obstruction removed, but the natural function of the bladder was restored.

I have a clear recollection, at a meeting of the British Medical Association, in 1889,

of seeing a number of cases, not less than twelve, upon whom Mr. McGill had operated by supra-prostatectomy, together with the specimens removed in each instance. Though many of his cases were as successful as could be desired, others fell short of this, so far as the restoration of bladder function was concerned.

I feel sure his cases, as well as those of others, might have been divided into two classes; first, those where the enlarged gland was, to all intents and purposes, removed; and secondly, those where the extirpation was only partial. In this distinction will be found the explanation for the different results that followed then and may be expected now after the latter.

Enucleation with the finger alone, as now practised, has greatly simplified the process of complete removal and has rendered more secure that which was, to some extent, a matter of chance. Had this distinction been recognised earlier and failures traced to their proper source, I have very little doubt that McGill's operation would not have comparatively fallen into disuse. The partially successful cases seemed at that time to discount largely those where success was complete.

I need hardly say I refer to this point not for the purpose of minimising in any degree the originality of Mr. Freyer's work, but for illustrating the wide difference in results between partial and complete removal of the gland, however effected.

MORTALITY.

I will say a few words in reference to the mortality attendant upon the two forms of prostatectomy under discussion. I am not disposed to think there is much

difference in this respect between them. I believe, including all causes of death, this is somewhere about 10 per cent. Probably it is rather less with the perineal operation. I have no doubt this percentage might be considerably reduced in many instances by an earlier prostatectomy before kidney complications supervene, and by the exclusion of malignant and other unsuitable cases where the operation has to be undertaken for distinctly palliative purposes. The fact that these operations have been so largely successful, often under very adverse circumstances, must find due weight when considering their adoption and selection.

PREVENTIVE TREATMENT.

I would add in conclusion that though many of the difficulties connected with advanced forms of prostatic obstruction may now be considered as within reach of successful treatment by operation, the subject cannot be regarded as ending here. There remains a large field for further investigation which is still comparatively unoccupied.

I should not be doing justice to much work that has been done during the past decade, more particularly on an occasion like this, without a passing reference to this matter.

It is impossible to go through the published records of orchidectomy and vasectomy without recognising the influence that these processes frequently exercised, or are distinctly stated to have done, in arresting and aborting prostatic overgrowth. I do not say that either of these operations are capable of removing by atrophy, or otherwise, the large masses of prostatic tissue which we are becoming familiar with, as figured in the pages of our Journals.

But when I look at instances of vasectomy, for example, operated upon as far back as eight to ten years ago, when the earlier forms of prostatic obstruction appeared to be imminent, and who are now alive with their health and energy unimpaired, it seems to me that evidence of this kind relative to the whole subject of prostatic hypertrophy and its prevention should not be entirely disregarded.

Facts will be found amongst these records which are capable, I believe, of being further utilised without minimising or detracting from the importance of those measures which I have thus endeavoured as briefly as possible to place before you for discussion this evening.

*Food and Drink in Health and Disease,

BY

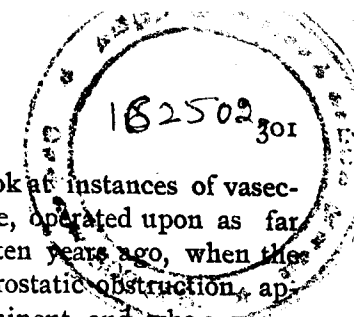
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SINCE my student days, this subject has been engaging my mind a great deal.

My physiology teacher in the F. A. class lectured on the necessity of meat being taken as a part of one's daily food and that the Brahmin's usual diet was a severe strain on the human stomach and 'that unproductive labour was as much to be avoided in physiological as in political economy.' (Huxley.) When I was in the Medical College, one professor seriously advised me to take beer regularly to cure my leanness.

Now, though the Rishis of old are said to have indulged in the use of meat and liquor, they are forbidden articles of food

* Specially contributed to 'The Antiseptic.'



to the modern Brahmin of South India. Here was a dilemma:—'Scientific' (Sic) teaching on the one side and the practice of religion on the other.

At this critical period in my life opportunely appeared the article advocating 'Vegetarianism,' in that excellent, but short-lived journal edited by Dr. Dhanakoti Raju—'The Friendly Visitor.' By the way, it may be observed that 'Vegetarianism' is a wrong term if applied to a dietary which includes such animal products as milk, curd, butter, ghee, &c. As has been pointed out by the talented editor of the *Central Hindu College Magazine*, "the antithesis is not between food derived from the vegetable kingdom and that derived from the animal kingdom, but between food derived from living beings and food derived from corpses." The perusal of the learned Doctor's article together with my natural aversion to meat and liquor, and the inborn repugnance to the shedding of innocent blood soon settled the doubt so far as I was concerned.

The humanitarian's argument may be summed up as follows as has been done by Bhishma in the great Exhortation.

In this world, there is nothing dearer to a creature than its life. Hence one should show compassion to the lives of others, as one does to his own life. Flesh cannot be had from grass or wood or stone. Unless a living creature is killed, it cannot be had. Hence the fault of eating flesh. Surely there is high merit in abstaining from meat, but it does not seem to be always possible. It is well known that in the Arctic Zone, vegetables, except lichens and mosses are not producible owing to the severity of the climate, and that animal food is necessarily the

staple diet of its inhabitants. Our sympathy therefore, for the reindeer and the seal is of no avail. It is not therefore from a humanitarian point of view that I now propose to consider the question, but I would merely discuss it as a national question concerning us, Indians. What ought to be the national diet of man living in the temperate and tropic zones where he can afford to exercise the divine element in him? The question is one of vital importance to the large masses of this country who are at their wits' ends to keep the wolf from their doors, and who cannot therefore find the wherewithal to purchase meat. In dealing with this problem it is perhaps unnecessary to decide, even if it were possible to do so, whether man was designed to be herbivorous, carnivorous, or omnivorous. All evidence obtained from anatomical research would only show what man is and has been. The characters of his teeth and digestive organs being identical in all important particulars with those possessed by the highest apes, would only indicate that during his long process of evolution he has been like the apes, chiefly living on fruits, roots, seeds, nuts, &c. But it is absolutely necessary to settle whether in a climate where the choice of food is left to him, the vegetarian can be as well off as his flesh-eating brother and to determine the quantity of food that would be requisite to keep an average adult man doing an ordinary amount of work in health and vigour.

The orthodox Western scientific teaching is that a diet for ordinary work representing visible energy equivalent to 300 foot-tons should consist of $4\frac{1}{2}$ ozs. of albuminates, $3\frac{1}{2}$ ozs. of fats, 14 ozs. of carbohydrates and 1 oz of salts per diem. The above quantities representing dry food

(Playfair, Moleschott, Pettenkofer, Voit and Ranke). In other words, an average man's daily food should consist of 8 ozs. of meat, 28.6 ozs. of bread, 2.1 ozs. of butter and 1 oz of salt. About 50 to 80 ozs. of water have also to be taken into the system in a liquid form, the quantity varying with atmospheric conditions and the exertion undergone. The people's usually accepted creed in the West has been that if a man wishes to be strong, he must eat plenty of meat and that at every meal. Herbert Spencer has laid down in his book on "Education" that overfeeding is preferable to underfeeding. A medical officer of high standing told me some time ago that a man who had fever should eat more nitrogenous food than one in ordinary health to replace the loss caused by the increased oxidation. It was the common practice among medical practitioners some years ago and it is perhaps the practice of many medical men now also to give concentrated nitrogenous nourishment such as meat, broths, &c., frequently to their feverish patients. Stimulants in some form (brandy preferably) were also given in more or less quantities 'according to the indication of the pulse.' I only mention these to show what the general trend of Western teaching on the subject has been.

Fortunately, scientific opinion has begun to change and eminent authorities who are not bound down by the trammels of tradition have expressed their views in unmistakeable language and in no uncertain voice. Sir Henry Thompson was one of the first to draw attention to the wrong and pernicious practices in vogue regarding the matter of diet. He was a pioneer worker in many fields and in every one of them he became specialist and

master. By his unrivalled work in Urethral Surgery, by his warm advocacy of cremation against powerful opposition and by his advanced teaching on the question of foods, Sir Henry has placed the medical profession and mankind generally under a deep debt of gratitude. In his remarkable little book on "Diet in Relation to Age and Activity," he has pointed out that the average Englishman eats much more meat than is good for him. Again he says in his "Food and Feeding" that man seems at the present time, prone to choose foods which are unnecessarily concentrated and too rich in nitrogenous and flesh-forming material and to consume more in quantity than is necessary for the healthy performance of the animal functions.

Sir Dyce Duckworth in one of his instructive clinical lectures has pointed out that during fever farinaceous foods are the most desirable and that the administration of meat broths and such like nitrogenous preparations are apt to induce fermentation and putrefaction and poison the system by the production of ptomaines.

The several parasitic diseases that are caused by the consumption of unsound meat and the blood dyscrasia produced by taking meat in excess of the requirements of the system are too well known to the profession to need any recapitulation here.

It behoves us therefore to consider whether there is any necessity for the consumption of flesh foods which are objectionable from moral, economical and hygienic grounds. "The superiority of milk, beans, legumens and cereals to the substances taken out of slaughtered animals is being fast recognized by experts.

The practical proofs of strength and endurance being displayed by the Japanese is assisting the evolution of opinion with reference to food." The following passage which I extract from the *British Medical Journal* speaks for itself. Dr. Josiah Oldfield, D.C.L., M.R.C.S., writes:—"Few experiments have been more striking in their suggestiveness than those classic experiments in which it was found that dogs fed on septic offal suffered from antosepsis when their bones and periosteum were injured, while those fed on healthy food escaped sepsis, when in both cases similar precautions had been taken to prevent sepsis *ab externo*. This was pregnant as to the risks of surgery upon a patient whose alimentary canal was in a septic condition. An important series of comparative experiments have now been carried out in the Hispano-American and in the Russo-Japanese campaigns which take us a step further. Surgeon-Major Seaman's observations show that when meat is practically excluded from the dietary and when cereals form the staple food, with some vegetables, dried fruits and eggs, the effects of shock after injury are much less and the danger of inflammatory sequelæ is minimized. The Japanese, fed on a practically fruitarian diet, are found by Dr. Seaman to be "in superb physical condition" when brought back to the base hospital after severe wounds, while as to the American army, he described it as "in a state bordering on collapse at the end of the war" and his observations led him to determine that the great difference was due to the diet. My own observations have extended over about 2000 cases where the patients have been on exclusively fruitarian dietary, and have quite come to the conclusion that their rapid recovery after operation, for the securing of a

non-inflammatory diathesis, and for the development of a constitutional tolerance to grave surgical interference, it is wise to prepare the patient by replacing the ordinary mixed meats and beery dietary by one composed almost exclusively of milk, eggs, butter, cereals, farinacea and dried fruits."

The medical profession of the West has been adopting extreme practices during the last century. First it depleted its patients with venesection and the 'antiphlogistic' plan of treatment. Then it tried the opposite method and took to administering stimulants and concentrated nitrogenous foods. It is gratifying however to contemplate that the new century has dawned with improved ideas on the subject and that the profession has begun to see the blunders it has been committing, and let us hope that ere long the golden mean would be universally recognized.

The Hindus have proved beyond doubt that intellectual eminence may be attained with a vegetable dietary coupled with animal products, and the Japanese have proved that the same dietary combined with a judicious system of physical exercise can produce the Ghorka with brains.

The type of physique developed depends largely on the quantity and quality of the food consumed by a nation. Every reader of romance will remember the beautiful description of the two adversaries that met in the vicinity of Lake Asphalites in Scott's "Talisman"—the Knight of the Combant Leopard and the Saracen Emir—of their horses, their accoutrements and their fare. The Christian crusader was tall, powerful and athletic with peculiarly large and strong wrists

and brawny arms, but, as Sir Walter has added, his form was that of a man whose strength might in later life become unwieldy. The Saracen's frame seemed divested of all that was fleshy or cumbersome and fitted for exertion and fatigue beyond that of his bulky champion whose strength and size were counterbalanced by weight and who would be exhausted by his own exertions. The Knight's gallant charger and his long and ponderous Gothic sword corresponded to the power and gigantic proportions of their owner, while the fleet and nimble Arab and the narrow and light Damascus Sabre of the Emir were in consonance with his elastic and wiry build. The Christian's meal consisted of dried hog's flesh and wine from a leathern bottle, while a handful of dates, a morsel of coarse barley bread and a few draughts from the lovely fountain sufficed to relieve the hunger and thirst of the Moslem. Yet, as we all know, the slender Saracen with his abstemious meal was no mean antagonist to the valiant Nazarene who required a 'more genial' repast. As every one knows, these two types of beings were not the mere products of Scott's fertile imagination. In his own way, the novelist has dwelt on the influence of food and drink on physique and character. Leaving romance and coming to the actual life of the present day, we find the diminutive Japanese ('feather-weights' as the Editor of the *British Medical Journal* calls them) has beaten the American in endurance, the Russian in prowess, and handle English, Scotch and Irish soldiers of height, weight, pluck and energy as if they were so many fogs. In his work on "Japanese Physical Training," Hancock narrates that the Japanese Emperor had a passing notion that his race might be im-

proved through attainment to greater size, and in 1899 the Emperor appointed a Commission to investigate for determination as to whether it would be advisable to take steps that would bring about taller and bulkier physique among his subjects; one of the questions that His Majesty propounded to the Commission was as to whether the successful encouragement of a partial meat diet would be of advantage. The report of the Commission, when its long and arduous labours had been completed, was to the effect that no material advantage could result from increase in height or weight. So far as meat diet went, the Commission reported that the Japanese had always managed to do without it, and that their powers of endurance exceeded those of any of the Caucasian races.

According to the Japanese estimate of the relative value of the nourishing properties of various foodstuffs, rice comes first, vegetables rank second, fish plays a third part and fruits fourth, in the scale. The Japanese soldier's daily ration is said to consist of about 36 ozs. of rice and a handful of fish. It is noteworthy that Professor Mayor of Cambridge thinks that the importance attached to the nourishing properties of rice is all "nonsense"; other authorities however, are of opinion that the Japanese is able to thrive on rice, because he does not lose the nitrogenous nutriment contained in the brain. There seems to be considerable difference in the amounts of nutriment obtained from the different methods of preparing rice. Professor Mayor however asserts that he is living comfortably on 2d. a day on lentils, beans, and skimmed milk.

As for drinks, I have very little to say about the use of alcohol. Though it was

the opinion only a few years ago that alcohol was not only harmless, but even necessary for middle aged men living in crowded cities and that it was a valuable food tending to prevent combustion on the tissues of the body, it is now admitted by most authorities that it is no food at all, that it is perfectly unnecessary, if not injurious to health, and that it is perhaps useful in some cases of high fever. What it will do, when it is abused, it is unnecessary to dwell upon. Coffee, tea, etc., may be utilized as gentle food stimulants, when used in moderation, but when used in excess, they contribute largely to their share of human wrecks and nervous diseases and digestive troubles. Mr. Ernest Hart told me when I had the privilege of being his 'Private Secretary' during his few days' stay in Madras, that the Japanese method of using tea was surely the least injurious and most beneficial. He said that the tea leaves were merely thrown in boiling water for a second and that the same leaves were used several times. The infusion was drunk without milk or sugar.

I have made these fragmentary remarks in the hope that the question may be fully discussed in all its aspects—ethical, physical, social, economical, &c., by abler and more experienced men than myself.

Cases and Comments.

A Case of Hysteria,

BY

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THE other day I was called to see Mrs. R., a Vaisya lady, who was reported to be totally unable to swallow food, solid or liquid. She is aged about 25 years, is weak

and superstitious and has three children. There was nothing the matter with her till January last when she removed to Adoni on account of plague in this place. In Adoni she had severe cough with expectoration and her appetite grew poorer day by day. She could eat very little solid food. She was much dispirited and at times used to talk to herself. She returned to Bellary in March and a few days later the cough disappeared completely and her appetite was better. But her aversion for solid food increased and she lived on milk and congee alone. She grew weaker and now and then fell into a swoon. Her behaviour became more singular. She talked about her dead mother having appeared in her dream and desired to take her away. At times she spoke as if she had a second self, invariably referring to herself in the third person. She and her female relatives were firmly convinced that she was possessed. For full three days prior to my seeing her, she had not taken any thing but water. Neither milk, nor congee, nor coffee could pass down her throat although she was hungry and quite willing to take nourishment.

2. During my visit I found her cheerful enough though extremely weak and unable to move without help. She deplored her inability to swallow anything except water which, however, she drank freely and frequently. In my presence, she took a mouthful of coffee and attempted to swallow it but there was violent spasm of the muscles of deglutition and the cheek. She felt a choking sensation, her whole body swayed to and fro and she had to spit out what she had taken. I next induced her to masticate bits of biscuits and drink water over it, which produced the same result. Medicine was, of course, out of question. The next day she had

hiccup in addition to the other symptoms. The fits were very frequent but differed from the ordinary ones in each of them being prolonged without an abrupt end. Anybody could easily imitate it. The hiccup never appeared in the presence of strangers. It became severe before the sympathising enquirers. My first idea was that she was purposely malingering. This was, however, dispelled by the fact of her five days' absolute starvation and the assurance of her father-in-law and his three sons, who are all educated men, that such conduct was quite foreign to her usual nature. They had watched her closely during her illness and were inclined to the view that she was either going mad or was possessed. Otherwise it was unaccountable.

3. I made thorough enquiries of all the members of the family, and among several facts which might be possible causes, I learnt a few which struck me as constituting the most probable ones though none of the relatives seemed to attach any weight to them. The facts were such as led me to believe that the patient had long been suspecting her husband's moral conduct and her remonstrances had been in vain. Finding him incorrigible and growing worse, she controlled her jealousy and appeared as if she was satisfied with his explanations. I also elicited the fact that a few days before, the husband had tried to induce the patient to take nourishment and finding her obstinate, he abruptly left her saying he cared a d—n if she lived or died. Since then the symptoms had become aggravated. When I asked her if she had any grievance against him, she replied with a supreme air of unconcern that after begetting three children, neglect, if any, on her husband's part would not affect her and in fact she

had no complaint against him. The husband was very anxious about her health and I took the opportunity to ask him to remove the cause of her complaint. He accordingly expressed to her his regret for his past negligence and made liberal promises as to his future conduct. He further informed her that it was the will of the household deity that she should be all right that day. The effect was instantaneous. The devil in her said: "I will then take leave." She said she felt all right and asked her husband to lead her to the kitchen, where she took her usual quantity of rice. Since then she has rapidly regained her strength and all the abnormal symptoms have disappeared.

REMARKS:—This is a clear case of hysteria and the symptoms are attributable to the patient's long brooding over her husband's neglect both before and after the disease, the idea of devil instilled into her by her female relatives and friends and the over-sympathetic attention of her father-in-law and others, including myself. This case recalls to my mind a similar case mentioned by Dr. C. B. Rama Rao while I was his student, in the Medical College. His patient one day suddenly found herself unable to swallow anything and all attempts on her relatives' part failed to make her take anything. Probably she was of a hysteric temperament. By tactful sympathy and gentle persuasion alone he was able to convince her that her throat was not blocked as she had imagined, and succeeded where others had failed. It is very seldom "possessed" cases come under the treatment of a medical man. They usually seek the aid of the devil charmer, who happens to be a pagan generally. I have seen many women suffering from colic, dys-

pepsia, menstrual disorders and barrenness resorting to shrines reputed to have the power of driving away evil spirits. The friends and relatives of the women night and day din the idea of the devil into their minds, with the result that they become hysterical. With the aid of drums (*uduku*), figures of variegated colours and distorted features, small torches, &c., their minds are so worked upon and the imagination is so overstrung that they laugh, cry, whirl round on all fours and carry heavy weights as they had been duly told "devils" always do. Most of these "devil" cases should be quite amenable to medical treatment. It is only ignorant villagers and the lower classes living in the town that go in for the devil driver. The upper and more enlightened classes resort to home treatment and pujas. Moral treatment more than drugs is what is needed. Valerian, musk, asafoetida, aurobromide, &c., should be avoided as far as possible. Tact and patience will enable one to find the causes and remove them. It might at times be necessary to pander to the morbid fancies of the patient. I have heard of intelligent medical men curing cases by having pujas made and limes cut with knives after having the blades daubed with permanganate of potash to give the idea of blood dribbling out of the fruit. I was quite prepared to do this trick, should my first attempt prove a failure.

THE ANTISEPTIC.

JULY 1905.

Indian Practitioners and English Diplomas.

ONLY a fortnight ago, a young member of the profession declared that medicine, as a career, was a failure, and he was promptly advised to join a circus or write a popular novel to make his fortune.

Indeed, on the face of it, it does appear a vain expense of all good things, of time and trouble and money, to cross the black waters, offend one's orthodox relatives and endure the severe drudgery of a University course merely to tack an *M. B. C. M.* at the end of one's name. Beyond a little, vague reputation, it counts for nothing, apparently, and the material success of the profession as measured by house-property and banking accounts does not, as a rule, belong to the holders of European degrees and diplomas.

The list of the 'England-returned' grows larger yearly, but the confidence of the public in the English qualifications of an Indian doctor does not grow in proportion, as against the merits—mainly of smaller fees—of the local practitioner and the prestige—chiefly of colour—of an I.M.S. Surgeon with lower qualifications. "What is in a name?" asks Shakespeare, and we might ask "What is in the colour of

a skin?" The answer is undeniable; it spells a difference of fees and fame.

It behoves us, in our own interests, to seriously face this question and find a final solution for it, since it affects in a vital degree the future prospects of our profession as represented by the higher qualifications of European Universities and brings up, eternally, the insidious and demoralising doubt as to whether it is really worth while to aim high and shine for the strenuous honours of an academic course, when it pays as well, or, rather, infinitely better, to be content with lesser ambitions and lower successes.

The remedy for these pressing ills lies not in platitudes and paradoxes, but in a sober threshing out of the whole matter. Briefly, the blame and responsibility of it all may be portioned out, almost equally, into three parts. To begin with, the fault lies with the medical men themselves, who, when they first return to India, fresh from University honours and traditions hold themselves aloof, with a singular want of tact and foresight, from their humbler brethren who, perhaps, are debarred for a hundred reasons from enjoying the same privileges and advantages that these have obtained, and which in themselves are valueless, unless backed by intrinsic merit and individual worth. Secondly, the local practitioners naturally resent the "superior" attitude of the England-returned, and are a little jealous of their greater opportunities

of learning; and do not help them as frequently as their large practice enables them to do, by calling them in consultation; but in nine cases out of ten they give the preference to an I. M. S. man or to a European doctor in private practice. (In this respect it would appear that the votaries of the sister profession of law are luckier; since barristers hold themselves in friendlier relations with Vakils and Solicitors).

Last, and surely not least of all, the public must bear its share of blame and shame—the great Indian public whose in-born adoration of a white man makes it blind to and suspicious of the merits of its own children, who have every right to demand of it justice and pride in their attainments.

There is endless talk and much fervour expended over "home-industries," the "Svadeshi movement," "patriotism" and the like. All talk! When it comes to the simplest test in the world, the buying of shoes or the choosing of doctors, the European product always scores over the home-made article.

Now, it is high time that there should be a re-adjustment of this three-fold problem, from the standpoint of the English-trained graduate, the local practitioner and the public; a triple alliance, as it were, held together in the bonds of common courtesy, sympathy and confidence, to the great benefit of

all concerned; each should make it a point of common honour to meet the other half way and find a happy solution for what is a vexed question all round, and chiefly to the first-mentioned party.

Further, if active measures be not speedily taken by our own united efforts in the matter, in self defence at least, for the preservation of our professional dignity and integrity; our lofty ideals of learning and research for all that goes towards making and maintaining the greatness of our calling, we shall richly deserve the strictures of the Viceroy upon us as a people; we shall in truth prove ourselves slaves in a double degree, slaves to circumstances that we can overcome; to prejudices that we can conquer; to injustice that we can crush by the mere validity and justice of our claim to our country's appreciation and response.

We are, as a whole, too lax in our acceptance of things; we fritter away our proper indignation in mere bitter words or futile complaints and self pity which answer no purpose whatever except perhaps as a vent for our pent-up personal grievances. Well, each man must strike for himself, and consider the question from a personal point of view as it affects his own career and prospects for better or worse. There are doubtless many exceptions among us whose very individual successes but serve to emphasise the weakness of our position as a class. But it is the sacred duty of the entire fraternity of

the England-returned members of the profession to form a sort of crusade against the existing evils that conspire to prevent them from taking their proper place in the economy of their country; and to insist by all fair and practicable ways on that triple alliance of which we have spoken, which can only be fruitful of the happiest results; for the man of European diplomas whose practice will thereby be materially enhanced; for the local practitioner who will thereby reap the naturally fuller knowledge of special subjects gained first hand from the best sciences by his England-returned colleagues; and the public will thereby ensure the swiftest and safest means to its desired end—its own physical welfare and mental comfort, by always commanding the most recent methods of coping with pain and disease.

Our Contemporaries. MEDICINE.

Cessation of Epilepsy consequent on Removal of Adenoids,

BY

STCLAIR THOMSON, M.D., F.R.C.P., F.R.C.S.,
*Physician for Diseases of the Throat
in King's College Hospital.*

In the summer of 1898 the little girl whose photograph is shown in the Figure (1) was sent to me by Dr. Ferrier, with the following note:—

1905.]

"She is under my care for *petit mal*, but she is getting deaf, and there are signs of some throat affection—probably adenoids. I am sure the epilepsy will also be benefited by the removal of this discomfort."

The child was six years of age, and on enquiry it was stated that she had been subject to fits from the age of four. Two attacks of *petit mal* occurred during her visit to my study, *i.e.*, two fits within twenty minutes. During these her head was thrown back, the eyes turned up, the upper eyelids twitched, and the inspiration was shallow and noisy. Each attack only lasted a few seconds, and the patient recovered consciousness without falling from her chair.

The parents reported that she had caught cold a month or two previously, and had since been noticed to be deaf and a mouth-breather. She was also said to be very restless in bed; talking in her sleep, and throwing off the clothes, but there was no enuresis.

As is well shown in her photograph, the child had a marked adenoid facies (Fig. 1). She was a constant mouth-breather; the root of the nose was very broad; and the inner fold of each upper eyelid, which by some is thought to be accentuated with adenoids, was well marked. She was said to have a dry nose, anteriorly the nostrils appeared normal. The molar teeth had not fallen, but the palate appeared a little arched.

The child was deaf, so that whispered speech was heard only at a distance of two yards. The membranæ tympani were very translucent, only slightly retracted, and the pink injection of the inner tympanic wall was easily visible, shining through the drum membrane. In children this appearance is very characteristic of Eustachian and middle-ear catarrh from adenoids, and, with digital examination, these growths were found to be plentiful. There were no palatine tonsils.

It was explained to the parents that the removal of the adenoids was unquestionably indicated on account of the condition of the ears, and would probably prove beneficial in other directions.

A large mass of adenoids was removed on August 25, 1898. On September 7 the patient had ceased to be a mouth-breather; the membranæ tympani no longer showed pink; and she heard a whisper at four yards. She was reported to sleep quietly and to be much brighter in herself, but the fits still continued.

I did not think of writing to the parents for four years, and then (in 1902) they reported that the fits had ceased within a few months of the operation, and had not recurred. The next time I saw the patient was in March, 1904. Her appearance is shown in Fig. 2. She was found to be a very self-possessed, bright, and intelligent girl of 12, weighing 6 stone 8 pounds, *i.e.*, more than 16 pounds above the average. She is no longer a mouth-breather; she has no trace of adenoids and her hearing is perfect. There is no marked arching of the hard palate. The parents reported that for a few months after the operation she continued to take bromide under Dr. Ferrier's advice, but that the fits had left her—as already reported—soon after the operation, and had not recurred. She had taken no bromide for six years. She is at the present moment nearly 13 years of age, and has had no fits for seven years.

I have had other cases where adenoids have been removed in epileptic children without the satisfactory result above recorded, but I am prompted to put even one success on record. For there appears to be a general consensus of opinion that the most unsatisfactory cases of epilepsy are those in which the disease commences under 10 years of age; they show the smallest percentage of recoveries, and the largest number of confirmed cases.¹ In a debate at the Royal

¹ Aldren Turner: *Transactions Medico-Chirurgical Society*, June 9, 1903

Medical and Chirurgical Society this feature was agreed to by several speakers.

Dr. George Shuttleworth, from his experience of epilepsy in children, could only record one instance of recovery out of a large number of cases.

Dr. Newton Pitt observed that practically the majority of cases, which failed to yield to treatment during the first year, were not hopeful, and Dr. Fletcher Beach asked why the cases under 10 years of age should present such a large number of confirmed cases.

I do not claim that the patient referred to above is permanently exempt from recurrence, as it is held that relapse will occur sometimes, even after nine years, and particularly at the onset of puberty.

The relief, however, seems fairly attributable to the operation, and there is no doubt of the improvement it has wrought in the child's appearance, and in her general physical and mental well-being.—*The Practitioner*.

Measles without Eruption.

The occurrence of measles without eruption has been denied by many authorities. Thus Monti states that in cases supposed to be examples of *morbilli sine morbillis* the rash has probably been overlooked. Even Henoeh (*Lectures on Children's Diseases*, New Sydenham Soc.'s Translation, vol. ii, p. 261) had never seen an assured case. The writer, with 50 years' experience, has met with his first case recently.

In a family of 6 children, a boy, aged 8, was attacked by measles on Oct. 30, 1904. He was immediately removed from the house and isolated. But on Nov. 10 his 4 sisters, twins, aged 9 months and 3 years respectively, showed prodromal symptoms with red patches on the palate. In 3 of them the measles ran a normal course, the eruption

being fully developed on Nov. 13. But the fourth, one of the twins, aged 9 months, was seized with severe bronchitis. She had always been weakly, and weighed only 13 lb. The pyrexia, which often reached 104°, persisted for a fortnight. Although the writer was visiting twice a day, neither he nor the nurse and mother saw a trace of an eruption. The bronchitis was accompanied by frequent cough and vomiting. On Nov. 27 the temperature fell to 99.5°, general convulsions appeared, and on Nov. 29 death occurred.

Schutz (*ibid.*, Mar. 21, p. 557) considers cases of measles without eruption to be commoner than is supposed. During an epidemic of measles his 3 children developed prodromal symptoms. In his daughter, aged 7, there were a typical eruption over the whole body, photophobia, cough, capillary bronchitis, and pyrexia, which reached 104.9°. But in a daughter, aged 9, and a son, aged 6, though there were all the symptoms of measles—pyrexia (up to 103.1°), severe conjunctivitis, and bronchial catarrh—there was no trace of an eruption either on the palate or the body. The cases without eruption were, unlike the one published by Salzer, of a comparatively mild type. In the case with eruption there was extensive capillary bronchitis, but in the 2 cases *sine morbillis* the pulmonary symptoms were slight.—Salzer *Munch. Med. Woch.*, Feb. 21, p. 360.

Inequality of the Pupils in Pleurisy with Effusion,

BY

A. CHAUFFARD AND L. LAEDERICH.

The importance of inequality of the pupils as a sign in the diagnosis of diseases of the nervous system has long been recognised. But it may occur in diseases of other parts. In 1902 Souques reported 3 cases of inequality of the pupils in pulmonary tuberculosis

(*Review*, 1902, p. 620). Vincent described it in phlegmonous angina (*Soc. Med. des Hôp.*, May 20, 1904, p. 522). Recently Deherain discussed it in diseases of the lungs and pleura. But of pleurisy with effusion, this is all he says: "In 4 cases of tuberculous pleurisy with serous effusion inequality of the pupils was present for several weeks." Of the nature or degree of the inequality or of its relation to the quantity and nature of the effusion he says nothing. The writers have investigated these points.

In pleurisy with effusion they found inequality of the pupils in 7 out of 17 cases (41 per cent.). The larger pupil was almost always on the side of the effusion. The inequality varied much from day to day, sometimes even disappearing on certain days to return later. It was never found after the effusion was completely absorbed. The inequality was always moderate and never attained the magnitude observed in diseases of the brain and the spinal cord; sometimes it was so slight that it had to be looked for carefully by exposing the eyes to equal illumination with medium accommodation. The inequality was observed only on moderate illumination such as that from a window. If a bright light, such as an electric lamp, was used, the inequality disappeared, the pupils contracting to their maximum and becoming symmetrical. The same result was produced on accommodating for very near objects. The 7 cases in which the inequality was observed comprised one case of "cardiac pleurisy" and 6 of tuberculous pleurisy. The 10 negative cases consisted of 6 cases of tuberculous pleurisy, 1 case of hæmorrhagic pleurisy (probably cancerous), 2 cases of pleurisy following pneumonia, and 1 case of "cardiac pleurisy." In these 10 cases all degrees of effusion were observed. Comparing the positive and the negative cases no relation could be traced between the amount of the effusion or the presumed condition of the apex of the lung in the tuberculous cases and the inequality. Paracentesis thoracis

had no effect on it, even when as much as 1,250 C.C. were removed.

The inconstancy, variability, and fugitive character of the inequality much diminishes its clinical value. Its principal interest is from the point of view of physiological pathology. Souques attributes it to compression of fibres of the cervical sympathetic from tuberculous lesions of the apex. According to Deherain, it is due to pressure of enlarged lymphatic glands or of the effused fluid on the pupillary fibres of the sympathetic. But the fact that it varies from day to day is opposed to the former theory, and the fact that paracentesis does not affect it is opposed to the latter. The inequality seems to be a functional phenomenon. Its explanation appears to lie in the dictum of Schiff: "All peripheral sensory irritation causes dilatation of the pupil." Probably it is due to irritation of the branches of the vagus distributed to the lung on the affected side. The unilateral character of the phenomenon is explained by Pflüger's law: "Reflex movements are first manifested on the side of the irritation."—*Archives Gen. de Med.*, Mar. 7, p. 585.

A Case of Delayed Chloroform Poisoning,*

BY

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GEORGE S—, aged 2 years and 7 months. Admitted into the Children's Hospital, Derby, March the 28th, 1905, under the care of Dr. Mervyn Wilson.

Family history.—Father, mother, and one other child alive and healthy. No child-

* "Delayed Chloroform Poisoning," by H. J. Stiles and S. McDonald, *British Journal of Children's Diseases*, vol. i, pp. 262-267; *Ibidem*, Editorial, pp. 401-409. For full report of paper by Stiles and McDonald, vide 'Reports of the Society for the Study of Disease in Children,' vol. iv., pp. 208-271, with coloured plates.

ren have died in the family. The mother has had no miscarriages.

Previous history.—The child had always been healthy. There was no history of vomiting, "bilious attacks," etc. He was a quiet boy.

Present illness.—He did not walk till he was two years old, and then developed genu varum. His parents wished his legs to be straightened, and he was therefore admitted into hospital for operation.

Condition on admission.—Patient is a fat, quiet, rachitic child, but otherwise healthy-looking. There is outward curvature of both tibiae. The heart and lungs are normal. Appetite is poor; bowels regular. The lower border of the liver is at the costal margin, in the mammary line. The abdomen is normal. He has phimosis, but no difficulty in micturition. The urine is normal.

March the 30th.—He was prepared for operation on March the 30th. He had milk at 5 a.m., and vomited this at 5-30 a.m. As his temperature was normal, and nothing abnormal was found on examination, the operation was not postponed. At 9 a.m. he was anaesthetised, A.C.E. mixture being given from a Rendle's mask. Both legs were forcibly straightened, the tibiae being broken. No skin incision was made. The legs were then put up in good position in plaster. The whole operation lasted 30 minutes. Four drachms of A.C.E. mixture were used, but the child did not inhale all this, as the mask was frequently off the face. He took the anaesthetic well, was not sick, was fretful and restless for a time on coming out of the anaesthetic, but passed a good night.

March the 31st, 7-30 a.m.—The boy suddenly became collapsed, cold, lips blue, respiration rapid. At 8 a.m. he was in a serious condition, with a weak, rapid pulse. Half a drachm of brandy was given, hot-water bottles were applied, the end of the bed was

raised, ten minims of ether were administered subcutaneously. 10 a.m.: On examination of the chest, harsh breathing and friction were found at the left base, and the diagnosis of commencing pneumonia in the left lung was made. Liquor strychninae mj, and ether, mx, were injected subcutaneously. A saline injection was given *per rectum*, but was not retained. The bowels moved slightly at this time, and he passed urine. Brandy was tried by the mouth, but he vomited it up, with some "coffee-ground" material. Oxygen inhalations were used. 1 p.m.: Slight improvement. Vomited coffee-ground material again. Became weaker in the afternoon. 6 p.m.: Died, thirty-three hours after the operation.

April the 1st.—*Post-mortem* examination. The right auricle was dilated and full of blood, the left ventricle was firmly contracted; otherwise the heart was normal. Lungs: Both bases were congested along the lower border, and slight consolidation was present. Liver: The lower edge corresponded with the costal margin. It was pale, with several scattered yellow patches. One of these patches was sent to the Clinical Research Association for examination; they reported as follows: "This liver shows fatty changes throughout. The degeneration affects the liver-cells, and shows in the sections as spherical spaces. A fresh section stained with osmic acid showed that these spaces contained fat. The change is interesting, as it affects the whole lobule, whereas fatty degeneration, unless very advanced, as a rule affects only the periphery of the lobule." Naked-eye the kidneys and spleen were normal. Nothing else abnormal was found in the abdomen. The head was not examined.—*The British Journal of Children's Diseases.*

The Influence of the First and Second Dentition Periods in the Etiology of Epilepsy.

In the course of an article bearing this title in the *Medical News* of December 10, 1904, Spratling gives us the following views which bear on treatment. He thinks it is always a mistake to regard the convulsions of dentition or the convulsions due to any other cause in early life, in any other than a serious light. They are never positively benign—at least we have no right to regard them so. That infants who have convulsions escape serious consequences in the future is always a matter for congratulation; but the physician should never assume that this is the outcome to be expected. When disease tendencies are so strongly marked as these morbid manifestations so plainly indicate, the most constant care and treatment should be undertaken at once in every case with a view to preventing epilepsy, or idiocy, or insanity, or other states of degeneracy destined to destroy the mental life of the individual in question.

In conclusion, the author's views in the matter may be briefly summarized as follows:

1. Difficult dentition—*i.e.*, the piercing of the gums by the tooth—may, in suitable subjects, constitute a sufficient irritant to cause convulsions.
2. In suitable subjects these convulsions may ultimately lead to epilepsy.
3. By suitable subjects is meant infants who inherit a neuropathic tendency to disease; whose parents have epilepsy, or insanity, or who are alcoholic, or suffer from some other general vice that could be transmitted to the offspring in some form capable of vitiating its powers of resistance to disease.
4. The author does not believe that difficult dentition alone in a child who inherited no ancestral taints, and who at its birth is

free from a tendency to nervous disease, can cause epilepsy.

5. Great caution must always be exercised to lay the true cause in cases of this kind where it belongs; for the reason that gastro-intestinal disorders, the sequelae of the eruptive fevers, and other factors common at this age, may produce similar results.

Some Observations on Hemoptysis.

In the *Cleveland Medical Journal* for December, 1904, Fitzgerald advises that when the hemorrhage has been profuse, and the patient is exsanguinated, normal saline solution by hypodermoclysis may be indicated. It must be given with caution, since blood-pressure may be raised to a dangerous level. Small amounts, repeated as required, are safer than one large injection. That the pulse is soft and the blood-pressure is low is beneficial rather than otherwise, since the greatest danger lies in a too high rather than a too low blood-pressure.

The best treatment of hemoptysis requires: (1) Absolute physical rest; (2) mental quiet and relief from fear and anxiety; (3) morphine and atropine in sufficient dosage to insure both the preceding; (4) control of cough, fever, and pleuritic pain and careful attention to diet; (5) suggestive measures, as ice-caps over the heart, salt and cracked ice by mouth, etc.; (6) free use of bromides and nerve sedatives in the nervous; (7) nitrites or veratrum when high blood-pressure persists; (8) care in not overdrugging or in placing reliance on specifics, as ergot or adrenalin; (9) hypodermoclysis with normal saline when indicated.

Nasal Diseases and Headache.

A. L. Whitehead says in *The British Med. Journal* that in all cases of persistent

headache, examination of the nose should be a routine practice. Suppuration in the accessory sinuses and marked nasal obstruction should be thoroughly treated. Small spurs and deviations should be left alone. If the middle turbinates are enlarged and pressing upon the septum, especially upon the tubercle, and if all other possible causes of headache have been eliminated, partial removal of the hypertrophied bone should be advised, since in many such cases complete relief is given.

Paradoxical Perspiration.

Zappert has recorded the occurrence of an instance of this condition in a child. By paradoxical perspiration we understand a form of perspiration which occurs only on exposure to cold and yields to the influence of heat. In the case in question perspiration was localised to the skin of the dorsum of the upper extremities, of the back, and of the anterior aspect of the thorax; the palms of the hands, the forehead and lower part of the body were not affected. This paradoxical sweating was observed to occur periodically during the winter months. It had first made its appearance at the age of two years and now seemed to be gradually subsiding. Zappert considers the condition to be a reflex neurosis and to indicate the existence of a spinal sweat centre.—E. P. BAUMANN (Johannesburg).—76, *Kersammlung Deut. Naturforscher u. Aerzte*, September 21, 1904; *Munch. med. Woch.*, No. 45, 1904, p. 2027.—*The British Journal of Children's Diseases*.

Persistent Low Temperature.

BY

LE FORT AND BACHMANN.

A rachitic girl, aged 2½ years, was admitted into hospital in January, 1903, with tuberculous bone trouble in both hands, both forearms, and one foot. Four operations were performed; the last in Oct-

ober, 1903, was followed by a fall of rectal temperature to 35.1° C. In January, 1904, for one week the temperature was only once over 35° C, then bronchitis set in with a temperature from 34.5° to 37° C for a fortnight, the hypothermia returned and continued till an attack of measles in August followed by improvement. During a period of eight months the mercury fell to the end of the scale usually marked on thermometers. In May and June the lowest verified records were 33.7° C. (92.66° F.). In March, perhaps due to meat-juice diet, segments of tape-worm were passed. These disappeared in November, not as the result of treatment; the worms may have been the cause of 2.5 per cent. eosinophiles in the blood-count.—T. P. BEDDOES.—(*L'Echo Med du Nord*, February, 1905).—*The British Journal of Children's Diseases*.

SURGERY.

Repair of the Urethra by Transplantation of the Urethra of Animals,

BY

J. HOGARTH PRINGLE, M.B., F.R.C.S.

Unless rupture of the urethra is repaired by the union of the epithelium the formation of a splice of cicatricial tissue between the two portions is unavoidable and an intractable stricture results. In recent cases treatment is easy if a large extent of the urethra is not destroyed, and consists in exposing the ends and bringing them into accurate apposition by suture. Even when a certain extent is destroyed the tissues are so elastic as to permit of being stretched over a considerable gap if they are sufficiently freed by dissection. But there is difficulty when the injury involves a considerable length or when suppuration occurs, as necrosis results. Attempts to remedy the condition have been made in several ways. Guyon advocates allowing the urethral tissues to regenerate from the two ends. A soft catheter is passed and

over this the tissues of the perineum are sutured. The catheter is allowed to remain in from 2 to 4 days, and then the patient is allowed to micturate naturally. Other methods are grafting the wound with skin or mucous membrane by Thiersch's method or transplanting flaps of the same tissues. The writer successfully used a skin flap, but skin does not seem to be a satisfactory channel to conduct urine, as it is easily irritated and inflamed. Still it may be the only material available. Mucous membrane is better, but is not always available. In any case, the use of either entails two operations—making the graft and converting it after it has become adherent into a canal. It occurred to the writer that by using the urethra of some animal the second operation would be avoided and a channel lined with mucous membrane adapted to urine being conducted over its surface would be provided. He used the urethra of a bullock in 5 operations.

CASE I.—A man, aged 51, was admitted to hospital on Dec. 2, 1900, for retention of urine, which began 2 days before when he was intoxicated. Since then only small quantities has been passed. A practitioner tried to pass a soft catheter on two occasions but failed. The penis was swollen, and the peno-scrotal junction had a bruised appearance. The bladder reached to the umbilicus. A catheter could not be passed. Two inches from the meatus, was an impassable obstruction. The bladder was aspirated, and a large quantity of blood-stained urine drawn off. Next morning a crackling sensation was felt on palpating the peno-scrotal junction, so a free incision was made, but the tissues were found only bruised. Another incision in the perineum opened a cavity containing foetid blood and urine. The condition of the tissues suggested traumatic rupture of the urethra. The writer could not find the proximal end of the urethra, and therefore performed suprapubic cystostomy, washed out the bladder which contained ammoniacal urine and blood, and passed

a bougie from the bladder into the urethra, which he found was destroyed from the apex of the prostate to the triangular ligament at least. He still could not pass an instrument through the penile urethra. Moist dressings were applied and the bladder was drained by Cathcart's syphon apparatus. The discharge continued very offensive, and it was soon obvious that a large amount of tissue had sloughed. Therefore the scrotum was split in the middle line. The corpus spongiosum was found to be completely gangrenous from the triangular ligament to a point 5 cm. from the meatus. This was all cut away, and a large wound left with a corresponding gap in the urethra, only the prostatic portion and a piece 5 cm. long remaining at the other end. The patient improved rapidly.

On Jan. 14, 1901, an attempt was made to supply the defect in the urethra by a graft. Portion of the penis of a young bullock just killed was brought to the hospital in hot sterile saline solution. The urethra was dissected out leaving only a few alveoli of spongy tissue attached to it. The wound was then prepared and the ends of the patient's urethra were freed sufficiently to enable them to be sutured to the graft and 13 cm. of the bullock's urethra were stitched in position. The wound was closed by buried and superficial stitches. It completely healed by primary union except at the junction of the graft with the penile urethra, where a fistula resulted. On Feb. 2 a No. 6 English bougie was easily passed into the bladder. The edges of the fistula were freshened and sutured. Several times after the operation the patient passed urine along the whole length of the urethra (although it was not intended that he should do so), but eventually the sutured part broke down again and this was followed by narrowing of the graft at the peno-scrotal junction.

On Mar. 26 the distal part of the graft was dissected out and 7.5 cm. of bullock's urethra were implanted. It all remained viable and the wound healed perfectly, but the

junction of the new graft with the original penile urethra again failed. Several operations were performed and though holding for a time it always gave way. He was discharged passing all urine by the fistula.

CASE 2.—A man, aged 28, fell on the foot-plate of a locomotive, striking his perineum, at 9 a.m., on Aug. 1, 1903. A practitioner tried to pass a catheter but failed. He was admitted to hospital late at night in a state of collapse, with blood oozing from the meatus and the bladder distended about half way to the umbilicus. The perineum was very tender but showed no signs of bruising. Under anaesthesia, an attempt was made to pass a full-sized instrument but it was arrested at the perineo-scrotal junction. The perineum was incised and a large cavity full of clot was opened. The greater part of the membranous urethra appeared to have been destroyed. The proximal end of the urethra could not be found, so the writer was obliged to open the bladder above the pubes. A bougie was passed from the bladder and the urethra was found to terminate about $\frac{1}{2}$ in. in front of the apex of the prostate. The bladder was drained and a wet dressing was applied. On the 3rd the distal portion of the urethra was freed and united to the proximal and the wound was closed. The wound broke down and there were signs of infection of the bladder. At the end of Aug. the wound was clean but there was a gap of 5 cm. between the ends of the urethra.

On Sept. 3, 5 cm. of a young bullock's urethra were implanted, its ends were sutured to the extremities of the urethra, and the wound was closed. Healing took place except at one point behind the scrotum. On the 14th a No. 7. English bougie was easily passed into the bladder. On the 21st he had a sudden desire to micturate although the siphon was still in use, and passed some ounces of urine per urethram. The bougie was passed every second day. On the 23rd

the temperature rose to 102.4°. He developed abscesses in the right kidney and nephrotomy was performed, but he did not improve, and died on the 29th. The necropsy showed that the renal pelvis contained several small calculi, and that the ureter was blocked by a calculus.

CASE 3. PENILE HYPOSPADIAS.—A boy, aged 14, was admitted to hospital. The penis was greatly curved downward, and the urethra terminated anterior to the peno-scrotal junction, where all the urine was passed. The line of the penile urethra was occupied by little tags of skin. There was no frænum and no meatus in the glans. On Jan. 30, 1902, after making a perineal fistula, the tags were cut away and the incision extended well into the erectile tissue, the fibrous sheath of which with the skin was dissected back at each side as a flap. The penis could then be straightened. Seven cm. of bullock's urethra were sutured into the groove and to the freshened end of the urethra behind and to the margin of the incision in the glans in front, and the wound was closed over the graft. Healing took place except at the junction of the urethra and graft. On Mar. 2 a No. 3 English bougie was passed into the bladder and the fistula closed, but this failed as did a second attempt. He was removed from hospital by his friends and not seen again until Sept., 1903. Most of the urine passed by the perineal fistula, some by the opening in front of the scrotum. A small part of the implanted urethra was present and admitted a small bougie, but the meatus was closed.

On Sept. 5 the cicatrix of the former operation was dissected out and the whole of the graft was found not only intact but permeable. It was dissected out and 9 cm. of bullock's urethra were implanted as before. The wound healed except at the junction of the graft with the urethra. At the beginning of Dec. this defect was closed and a No. 8 bougie was passed into the bladder. This

operation was successful and he was taught to pass a bougie. He was frequently seen subsequently and a No. 6 bougie could easily be passed.

In all the 5 operations the graft lived and remained patent. A case has been recorded in which portion of a sheep's urethra was transplanted for intractable stricture by Clennel Fenwick (*Lancet*, vol. i., 1896). This seems to be the only case previously recorded. In the treatment of hypospadias the operation appears to be new and to be superior to other methods.—*Annals of Surgery*, Sept.

Resuscitations after Hanging.

Old medical writers often mention the recovery or resuscitation of persons who have been hanged. In the days when a man could be hanged for the smallest offence, such as stealing a pocket-handkerchief, the last office of the law was often carelessly performed. Hence the many marvellous returns to life of the victims. The case of Anne Green was famous under the Commonwealth. She was hanged at Marston in Oxfordshire, in December, 1650, for murdering her baby. After shocking maltreatment the body was cut down, trampled upon, put into a coffin, and handed over to the surgeons for dissection. On the coffin being opened, the woman's bosom was seen to move, and it was decided to smother her. Fortunately for the poor creature, however, a number of eminent men, who had been invited to the dissection, intervened in her favour. She was put to bed, bled, and in 14 hours' time was able to speak. Subsequently, by the intercession of the doctors, a pardon was granted her. It was found that the half hour during which she had been hanged had left no impression on her. She awoke as from sleep, and her power of speech returned only gradually. She began to speak at the point she had left off before being hanged. In 1724 Margaret Dickson was hanged in Edinburgh, also for

infanticide. The body was taken in a cart to Musselburgh, and showed signs of life when some third of the way thither had been traversed. The coffin had been damaged in some way and let in fresh air, and this, with the rough jolting of the cart, was thought to have revived her. Both Anne Green and Margaret Dickson became respectable members of society. They married, were mothers of many children, and made their living honestly. Margaret for years sold salt about the streets of Edinburgh, and was nicknamed "Half-hanged Maggie." In both these cases the noose or the drop must have failed to do its deadly work. Sometimes a criminal set about frustrating the object of the law with great ingenuity. Thus Gordon, a highwayman, who was hanged in the seventeenth century, went to the gibbet with a small tube inserted in a hole cut in his windpipe by a friendly young surgeon. The plot only succeeded for a few moments. The hanged man breathed after execution, but his weight was such that he had fallen heavily and his vertebral column was probably broken. He did not recover. In 1697 Richard Johnson made the executioners promise not to strip him after death. After he had hung half an hour he was seen to be alive. A man mounted the gallows ladder to examine him, and found that he had twisted cords round and under his body, and had connected them with rings round the neck, the whole being concealed by 2 shirts and a long flowing periwig. The poor fellow was hanged a second time.

It was long a moot question whether these second executions were legal. Some merciful people contended that one hanging was enough, and that if a man was sufficiently lucky to recover from it he should be given the benefit of the doubt and be quietly let off. Of this opinion were the majority of surgeons. In the eighteenth century the bodies of persons recently hanged in London were taken to Surgeons' Hall, where the Master of the Surgeons' Corporation dissected them

Bodies for dissection being then very scarce, these demonstrations had much educational value. In 1740 William Duell was hanged for murder at Acton, and was afterwards taken to Surgeons' Hall. Just as the dissection was about to begin, Duell was heard to groan feebly. He was bled, and in the evening was able to sit up. He was taken back to prison, but public feeling being strongly excited in his favour, he was not hanged again. In many cases the resuscitated man was quietly smuggled away by his surgical friends. One grim exception to this rule is, however, recorded. In 1752 another murderer, Ewen Macdonald, was hanged and transported to Surgeons' Hall. The operator left the room for a moment, and on his return found Macdonald sitting up on the dissecting-table. The surgeon accordingly took the law into his own hands, and killed the poor wretch with a mallet! This act of mistaken zeal caused much public indignation.

Bleeding was always found to act as a restorative in cases of recovery after hanging. On one occasion the executioners themselves saved their victim. Two natives of India were hanged by Thugs. The murderers thinking that they had not sufficiently dealt with one of their victims, returned and gashed his throat. The sudden flow of blood relieved the brain-congestion caused by strangling, and the man recovered and was able to give a very good description of the Thugs, which led to their identification. His companion, whom they had left un mutilated, was found dead. Except in the case of suicides, recovery from hanging is now unknown, for the fatal drop has superseded the old jump from the ladder.—*The Medical Review*.

A Distinction between Femoral Hernia and Varix of the Internal Saphenous Vein,

BY
HERTLE.

The differential diagnosis of femoral hernia and varix of the saphenous vein is usually easy. But cases occur in which it is impossible to distinguish the conditions with certainty. Thus Boger has published a case in which firstly two practitioners, secondly the Leipsig University Clinic, and finally he himself diagnosed a femoral hernia, though the true condition was varix. While examining a case in which a practitioner had diagnosed femoral hernia the writer discovered a sign which is easily elicited and absolutely pathognomonic of varix. If firm pressure with 2 fingers is made over the swelling and then suddenly relaxed without interruption of contact, a thrill, which resembles that of mitral stenosis, is felt. In 2 cases seen subsequently the sign was also present. It is conceivable that a thrill might accompany a hernia if it were complicated by congenital hydrocele and the fluid were pressed into the abdomen through a narrow opening. But in this case the thrill would occur only during firm pressure, and would cease when pressure was relaxed.—*Beitrage Zur Klin. Chir.*, 43 Bd

Removal of Plaster of Paris Dressings,

BY
WM. C. TODD, M.D.
Philadelphia, Pa.

I noticed in a recent issue of the *Brief* a way to remove plaster of paris dressings. With no desire to criticize other plans, it occurred to me it might be of interest to the readers of the *Brief* to know a simpler, easier and better way. My plan is to simply immerse the part in a warm bath for twenty or thirty minutes, when the plaster becomes so disintegrated that the bandages can be cut with ordinary scissors.—*The Medical Brief*.

OBSTETRICS.

Three Cases of Hæmorrhage, with difficulty in Diagnosis,

BY
JACOBS.

In the three cases of which the author gives an account, the necessity for operation seems to have been urgent, although a complete diagnosis was not made before operation in two of them.

The first case was one of cancer of the uterus with pregnancy, in a multipara of 47. She had been confined to bed for a month, with severe menorrhagia, was very anæmic, and presented the appearances characteristic of advanced cancer of the uterus. A cauliflower growth was found per vaginam and total abdominal hysterectomy was performed. In opening the uterus a two months' normal foetus was found. The patient recovered from the operation, but died of recurrence nine months later.

The second case was an extra-uterine gestation in a nullipara, married eleven months. Menstruation was regular before and after marriage. About two months before being seen she had some abdominal pain, not particularly localised, which lasted about a fortnight. Menstruation remained regular, and although the pain returned at intervals it did not prevent the patient going about, nor did it interfere with sleep. Ten days before operation the pain got a little worse, some days after a normal period, and as it continued, the patient was examined. The abdomen was slightly distended and somewhat tender. Per vaginam the uterus was displaced behind the pubes, and the posterior fornix was filled up. There was slight fluctuation, and the peculiar feeling of a pelvic hæmatocele was quite evident bimanually. Laparotomy was at once performed, and the abdomen was found to contain a large amount of blood clot. The right appendages were imbedded in a large clot, and right

salpingo oophorectomy was performed. On examination of the specimen a two months' foetus was found in the centre of the tumour. The tube was not ruptured, but was enormously dilated at the distal end. The ovary was normal.

The last case was one of uterine fibroid complicated with pregnancy. The patient was a primipara, who had always had profuse periods, but this had not given rise to any trouble. Some months before being seen the hæmorrhage had been more severe, and there had been considerable pain. The general health had become much impaired. On examination a large, irregular fibroid was discovered, and the diagnosis of a sub-mucous fibroid, giving rise to severe hæmorrhage was made. Supravaginal hysterectomy was performed, and on examining the specimen a three months' foetus was found. Evidently the patient was aborting, but the fibroid in the uterine wall prevented strong contractions, and the foetus remained in utero.—HENRY SIMSON.—(*Le Progrès Medical Belge*, April 15th, 1905.)—*The Journal of Obstetrics and Gynecology*.

The Treatment of Eclampsia in Pregnancy by Parathyroid Extract.

Professor G. Vassale has extracted from the parathyroid glands a principle of great activity which he calls parathyroidin or parathyro-antitoxin. He has given it in three cases of eclampsia in pregnancy occurring in the obstetrical clinics of Modena and Geneva. The effect of the parathyroidin on the convulsive seizures was surprising; so much so, as to lead to the belief that here, as was the case with the thyroid treatment of myxoedema, one is compelled to recognise a means by which it may be possible to successfully discover the hitherto obscure cause of eclampsia, and its specific cure.

Vassale points out that the various theories advanced to explain the pathogenesis of

eclampsia fit in quite well with the parathyroid theory. He has experimented with parathyroidin in a case of tetany of the well-known type in a child, and the method was rapidly successful. He also tried the remedy in three severe cases of epilepsy. In one of the cases no good resulted, but in the other two a notable diminution in the number of fits was observed, and the mental condition of the patients subsequently improved.

Vassale reserves his opinion about the therapeutic value of this method of treatment in epilepsy till further observations are made, but he shows that it is rational to use parathyroidin in all the various forms of tetany, in exophthalmic goitre, and in some of the psychoses.—OLIPHANT NICHOLSON.—*Riv. crit. di Clinica Medica*, March 4th, 1905.

Röntgen Rays in Obstetrics and Gynæcology.

Prof. H. Freund give a short sketch of the use of the X-rays in obstetrics and gynæcology in a number of the above journal, devoted to them in view of the tenth anniversary of their discovery. Though they can have nothing like the importance they bear in the sister science of surgery, yet there are many occasions on which they can be of great use. Especially is this the case in the diagnosis of pregnancy, of multiple pregnancy, of extra-uterine pregnancy, and in the further elucidation of presentations, positions and mechanisms, and in the recognition of the form and size of the pelvis. With regard to the question of pregnancy, it is only in the second half that the Röntgen rays can help, but they may be of assistance in this later period in the differential diagnosis between pregnancy and tumour, or in the recognition of pregnancy complicating tumours. Most is to be hoped from the rays in the examination of the condition of the bony pelvis; in this case the examination ought to be carried out in the first months of pregnancy or

after delivery. Many interesting facts may also be expected from careful investigations of the pelvis after symphysiotomy and pubiotomy. For the examination of malformed children and fetuses this method has already proved of great service.

In gynæcology there is a much narrower field for their application. Foreign bodies, calcifications and concretions may be discovered. For example, vesical and ureteral calculi, lithopædion, and calcification or bone formation in tumours and teratomata, may be found, though this will not always be easy. Foreign bodies in the vagina, uterus or bladder are easily located. So far nothing has been proved of the value of the rays as a therapeutic measure.—J. S. FAIRBAIRN.—*Deutsch. med. Wochenschr.*, April 27th 1905.

A Case of Uterine Inversion occurring Six Days after Delivery,

BY

FERRE.

Inversion of the uterus is extremely rare in the human species, though it is common in horses, sheep, and goats, and especially so in cows. In the Maternity Hospital of Pau there is no record of any other previous case, though the registers have been examined since the foundation in 1822.

Dr. Ferre's case is that of a primipara, an unmarried girl of 24 years of age, admitted in the 8th month of pregnancy. She was stupid and seemed prematurely old; she was found to be suffering from albuminuria, which cleared up with treatment. Labour came on at term, and proceeded naturally till the head was on the perineum, when no further progress was made, and the forceps was applied. The child was born alive, and weighed 3,900 grammes. The birth of the child was followed by a considerable hæmorrhage; the placenta was therefore expressed. Vaginal and intra-uterine douches were given, but four hours later there

was a large hæmorrhage, which was only partly checked by hot vaginal douching and ergot. During the four days following there was a continuous oozing of blood, which did not, however, amount to what could be called hæmorrhage. It was noted that the uterus was not readily defined by palpation, and that the distended bladder seemed to reach higher than the fundus uteri. On the 6th day, palpation revealed hard, rounded masses at the sides of the uterus, and these were taken for scybala, and massage along the line of the colon was ordered. As this did not produce an evacuation, an enema was administered; the patient then got up to the stool, and with a little straining, but without pain, expelled a large mass from the vagina. This was immediately found to be the inverted uterus. All efforts to reduce the inversion were unavailing, so on the following day the uterus was, with considerable difficulty, amputated. Septic infection soon set in, and the 7th day after the operation the onset of septic meningitis was revealed by an attack of hemiplegia. The patient died on the 20th day of the puerperium.

The *post-mortem* examination showed the cervical stump, and the broad ligaments where they were ligatured, to be sloughing; there was a purulent basal meningitis. The uterus, which had been removed in two halves, required a considerable amount of force to revert, and when placed on a dish immediately returned to the state of inversion, that is, with the mucous surfaces convex.

Dr. Ferre is of opinion that the etiology of this condition is quite unknown.—E. H. L. OLIPHANT.—*L'Obstétrique*, March, 1905.

The Return of the Secretion of Milk after the Cessation of Nursing,

BY

H. BARBIER.

When nursing has been interrupted by illness of the mother or other cause, and the infant is not thriving on artificial food, it is often important to return to breast feeding. This may be done after a considerable interval. The chance of success decreases with the lapse of time, but nursing generally is possible if the interval does not exceed 2 months and may be possible after 4 or 5 months. On putting the infant to the breast it is necessary to persevere for some time as the return of the secretion is very gradual, and it may require 15 days before a sufficient quantity is obtained to satisfy the child who, during that time, requires additional artificial food.

Even severe illness may form no obstacle to the resumption of nursing. Thus Comby reports an interruption of 44 days due to scarlet fever, Marfan one of 25 days due to diphtheria. In a case of the writer's, nursing was successfully resumed after 3 weeks during which the mother suffered from typhoid fever. The patient was able to entirely nourish her infant 16 days after resuming nursing, and after leaving hospital acted as a wet nurse.—*Jour. des Practiciens*, Dec. 24, p. 833.

The Cause of Death in Uterine Cancer.

Cealac (*Rev. de chir.*, Paris, 1904, No. 7) describes the post-mortem appearances in two fatal cases of epithelioma of the cervix. The cause of death was uræmia, as the result of compression of the ureters. In one case the ureter was dilated above the point of constriction to the size of a loop of intestine, and the renal tissue proper was converted

into a mass of cysts. The urine was scanty, contained albumin; and death resulted, with well-defined symptoms of uræmia. The other case showed similar but less marked changes.—*The E. M. Journal*.

OPHTHALMOLOGY.

Artificial Ripening of Cataract.

Forster's well-known method has a number of adherents, but many surgeons regard it as unnecessary, and some as highly dangerous. Some years ago Wolffberg (Breslau) devised a "hot-air douche," an apparatus for directing a blast of warm dry air upon the eye; this he has found of great service in the treatment of neuralgia (supra-orbital), iritis, strumous keratitis with blepharospasm and photophobia, etc., in short, in most of those diseases of the eye in which pain is a prominent feature. Meditating on the occurrence of glass-blower's cataract, he bethought him to try whether by means of this "calorisor" he could influence the formation of cataract. He made use of an instrument consisting practically of a spirit lamp, a blast, and an asbestos tube along which the heated air is driven. It is obvious that one would require to be very cautious in directing this upon the eye, but the heat is soon dissipated, and at 10 cm. from the mouth of the tube the temperature is not higher than about 70°C. At the first onset the eye (we are not astonished to learn) is convulsively closed and the conjunctiva becomes injected, remaining so for perhaps an hour after cessation of the blast. At first also the eye waters considerably, but this passes off. He has usually employed the douche for five minutes or so at a time, with intervals, and after a little the patient can be trusted to apply to himself the greatest heat which can be borne without real discomfort. As regards results, his figures are too small as yet to be relied upon. Other surgeons have made tentative efforts to ripen partially opaque lenses by

means of heat, but we have not observed any records of success with this method.—*Wochenschrift für Therapie und Hygiene des Auges*, 22nd September, 1904.

Trachoma Treated by Radium.

Acting on the lines indicated by others, that radium was capable of influencing the growth of tumours, Cohn (Breslau) bethought him of applying it to the new formations in the conjunctiva which form the essential element in trachoma. He brought the end of a fine glass tube containing a minute quantity of radium into approximation with each of the granulations, and found that these disappeared rapidly and without pain to an extent with which ordinary means would have required months of treatment. He has not seen any evil results follow, but has had only a very small number of cases under observation as yet.—*Wochenschrift für Therapie und Hygiene des Auges*, vii., 14.

Antipyrine in Optic Atrophy.

In 1893 Valude wrote an article advocating the subcutaneous use of antipyrine in optic atrophy. He returns to the question of its employment, and states that since then he has used the drug with varying success, and has thus come to the conclusion that antipyrine is of service in one form of atrophy only, namely, the descending variety, where the wasting is secondary to an acute cerebral lesion. Perhaps the most typical condition is that in which the atrophy takes its origin in typhoid fever with cerebral complications. It has no value in simple atrophy, in toxic cases, in retro-bulbar neuritis, in tabetic atrophy, in atrophy secondary to choroido-retinitis, etc. The method employed in suitable cases is to inject into the dorso-lumbar region every second day 2 cubic centimetres of a 50 per cent. watery solution, containing $\frac{1}{8}$ per cent. cocain. If no effect is shown after 25 injections the treatment need not be proceeded with.—*Annales d'Oculistique*, March.

The Treatment of Tobacco Amblyopia,

BY

MR. C. WRAY.

Two cases of cured toxic amblyopia were shown. The writer pointed out that toxic amblyopia was, as a rule, present with tachycardia, though tachycardia might exist as the only symptom, and that in these cases, when it is absent, it is just as important to prevent its development so as to prevent, if possible, future attacks of amblyopia. In discussing the manner in which tobacco acts as a poison, it was stated that microscopic examination showed degeneration of the papillo-macular neurons, which is important since nicotine is frequently used in the physiological laboratory to paralyse "ganglion cells," and also is very soluble in water. Tobacco amblyopia is, as a rule, associated with toxic breath; pipe smoking is always the cause of it, cigarette smoking possibly never caused it, and yet cigarette smoking is the most common cause of tachycardia. Toxic amblyopia in all probability implied saturation of the blood with the poison, while tachycardia is most probably caused by the action of the smoke on the pulmonary endings of the cardio-inhibitory apparatus. The writer considered that carious teeth were a distinct element in the process of absorption of the poison since most of the patients who fall a victim to tobacco amblyopia have bad teeth. The treatment found most satisfactory was based on (a) the condition of the retinal neurons; (b) the fact that nicotine is used in the physiological laboratory to paralyse "ganglion cells"; (c) that nicotine is soluble in water; (d) that it is eliminated by the kidneys, lungs and skin. The patient accordingly is instructed to take a pint of warm water at 7 a.m. to get up and walk briskly in the open air for half an hour; he then takes a second pint of water and walks as before for another half-hour, then rests a few minutes and has

breakfast. At 11-30 a.m., 4 p.m., and 9 p.m., he takes another pint, and is encouraged to spend as much time as possible in the open air. The internal administration of iodide of potassium as a diuretic was also recommended. In one case treated by water alone the vision improved in sixteen days from $\frac{5}{36}$ to four letters of $\frac{5}{6}$.

Case I. November 11 $\frac{5}{18}$, November 25 $\frac{5}{18}$, taking water all the time; December 9 stopped water and smoked $\frac{1}{2}$ oz. a day for fourteen days, and on January 11 vision $\frac{5}{18}$ some, again improved to $\frac{5}{6}$ (3 letters) on February 11, smoking $\frac{1}{4}$ oz. a day the whole of this latter part of the treatment.

Case II, January 12, vision $\frac{5}{36}$ one letter January 14 $\frac{5}{24}$, January 17 $\frac{5}{18}$, January 27 $\frac{5}{8}$ (four letters); this patient was on the water treatment alone without any drugs, and he smoked $\frac{1}{4}$ oz. a day of "shag" during the whole-time. *The Ophthalmic Review*.

Treatment of Myopia by Extraction of the Transparent Crystalline Lens: Late Results,

BY

FELIX LAGRANGE (Bordeaux).

Mr. Lagrange is impressed with the value of the operative treatment of high myopia, and is convinced that it has not, in France at all events, been given the place it deserves among therapeutical measures. He gives the results of 20 cases, in which he needled the lens and extracted by a linear incision. Visual acuteness was increased in all cases, sometimes two- or three-fold. This improvement he describes entirely to physical causes and not to any improvement in the nutrition of the eye. The total diminution in refraction varied from 19 D to 25 D. These variations are considered to be due to inaccuracy in the estimation of the myopia before operation, the refraction appearing greater the further the correcting lens is held from the eye. The

average reduction may be taken as 20 D. Although the patients operated upon suffered from pernicious myopia, in no case were the lesions in the fundus aggravated by the operation, and detachment of the retina was never observed. The influence of the operative treatment on the evolution of the myopia was decidedly beneficial. Not even in the case of young subjects was there any increase in the length of the globe after operation. This salutary effect is ascribed to the suppression of accommodation and the abolition of binocular vision, and consequently of convergence, which result from extraction of the lens in one eye. With two exceptions only one eye was operated on, and this is recommended by the author as the best procedure.—J. JAMESON EVANS.—*Annales d'Oculistique*, October, 1904.

THERAPEUTICS.

The Treatment of Tuberculosis of the Larynx by Sunlight

Very favourable results were obtained in the treatment of tuberculosis laryngitis by the reflection into the glottis of sunlight by means of mirrors. The patient is seated with the back to the sun, and in front of him, about the height of the mouth, an ordinary toilet dressing mirror is affixed to a suitable standard, at such an angle as to throw the light directly into the pharynx. The patient pulls forward the tongue with one hand, and with the other manipulates a laryngeal mirror in such a way as to render the image of his larynx visible in the large mirror.

The best time for the treatment is early in the forenoon and late in the afternoon, as the sun's rays are more easily utilized when slanting, and it is desirable to eliminate the heat rays as much as possible. The patients soon learn the technique of the procedure and become much interested, as

they are enabled to watch the improvement themselves. The length of each sitting varies from five minutes to an hour, according to the strength of the patient. The treatment is contra-indicated in case of oedematous swelling of the larynx, which appears to be unfavorably influenced by the heat rays. The author gives the histories of fourteen cases in which the treatment was found of marked benefit, and he believes that improvement follows this method more rapidly than any other form of treatment.—Kunwald. (Munchener medicinische Wochenschrift, Jan. 10, 1905; *Cyclopedia*, March, 1905.)—*The D. & H. Gazette*.

The Treatment of Renal Calculus.

In the *Therapie des Gegenwart* for 1904 Klemperer states that by appropriate diet the composition of the urine may be so modified as to prevent the deposition of any crystalline substances, and therefore the prophylactic dietetic treatment of renal calculus is sufficient for the purpose, without the aid of medicinal treatment. At the same time the author admits that in many instances, certain medicinal adjuvants may be advantageously resorted to, especially with patients who tolerate dietetic restrictions with difficulty. It is obvious that the composition of the calculus will determine the character of both dietetic and medicinal treatment.

Uric Acid Calculus.—Free uric acid is very slightly soluble in water, whilst in basic combination it is comparatively easily soluble. Although it is impossible to increase the solubility of the free acid, it lies within our power to diminish the percentage of free acid by causing a large proportion of it to appear in the urine in the combined state. This is accomplished by lessening the quantity of animal food and at the same time largely increasing the quantity of vegetable food; the administration of alkaline salts, especially in the form of appropriate mineral

waters, is also of great assistance. Analytical methods and results are given which demonstrate the efficacy of the treatment. For example, the urine of a patient who had had many attacks of gout was, by means of limited fresh diet with abundance of vegetables and Fachingen water, made to have all its uric acid combined with bases, thereby replacing a considerable amount of the free acid. The mineral waters which contain sodium carbonate and carbonic acid, such as Fachingen, Vichy, and the like, are specially adapted to this end, although sodium bicarbonate itself may be given instead. Von Noorden recommends calcium carbonate in the place of the sodium salt, but Klemperer doubts the alleged advantage. The solvent properties of piperazin and formaldehyde (urotropin) are then discussed, but they are held to be of doubtful utility.

Calcium Oxalate Calculus.—The indications are to increase the amount of acid sodium phosphate and of magnesia in the urine. Both these indications are fulfilled by a liberal allowance of animal food; the amount of magnesia may be further increased by the administration of magnesium sulphate in half-drachm doses daily. By increasing the quantity of magnesia excreted by the kidneys in proportion to the quantity of calcium, the oxalates appear in a much more soluble form than when the alkaline salt predominates. Alkaline mineral waters, though of less importance than in the case of uric acid calculi, are held by Klemperer to be of service.

Phosphatic Calculi.—This form of renal calculus is not so easily directly combated by diet and medicaments because the primary deposition of phosphates in the urine is frequently associated with an abnormal condition of the nervous system, toward which treatment requires to be directed. The alkalinity of the urine may possibly be influenced by the administration of dilute sulphuric acid, and still better by phosphoric

acid. The drinking of waters which hold much CO_2 in solution is serviceable.

Klemperer then goes on to discuss the possibility of dissolving calculi which have been already deposited in the kidneys; he holds that it is quite possible to diminish to some extent the size of a renal calculus, but he doubts its entire solution. He warns against excessive alkalization of the urine, with the object of dissolving a uric acid calculus, lest phosphates be deposited on the calculus, which is thus increased in place of being diminished in size.—*Medical Chronicle*, November, 1904.

The Absorption of Iodine from Potassium Iodide Ointments.

Hirschfeld and Pollio have made some interesting observations on the absorption of iodine from ointments. The ointment base has a certain action. Thus lanoline is not suitable, if used alone, as no iodine is absorbed. But when the lanoline is diluted with olive oil or vaseline, absorption takes place. Vasogen is also a suitable basis. The quantity of iodide absorbed is greater if the ointment is strong than if the same quantity is made up in a dilute form. The authors are of opinion that the iodine is absorbed as free iodine, and not as the potassium salt. They are, however, unable to explain why in this case there should be no appearance of free iodine in the dressings or on the skin.—*Arch f. Dermat. u. Syph.*, Wien, Bd. lxxii. Heft 2.—*The E. M. Journal*.

Treatment of Neurasthenia by Manual Work,

BY

H. J. HALL, M.D.

Worry and over-estimation of the importance of small things precedes the develop-

ment of the characteristic symptoms of neurasthenia. Treatment by rest is often successful, but sometimes it is not because the absence of occupation is not conducive to mental quietude. It occurred to the writer to provide a wholesome and pleasant occupation, differing from that which the patient previously followed, which would conduce to "self-forgetfulness." As neurasthenic patients are clever people with artistic tastes he started a shop for the manufacture of pottery and the hand-weaving of fabrics. The equipment consisted of some half-dozen looms, spinning wheels, vats and dyes for colour work, a kiln for baking and glazing pottery, and a potter's wheel. A teacher was secured and when the shop was turning out articles a few patients suffering from a mild form of neurasthenia were introduced daily for a short time. The shop at once became popular and had a very encouraging effect. Subsequently basket-making was introduced and proved very useful. The work done was good and to the resulting satisfaction of the patients the writer partly attributes its beneficial effects.

Patients in a more advanced stage were then introduced. The difficulty was to eliminate the fatigue and the irritation which even the anticipation of change induces. The treatment was begun by rest in bed for a few days or a week. Then without warning the patient was ordered to do something simple, perhaps only to sit up in bed for a short time. The order given was changed from day to day. Then the patient was sent to the shop, where he worked daily for gradually lengthening periods. Many discouragements occurred and constant tact and vigilance were necessary, but the results were good. After a few weeks of work the inertia of months and years was thrown off and the change in facial expression, in skill of movement, and in the whole *morale* of the patient was remarkable. Although the work appealed especially to those who had never done manual work, and to whom the pleasure

of it was a revelation, it was specially appreciated by persons of limited means, because they were acquiring a means of support which might be useful if they could not return to their old life. To encourage a feeling of independence, when the patient turned out a work of value, it was sold and he received the proceeds. It was surprising how the patients' lives readjusted themselves and how the petty annoyances and troubles again took their proper subordinate position.

The writer suggests that this method might be used prophylactically. He subsequently ascertained that a similar method of treatment is carried out successfully at Zurich, by a layman named Grohmann, who works under physicians.—*Boston Med. and Surg. Jour.*, Jan. 12, p. 29.

DERMATOLOGY,

BY

J. M. H. MACLEOD, M.D., M.R.C.P.

Acne Vulgaris Aggravated by iodide of Potassium.

The patient was a young man, aged 20, who for several years had suffered from acne affecting the face. His acne was of a mild degree till lately, when a marked exacerbation had occurred together with the formation of various sized infiltrated masses on the cheeks and chin. The exacerbation had resulted from his having taken ten bottles of a patent blood-mixture which contained iodide of potassium. The danger of prescribing the drug in cases of acne is well known and instances of this sort are not uncommon in dermatological clinics. The treatment of such cases is fairly satisfactory, for when the patient ceases to take the iodide improvement gradually supervenes, and the large granulomatous masses which result from the drug slowly disappear. The management of the case then revolves itself into that of acne vulgaris.

Lupus Vulgaris, Illustrating Old and Modern Methods of Treatment.

The first case was that of a young man who had extensive lupus of the nose which had resulted in the almost complete destruction of that organ. Four years ago it was operated on by Mr. Astley Bloxam at Charing Cross Hospital, the diseased tissue being eradicated and a new nose formed by a plastic operation, the tissue being taken down from the forehead. The operation was successful and the new nose greatly improved the appearance of the patient. Unfortunately a recurrence had recently taken place at the junction of the graft with the skin of the face, and Mr. Bloxam had handed him over for further treatment. Such cases were difficult to treat on account of the graft, for serious pathological changes usually went on underneath it before they became evident, and the diseased tissue was difficult to get at without removing the graft.

The second case was that of a little girl who had a patch of lupus on the left cheek about the size of a shilling. This patch had been treated almost entirely by Finsen light. A year ago she was discharged. When seen at the Polyclinic there was no evidence of recurrence and the scar was a perfect one. It was pliant, the colour of the normal skin, and almost imperceptible.

The method of infection in lupus vulgaris was discussed. Lupus vulgaris was the result of the reaction of the skin to the tubercle bacillus in the corium. The bacillus either got there from without or through the blood stream from within. In a large number of the cases the bacillus reached the skin from without. It frequently became deposited at the nasal orifice and gained entrance to the corium by some abrasion due to scratching or picking the nose. At other times it reached the deeper layer of the cutis by an imperceptible abrasion, or a lowering of the

resistance of the skin from impetigo or other predisposing condition. Occasionally the precise cause and time of infection may be known, as in the verrucose patches of lupus which result from a scratch in performing a *post mortem* examination in a tuberculous subject. There is another method of reaching the skin, namely, through the blood stream, and in these cases the lupus generally occurs in multiple patches. They usually are found in young children and appear more or less simultaneously after an attack of measles. They are believed to be result of a shower of tubercle bacilli reaching the skin through the blood stream and which emanate from a tuberculous focus such as an affected bronchial gland which has broken down as a result of the measles.

Ringworm of the Scalp Successfully Treated by the X-rays.

In one case the depilation had resulted from a single exposure to the rays; in another the child had had several exposures and the affected hair had fallen out; in a third the defluvium had taken place, and as sufficient time had now elapsed since the exposure the hair was growing on naturally again.

A series of cultivations of the ringworm fungus on maltose agar were demonstrated to show that the X-rays did not destroy the fungus nor even impair its growth, while the Finsen light applied for half an hour retarded the growth considerably.

A Case of Lupus Erythematosus.

The patient, a young adult woman, was kindly sent for demonstration by Dr. Butcher. The diseased area was small, but the size of a threepenny bit, and situated on the right cheek. It was reddish-pink in tinge stippled over with small plugs, blocking the follicles. At the time of exhibition there was scarcely any scaliness. *The Polyclinic.*

CORRESPONDENCE.

Two Cases of Hermaphrodites.

To

THE EDITOR,

"THE ANTISEPTIC,"

MADRAS.

SIR,

ANENT the article under the above heading reported in your journal for May 1905, please permit me to add the following facts and notes which have been omitted therein and which may interest you and the many readers of your journal.

Both these cases originally came under the notice of Major D. Simpson, I. M. S., on their admission (first) into jail in July 1903, when he was the Medical Officer, Central Jail, Coimbatore. As they were sent to jail under the "good behaviour" section, I. P. C., and as such were likely to be released on furnishing the necessary securities, Major Simpson wanted to record these interesting cases for publication, and with the written consent of the two subjects had photographs of their persons and private parts taken. The cases were also seen by the Surgeon-General and the Sanitary Commissioner, during their inspection of the jail. On enquiring into their family history for heredity, &c., it was elicited that one of their maternal uncle's issues, *not* 7 years, had a similar malformation and that the same lived in a village of the Palini Taluk of Madura District bordering on the Udumalpet Taluk of the Coimbatore District. Information was sought for by me from the Civil Apothecary, Palini—sometime a subordinate under Major Simpson—and the Tahsildar of Udumalpet—a friend of mine—as to this third case, but nothing of importance was learnt except that the two "hermaphrodites" were known in that

village and that they had no relatives in the village. On my transfer to this station in May 04, I happened to pass through both the Taluks and meet both the above officers, but failing to get any further clue, requested Major Simpson in June 04 to permit me to publish the cases. As he wanted to publish them himself I dropped the matter there and forgot all about it—till I saw it a few days ago in your journal. These have certainly been sent to jail a second time now, and the notes furnished to you have evidently been taken again and not the original one, previously recorded. So much for facts and now to notes.

- (1) They go by female names.
- (2) They bear the hair on the front of the head like females.
- (3) Like some native females they have vertical tattoo marks on forehead commencing from between the eyebrows to upper margin of the forehead.
- (4) Have like low-caste native females, large holes bored on lower part of ears.
- (5) Voices resemble that of females more in intonation than in pitch and their gestures are feminine.
- (6) The rudimentary penis to all appearance resembles a clitoris.
- (7) State they have a relation—a boy—similarly malformed. (*Vide supra.*)
- (8) Are said to have no desire for sexual intercourse with either of the sexes.

Remarks:—1. It appears to be out of question for them to engage as active agents in the copulative act—in spite of well-formed, healthy testicles—on account of the rudimentary nature of the penis, which is further blended with and bound down up to the 'coroner' to the substa-

1905.]

neous tissues and skin; but the presence of small cordyloarotous ulcers on the labiae of one pointed to the probability of their being passive agents.

2. The fact that these are known in the village referred to leaves room for suspecting the existence of a third case, and to anybody willing to investigate the same, I am ready to give details as to name, &c.

SIVAKASI, } S. A. CHINNASWAMI,
26th May 1905. } 2nd Grade Civil Hospital Assistant.

[Published by kind permission of Major D. Simpson, M. A., M. D. I. M. S., Superintendent, Government Maternity Hospital, Madras.]

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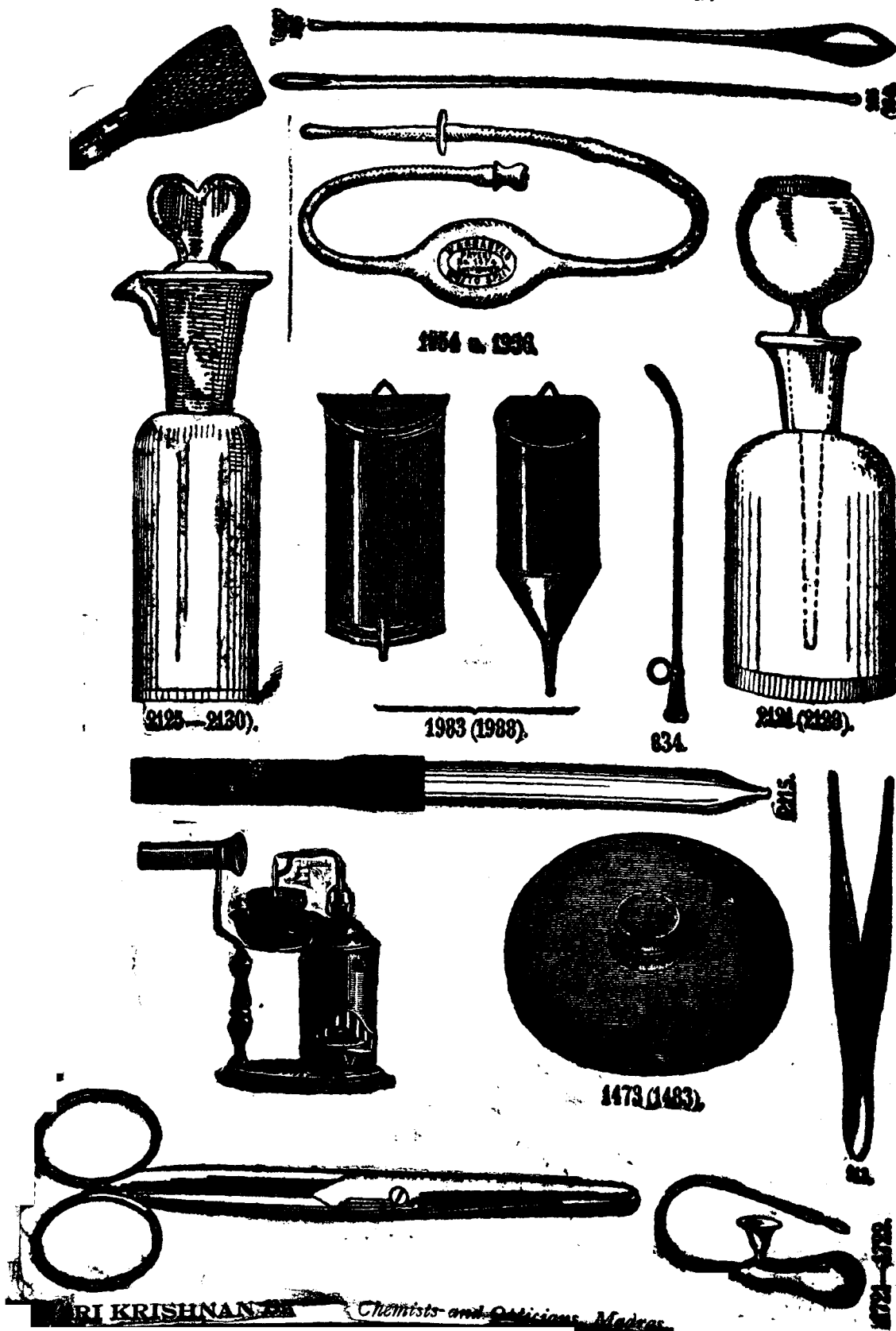
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WE HAVE JUST RECEIVED THE FOLLOWING:—



The Antiseptic.

Vol. II.]

AUGUST, 1905.

No. 8.
Annual Sub-
scription Rs. 5.

Original Articles.

*Uræmia: Its Symptoms, Pathology, and Treatment.

PART III.

BY

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(Continued from page 296, Vol. ii, No. 7.)

TREATMENT.

THE net result, therefore, of present knowledge of the pathology of uræmia is that it is most probably due to a poisonous body or bodies, the nature of which is unknown; whilst the high arterial tension possibly adds severity to one or more of the symptoms. The chief indications in treating the condition, therefore, are: first, to eliminate the poison already in the blood; secondly, to diminish as far as possible the production of more poison; and, thirdly, to correct any abnormality in the blood-pressure or in the action of the heart.

I. TREATMENT OF LATENT URÆMIA.

Medicines are here of little avail. The condition being due to a mechanical obstruction, surgical interference is indispensable if life is to be saved. Pelvic

* Specially contributed to "The Antiseptic."

cancer obstructing both ureters is probably inoperable; nothing can be done. In cases of calculus, life may be saved sometimes. For instance, the right kidney may have become a hydronephrotic bag from old calculus disease; a small calculus may have formed in the pelvis of the left kidney, and have passed down into its ureter and become impacted. This would prevent any urine escaping from the patient's only serviceable kidney; the condition would be one of latent uræmia. The surgeon might cure the patient by operating and removing the impacted stone.

II. TREATMENT OF CHRONIC URÆMIA.

The headache, occasional vomiting, dyspnoea, sleeplessness, are probably in the main due to increased blood pressure and laboured heart's action. In many cases the patient will not need to stay at home, still less in bed. It is even possible for the usual daily occupation to be continued. The diet will need modification in many instances. The cause of the trouble is very frequently high living. At the same time, to cut down the daily food to a starvation minimum is wrong. The restriction need only be in the matter of rich foods, and wines. Ordinary simple food at regular intervals; meat at dinner, meals at the usual times; simple dishes; few courses; light wine, or better still, plain water, to drink at dinner;

freshly infused tea or similar beverages at other meals; these are the best lines to adopt as regards diet. Drugs will not be needed in all cases; simplification of the mode of living may cure the symptoms and check the slow degeneration of the arteries and kidneys.

Should drugs be needed, the more important are probably those which act upon the bowels. Carlsbad water before breakfast; or a blue pill occasionally; or in severer cases Pulv. Jalapæ Co. ʒss or ʒi every other morning. Probably the blue pill is as useful as any other purgative: it opens the bowels, reduces the blood pressure, and relieves the headache or the sleeplessness or the mental depression.

Of drugs which directly reduce the blood pressure, the nitrites give some temporary benefit. For the uræmic asthma which comes on in paroxysms at night, a glass capsule of amyl nitrite m. v, broken in a handkerchief, and the vapour inhaled, is efficacious; it probably here acts by diminishing the contraction of the peripheral arterioles.

Mixtures which have given relief to the headache, sleeplessness, or occasional vomiting, of chronic uræmia are:—

R. Liq. Trinitrini	m. i
Tr. Gelsemii	m. x
Tr. Nuc. Vom.	m. v
Aq. ad.	ʒi.

or

R. Liq. Trinitrini	m. i.
Potassii Acetatis	gr. xx
Sp. Æth. Nit.	m. xxx
Succ. Scoparii	ʒi.
Aq. ad.	ʒi.

or

R. Phenazoni	gr. x
Sp. Ammon. Aromat	m. xx
Aq. Menth. Pip. ad.	ʒi.

R. Caffeine Citratis
Sodii Benzoatis
Syrupi Rosæ
Aq. ad.

gr. v
gr. viii
m. xv
ʒi.

Uraemic diarrhœa is best left alone unless extreme. It is itself curative.

Should the vomiting be a persistent symptom in spite of the above treatment, the patient will need to be kept in bed, and all food by the mouth interdicted for a while. It will do the patient little harm to have no food for twenty-four hours. If, on attempting to take food again, vomiting recur, nutrient enemata must be resorted to for a time, and no food given by the mouth for a longer period. The necessity to use nutrient enemata in this condition does not often arise. In regard to medicines which may directly check the vomiting, there are many. Two which are often efficacious are:—

R. Acidi Hydrocyan. Dil. m. iii
Liq. Bism. et Ammon. cit. ʒi.

and

R. Tr. Iodi m. i
Aq. ad. ʒi.

Repeated every 20 minutes for four or five doses.

A mustard leaf to the epigastrium is often serviceable. Should the symptoms be very severe, they cannot then be still regarded as chronic uræmia, but, are on the verge of passing on to the coma and convulsions of the acute condition.

III. TREATMENT OF ACUTE URÆMIA.

Acute uræmia is a very fatal condition, and treatment would often seem to be of no avail. Without treatment, however, a fatal result is almost inevitable; skilful management may sometimes save a life.

The patient is, of necessity, in bed; in all probability already under treatment for nephritis: upon milk diet and having a diaphoretic mixture and a purge every other morning. The treatment for the acute uræmic symptoms will be, in the first instance, directed to still further increasing the activity of skin, bowel, and kidney.

Of the less extreme remedial measures there are three different orders—diaphoretics, purgatives, and diuretics. In a typical case the mode of procedure would be as follows:—a stick covered with flannel should be placed between the teeth to prevent the tongue being bitten during the convulsions; croton oil, 1 drop, or 2, should be given; it is one of the briskest and most rapid purgatives, but excoriates the mucous membrane unless given with care; one method of administering it is to hollow out a pat of butter upon the end of a spatula, to drop the croton oil into the hollow, cover the butter over it, insert the spatula into the patient's mouth, and detach the butter on to the back of the tongue as one would on to a piece of bread; though comatose the patient will swallow the butter, and the croton oil will be gradually liberated as the butter melts in the stomach.

The loins should be dry-cupped if the volume of urine passed is small. Dry cupping is to be preferred to wet for two reasons: firstly, no break in the skin is made; secondly, no particular instrument is needed. An ordinary tumbler serves; its edges should be vaselined, to make its removal from the skin less difficult. A piece of blotting-paper, steeped in spirits of wine, is lighted and dropped into the tumbler, the latter being held mouth upwards. As the spirit burns, the carbon

dioxide and water vapour produced displace the air. The tumbler is now inverted to let the burning blotting-paper drop out; then firmly applied to the loin. As the tumbler cools, the water vapour condenses, and the superficial layers of the skin rise into the glass. A knife is slipped between the vaselined edge of the glass and the skin, the glass comes away at once; the operation is repeated on the other loin. In this way, by some obscure "determination of blood" to the part, there is no doubt whatever, that the underlying kidneys are benefited; the urinary excretion often increases at once, and the condition of uræmia is relieved.

Venesection to the extent of twelve to sixteen fluid ounces should be the next step, particularly for patients of robust frame. It is not evident in what way the blood-letting acts. The removal of so small a quantity can, according to experiments in physiology, exert but a small influence upon the blood pressure. Very little of the hypothetical poison of uræmia can be removed in twelve ounces of blood. No doubt the right auricle and the ventricle are overdistended during the convulsions, and venesection relieves the heart. Whatever the *modus operandi*, there is no doubt whatever that venesection is of the greatest benefit in these cases; if not curative, it often tides the patient over the crisis, and gives time for the adoption of further measures.

Transfusion of normal saline at body temperature into a vein has frequently been tried, both by itself and in conjunction with simultaneous venesection from the other arm. Theoretically, if uræmia be due to a poison, transfusion with four pints of normal saline, repeated the same day if necessary, should both dilute the

poison within the body, and assist in washing it out. In practice, however, the results do not seem to confirm this theory. Transfusion may or may not be harmful, but it does not seem to be of actual benefit in uræmia. Dry cupping to the loins, and venesection, are apparently far more important.

Thus far, the treatment of the case has been that which was immediately necessary—a gag; croton oil; dry cupping; venesection. If the immediate danger be averted, other measures of treatment may now be resorted to.

First, in the event of the convulsions being violent and recurrent, chloroform inhalations will be required. These should be just so shallow that the convulsions do not occur; though not curative, in that the fits will occur so soon as the chloroform is stopped, the slight narcosis prevents the muscular spasms, enables the patient to breathe quietly, and checks the otherwise speedy exhaustion.

It is well to give potassium bromide and chloral hydrate at the same time. A mixture such as:—

R. Potassii Bromidi	gr. xxx
Chloral Hydratis	gr. xv
Syrupi Auranti	℥ss.
Aquam ad.	℥i.
Every 4th hour.	

may be administered. This will take effect in a few hours, and make it then possible to diminish, or even omit the chloroform.

It is generally held that morphia and opium are dangerous drugs for those who have renal disease, but there is no doubt that they are beneficial in uræmia. As an empirical rule it may be said that

opium or morphia are safe in uræmia as long as the pupil is large; they may be used instead of the bromide and chloral hydrate, and for the same purpose morphia, beginning with gr. $\frac{1}{4}$ hypodermically, acts more quickly than the bromide, and will therefore allow of an earlier suspension of the chloroform inhalation.

In the next place, diaphoresis must, if possible, be brought about. It may be wondered why this has not been mentioned previously. It will be found in practice that the procedures already described will come first in a very acute case; for they can be carried out at once, whereas it takes a little time to prepare for hot air or hot vapour baths. Away from a hospital it may not be possible to arrange for the latter at all; in that case a hot water bath at 110° F. should be given, and the patient thereafter swathed in hot blankets. The question of giving pilocarpine will arise. Should the patient be quite comatose, this will be dangerous; besides the sweat, both the salivary and pulmonary secretions are stimulated by this drug; in a state of coma, accumulation of secretion in the tubes, or of saliva trickling back through the larynx, may not lead to reflex coughing, and the patient is liable to be asphyxiated or drowned by his own secretions. If there be no coma, however, an immediate injection of:—

R. Pilocarpine Nitratiss gr. $\frac{1}{4}$
Aquæ
m. x

should be given; after which hot vapour or hot air baths are the most certain means of insuring diaphoresis. To give a hot vapour bath the patient should have a mackintosh covered by a blanket beneath him, and over him a light blanket. The rest of the bed-clothes, with a mackintosh sheet, are kept raised from him by a cradle

and the clothes tucked tightly in at both sides, leaving an opening at the foot of the bed for the inlet of the steam. The latter is generated in a kettle, such as a bronchitis kettle, over a lamp; the long spout of the kettle carries the steam beneath the cradle; the thin blanket protects the patient from being scalded. The vapour bath should be continued for 15 minutes, and then the wet blankets rapidly changed for hot, dry ones.

The hot air bath is similar in principle, but less easy to arrange for in practice. Where electric lamps can be inserted into the space beneath the cradle, the heat generated by them is efficacious. Or a lamp may be burned beneath an inverted funnel, the bent spout of which is inserted beneath the cradle as was the spout of the bronchitis kettle in giving the hot vapour bath. It is so much easier, however, to give a vapour bath, that probably, in private houses, the hot air bath would not be adopted.

It is probably unwise to directly stimulate the diseased kidneys by active diuretics, but two points remain to be mentioned in this connection.

The first is, simply flushing out the kidneys by means of water can do nothing but good, particularly when the activity of these organs has been reflexly augmented by dry-cupping the loins. Water by the mouth may be administered with benefit; and it is remarkable how much the diaphoretic effects of baths and pilocarpine may sometimes be assisted by causing the patient to drink a glass of cold water at the same time as he is having the hot vapour bath. If drinking by the mouth is not possible, an enema of one to two pints of warm water may be given per

rectum, repeated in three hours if the patient retains it.

The second point is that digitalis is not infrequently indicated in uræmia. It is true that digitalis raises the blood pressure, and would seem therefore to be contra-indicated; but by giving citrate of caffeine at the same time, the effect on the blood pressure is partly obviated, and the digitalis is required to stimulate the heart. Urine excretion falls if the heart fails and uræmia will be precipitated; as a prophylactic measure digitalis is required when signs of heart failure appear. It must be remembered that digitalis is slow in its action on the heart. The urine outflow does not usually rise until the third day from the first administration of the drug. It is therefore of little use in the acute stages of uræmia, but may be very useful later when the urgent symptoms have been staved off by the immediate forms of treatment already described.

IV. TREATMENT OF THE URÆMIA OF PREGNANCY.—When symptoms occur for the first time after labour, the prognosis is bad, but the treatment must be upon the same lines as that for acute uræmia in non-pregnant persons.

Before labour, the treatment can be summarised very briefly.

With the premonitory headache potassium bromide should be given at once thus:—

R. Potassii Bromidi	gr. xxx
Aquam ad.	℥i.
Every 4th hour.	

and if this be not effective, chloral hydrate may be added thus:

R. Potassii Bromidi	gr. xxx
Chloral Hydratis	gr. xv
Syrupi Auranti	℥ss.
Aquam ad.	℥i.
Every 4th hour.	

If convulsions set in, notwithstanding, the essential treatment is to give chloroform and induce labour. It is little use to jeopardise the mother's life in the hope of obtaining a viable child by waiting. If labour be not induced at once, the mother is in great danger, whilst the foetus is almost certain to be dead. In milder cases, after giving chloroform to check the fits, puncture the membranes and leave the rest to nature. In severe cases, dilate rapidly with tents, insert a Champetier de Ribe's bag; as soon as the os is widely enough dilated, either turn or apply forceps. It is not essential to employ hot vapour baths, croton oil, venesection, dry cupping. As soon as the uterus is evacuated the uraemia subsides; and the prognosis in such cases is moderately good.

*Pruritus Ani.

BY

CHARLES J. DRUECK, M. D.

Professor of Rectal Diseases at Harvey Medical College; Professor of Rectal Diseases and Clinical Surgery at National Medical University; Rectal Surgeon to the Peoples Hospital and Attending Surgeon to the National Emergency Hospital, Chicago; Member of the Chicago Medical Society.

Pruritus Ani is the name applied to any itching about the anus, regardless of the cause, and may be a direct symptom of some local rectal disorder or a reflex manifestation of some other diseased pelvic or abdominal organ or even a sign of serious systemic disturbance. The character or degree of itching may vary and includes all varieties of eczema. Sometimes the cause is discernible, while again, it is quite obscure and in some instances there

* Specially contributed to "The Antiseptic."

seems to be no apparent cause. The general practitioner often considers it a trifling ailment, although in old and aggravated cases it proves to be intractable and renders the patient's life almost unbearable.

It affects all classes of men and women, for it is found in all occupations and social conditions of life and occurs at any age, but is more common in males and about middle age. The itching is usually constant with exacerbations, especially at night when the patient's body becomes warm in bed, and is not limited to the anus, but radiates down the limbs, over the buttocks and across the perineum to the urinary organs. Scratching and rubbing the parts gives only temporary relief and leaves after-effects such as: bleeding, cracks, and fissure which add to the annoyance. In the majority of cases, pruritus is simply a symptom of some other rectal or pelvic trouble and may therefore refer to any neighbouring organ, though it is usually due to hyperesthesia of the nerve filaments.

ETIOLOGY.

The causes are many and sometimes very difficult to ascertain, but usually when found and removed the pruritus will be cured at once. Sometimes nothing can be found to explain the itching. Various local and constitutional conditions or habits are at times the cause, or, occasionally, neurotic affections, diabetes, portal congestion, syphilis, rheumatism, albuminuria, or a gouty tendency.

Thread-worms are frequently the source in children, but rarely in adults, and can easily be found in the folds of the mucous membrane of the rectum as short fibres resembling pieces of thread. Chronic prostatitis, proctitis, impacted faeces, chro-

nic constipation, and errors of diet are each at times the source. Hemorrhoids, either internal or external, ulceration, a beginning fissure, prolapse, polypus, fistula in any variety, may be underlying causes. In women, it occurs with pruritus vulvae during menstruation and early during pregnancy, or in the last few weeks of gestation when the perineum is congested and oedematous.

Certain articles of food frequently produce pruritus: as, shell-fish, salmon, venison, strawberries, coffee or the over use of meats and spices. In fact, any rich diet or excess of alcohol and tobacco may cause it. When a fistula is present, though the skin opening may be pin-point in size, still the discharge as it evaporates leaves a crust which occasions the itching. Pediculi also by their presence and excretions act in the same way: Herpes, erythema in fleshy people from chafing and sweating of the buttocks in walking, and eczema, either acute or chronic, are each occasionally the cause of pruritus. In eczema marginata, the spores may be found by the microscope in scales scraped off and moistened in glycerin. Incontinence of urine in either children or old people is many times a cause.

SYMPTOMS.

The predominant symptom is the unbearable itching, which grows worse with warmth and rubbing of the parts. Scratching, which is sometimes controlled when the sufferer is awake, is unconsciously performed when he is asleep and causes bleeding and abrasions of the skin, which serve to make the condition more painful the next day. In recent cases, there is often nothing to see or there may be a red, glistening, perhaps oedematous condition of the parts with a scanty

serous secretion, enough to keep the skin moist. In old cases, the skin becomes thick, pale and parchment-like, sometimes even brownish, especially back of the anus and towards the coccyx in the inter-gluteal space, and the whole surface is eroded and fissured. In protracted cases, the patient's general health and nutrition fail from prolonged insomnia and nervous wear and he becomes a hypochondriac.

DIAGNOSIS.

Pruritus is easily diagnosed from the patient's history and then corroborated by the examination. The patient in the lithotomy or Sims position affords easy inspection of the whole field. The presence of syphilis, tuberculosis and especially rheumatism as an underlying dyscrasia must always be investigated in obscure cases, because this fact alters the treatment.

PROGNOSIS.

Without careful attention the outlook is very poor. Periods of improvement are quickly followed by exacerbations worse than the preceding. The itching and pain together with the loss of sleep, bring the sufferers to the verge of nervous prostration or insanity, if they have not already become opium wrecks. A patient told me that he had not had a day's peace or a comfortable night's rest in a year. He could do no business, looked and felt as though he was in the last stage of phthisis, and vowed unless I could help him he would commit suicide.

Under careful, persistent treatment you may look for a favorable future provided the cause can be removed. The patient, however, must be told that unless the cause is purely local the treatment requires time and perseverance on his part.

TREATMENT.

The treatment depends first, upon the cause, for when that is removed the pruritus will usually disappear. Sometimes the cause is very trivial. I remember seeing a severe pruritus that had resisted treatment by two physicians that was due to a few inverted hairs. These were removed, the follicles destroyed and a sedative dusting powder used. The case healed kindly and has since never bothered the patient, who is himself a physician. If there is no apparent local cause, examine the patient's general condition. When anæmia or tuberculosis is present alteratives and tonics like arsenic, iron, cod-liver oil and quinine are indicated, also nux vomica for its tonic effect, both systemic and intestinal. The tonic value of exercise must be remembered and its importance impressed upon the patient. The diet is to be looked into and excesses cut off, as: coffee, alcohol, tobacco and the over use of meats, spices and condiments, and also highly-seasoned sauces or game. When the gastric digestion is impaired pepsin, diastase or mineral acids may be needed. In the lowered digestion, the bowel or liver may need attention. The genito-urinary systems in both male and female patients must be given a thorough examination and the physician satisfied that there is nothing abnormal about these organs which might maintain a reflex excitation. The condition of the stool should be inquired into, and if constipation exists, the bowel should be emptied thoroughly by a saline laxative or rhubarb, after which they should be moved daily. Aloe is contra-indicated as a laxative because of its irritating effect on the rectum. The use of intestinal antiseptics such as salol, sulphocarbolates and ichthyol, five grains of the latter given

night and morning on an empty stomach, is useful to clear up the auto-intoxication. Intestinal lavage with large quantities of weak alkaline solutions is of inestimable value in clearing out the bowel and stimulating intestinal action (the details of lavage will be considered in detail at another time in a paper on constipation and auto-intoxication, because of lack of space in this article.)

Syphilis occasionally produces a pruritus and eczema about the anus, but a thorough course of mercury and the iodides will remove it. If due to lithemia, the salicylates and alkalies should be freely given. As the itching is always worse in bed and while the patient is resting, the use of pajama night suits must be replaced by a cotton gown which is loose and does not touch the perineum. The pajamas by fitting closely increase the production of moisture and increase the chafing. Cotton sheets should be worn on the bed and heavy quilts replaced by wool blankets, which permit a more even temperature and thus prevent sweating.

LOCAL TREATMENT.

Locally the treatment divides itself into cleanliness, keeping the parts dry, maintaining rest by preventing friction between the sides and relieving sphincteric spasm. Scrupulous cleanliness during the local toilet is imperative. The matter of toilet papers is important. "Adler" calls attention to the fact that harsh papers and ordinary newspaper, because of the printer's ink, often cause pruritus. A patient, whom the writer saw, presented a very obstinate case of pruritus that persistently recurred until it was discovered that the sufferer used as toilet paper, the tissue paper which had been wrapped around oranges and lemons. When this practice was

stopped and a little local treatment given, the case healed and has never recurred. Where contact of the fæces produces pruritus the ordinary use of toilet paper is not sufficient to remove all the small particles, and pledgets of cotton moistened in warm water are much more efficient. The addition of sodium borate or bicarbonate to the water is often of value.

In conjunction with the local applications to be described later, I have made it an almost routine practice, whether the cause is evident or not, to gradually but thoroughly dilate the sphincter. There is always present a hypersensitiveness of the anal mucous membrane or an hypertrophy of the sphincter muscle, both of which conditions are relieved by this procedure. The dilatation is performed slowly and without an anaesthetic. By frequent moderate stretchings, I overcome the hyperesthesia and abnormal resistance and in that way relieve the constipation that occurs from prolonged retention of the fæces. This also relieves the tenesmus that is set up and keeps the skin under tension and helps to make defecation painful. It has been advised to perform the dilatation under chloroform, but I do not employ that method, because whenever you dilate forcibly there is danger of incontinence resulting, which will be more or less permanent. This mishap is never possible when the dilatation is performed by my method.

The local application of astringents and ointments: as acetate of lead or zinc, zinc oxide, carbolic acid, chloroform (a dram to an ounce of olive oil), bismuth or mercury may be tried, but with varying success unless the predisposing cause is removed. Opium is to be used very advisedly because of the possibility of indu-

cing the habit and because the secondary effect of the drug is to produce a general itching. I have found mutton suet and diachylon ointment preferable to other emollients. The following formula I have frequently used to give temporary relief while treating the underlying cause;

R Camphorae
Chloral Hydratis AA ʒi
Ung. Diachylon ʒi

This may be applied two or three times daily after bathing the parts. Much immediate relief is obtained by brushing the surface with nitrate of silver twenty grains to an ounce, or with Churchill tincture of iodine, twice a week. Both applications produce some temporary pain, but the relief afterwards fully compensates for the suffering.

When pruritus is due to thread-worms, injections of lime water or salt water are sufficient, or in severe cases, an anthelmintic as santonin. Occasionally, this procedure needs to be repeated. When due to vaginal discharges, douches of 1 in 2000 mercuric chloride or two per cent. lysol, should be used twice daily. In infants, when due to lack of attention during an attack of diarrhoea or to fermentation of urine about the parts, I have found picric acid, ten per cent., in nitrate of mercury ointment, gives the best results.

Eczema in all its various forms is frequently a cause. If the skin is dry and scaly much benefit is derived from tar preparations. Bathe the parts with a solution of alcohol and tar water or use an ointment as:

R Picis Liquidæ ʒiv
Ung. Belladonnae ʒii
Acid. Carbolicæ m. x.
Adeps Lanae ʒii

Bathe the parts repeatedly in water as hot as can be borne and in green soap, to remove the thickened scales and to deplete the local circulation. In exaggerated cases, a solution of caustic potash, five grains to an ounce, may be used. A cloth may be used to sop the hot water on the parts, but do not allow any rubbing. This treatment on retiring will often insure a restful sleep for an otherwise tortured patient.

In the moist variety of eczema and in erythema, soothing applications such as calomel, bismuth, boric acid, starch or zinc oxide powders may be dusted on the parts and a piece of lint or muslin inserted between the buttocks. The following, as an ointment, has acted admirably in many of these cases.

R Thymol gr. 2
Pulv. Zinc Stearatt ʒiv

When the patient is about to indulge in excessive exercise, work or walking, especially obese subjects, where he is likely to aggravate the condition, he should apply the above ointment before the effort and bathe the parts promptly afterwards with cold water, being careful to dry the parts thoroughly. Frequent ablutions of cold water give much temporary relief in these cases. For fleshy individuals and others who perspire freely and are liable to chafe, carbolic acid solution 1-2% or potassium permanganate 1-5000 is an admirable lotion to be used daily with the toilet.

In eczema marginata, bathe the parts thoroughly with warm water and soap, dry carefully with a soft cloth and then apply dilute sulphuric acid. It is painful for a short while, but gives immediate relief. Tincture of iodine may be used. In purely neurasthenic cases, local treatment is of no use and the patient is better off without

it. Moral and hygienic instructions are much more needed and, in some instances, straight talk, as Morris (*British Medical Journal*) calls it, will do more than all the drugs. In severe cases or when the pruritus is due to disease of the brain, spinal cord or their membranes, it may be necessary to give the patient a narcotic to enable him to sleep. Succus conii, one dram (4'00) given three times a day is efficacious. Bromide or chloral is preferable to opium, as the latter causes more itching the next day.

Recently, the Röntgen ray has been used in the treatment of pruritus and eczema about these parts, but the work, in many instances, has been done by enthusiasts and its value overestimated. Very often, but not always, the X-ray acts almost magically, but there is always the danger of possible burns even in the hands of an expert, and this danger is increased, if the treatment is continued over a long period of time. A fifteen-minute treatment every other day for two weeks ought to show results by relieving the itching and increasing the discoloration of the skin. A tube of low vacuum is held about ten inches from the patient. The surrounding parts are to be protected by lead sheets and no application or ointment containing metallic salts are to be used at any time during this treatment. Nothing is worse than the empirical use of any agent, and it is folly to use the X-ray on every case, without first finding the cause of the itching. The X-ray will prove a valuable assistant, however, if its use is limited to cases of unknown origin or those that prove themselves especially obstinate and where relief alone is desired. A cure cannot be expected even with the use of the X-ray unless the cause is removed. Should a

cure occur, it will be only temporary if the exciting cause is allowed to remain.

When the pruritus is due to proctitis, hemorrhoids, fissure, ulceration, fistula, prolapse or polypus and the patient refuses to submit to surgical treatment or, in senile, debilitated or hemorrhagic subjects, much relief may be given by the use of the following:

R Calomel gr. 30
Menthol gr. 10 to 20
Vaseline ʒi

Sign.—Apply after each bowel movement, bathing the surface carefully before, and sopping it dry.

If there is much pain, cocaine hydrochlorate, grains ten, may be substituted (Mathews). The use of unguentum gallae or tincture of iodine will relieve the itching when hemorrhoids are the cause. These formulae have given me much satisfaction in a general way, but must be altered to suit each case. Finally, there remains a class of cases in which the pruritus persists in spite of all therapeutic treatment and where there is no apparent cause, either local or systemic. In these instances, the actual cautery applied lightly all over the irritated surface will at times effect a cure.

*Headaches: Their Causes and Treatment.

BY

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HEADACHES vary so much, not only in degree, but in kind, that any attempt to

* Specially contributed to "The Antiseptic."

do more than briefly discuss a few of the more important causes and conditions which may give rise to them, would be quite out of place in the present instance. Nor is it our intention to indicate the various drugs that may be necessary for their treatment. That can only be done by the physician, who, with his case before him, observes symptoms and signs of which the patient himself may think but little (even if he be conscious of them), and thus derives hints which are of the utmost value to him in prescribing or directing a precept. But a knowledge of the cause, or causes, which may have produced a headache may be of importance to the patient, as well as to the doctor; for in the attack made upon the cause, lies the essence and foundation of the treatment. Not only will the patient appreciate his physician's efforts in this direction when he knows something of the nature of his ailment, but learning to avoid that which gives rise to his suffering—if it can be avoided—he may find himself exempt from pain and trouble in the future. The causes of headaches vary very greatly; great caution is needed in inquiring into their etiology, and in discriminating one form from another, but roughly speaking, they may be grouped under three heads. (1) Those in which the blood-supply of the brain and body at large is at fault; (2) those in which some distant organ (such as the stomach or the liver), with which the brain is in sympathy, has got out of working order; and (3) those in which there is some affection of the nervous system itself, and more especially of the great central organ—the Encephalon. Such a classification is tantamount to including headaches under the three divisions of blood or circulation headaches. It must not be supposed that every headache can be at once set down as

belonging entirely to one or other of these three groups. A headache may, so to speak, lie on the borderland and partake of the characters of more than one variety. For example, it is more than probable that in all kinds of headache the nervous system is deficient in tone, and requires "bracing up." Sometimes, for instance, a patient complaining only of frontal headache may be found suffering from phthisis pulmonalis, although it is in the third group only (neurotic) that this deficiency is markedly prominent. As a rule, however, most forms of headache will be found to possess symptoms which enable us to class them as above. First, then, let us consider those conditions in which the blood-supply and circulation are at fault. The brain requires, and receives for its nourishment a very large quantity of the blood which circulates through the body. This amount varies in different states, a much larger quantity being supplied when the brain is working actively, as in the process of thinking or calculating, than when it is at rest, as during sleep. Sometimes we find that the blood supplied is deficient either in quantity or quality, or in both these respects. This gives rise to the condition known technically as anæmia (or bloodlessness) of the brain, in which that organ, deprived in part of its nourishment, becomes impoverished. The mental powers in this case are weakened, and any attempt to do the same amount of brain-work as in health may result in troublesome headache. Various causes tend to produce this want of brain nourishment. Chief among them are a feeble heart and excessive drains of many kinds on the system. It is thus more common among women than among men. Not unfrequently, in both sexes, the evil lies in the excessive use of aperient medicines. The habit which some

people have of frequently administering to themselves purgative pills by way of getting rid of the headache, which they suppose is due to an overloaded state of the bowels, may, in reality, be the cause which keeps up the pain in the head and brain mischief. An occasional purgative may, no doubt, be a good thing; but good things sometimes become evil by improper use. It is in this form of headache that sufferers not unfrequently find they obtain relief from small quantities of alcohol, which acts by strengthening the heart's action and dilating the blood-vessels of the brain, so that more blood is supplied. Unfortunately, the benefit received is in many cases only temporary, and alcohol unhappily being in the eyes of far too many a drug to be desired, the dose is repeated, and probably increased. In this way it too often happens that the sufferer becomes a confirmed inebriate. One of our best and latest writers on headaches (Dr. Day) says that "the relief afforded by alcohol in the misery of cerebral anæmia (or bloodlessness) is one of the most fertile sources of drinking habits, especially among women." This observation applies more to the western country. The opposite condition to anæmia—that in which there is an excessive supply of blood (hyperæmia)—may also give rise to headache. It is most apt to occur in those who use the brain overmuch. Students "burning the midnight oil," and something even more precious, namely health—merchants toiling in their counting-houses, brokers who yield too readily to the excitements of a Change, politicians worrying over affairs of Government—these are the classes of people most liable to suffer from this form of headache. They use their brains to such an extent as to cause excessive waste. To repair this waste, an increased

flow of blood to the head takes place, which may be so great as to overwhelm the nerve-centres. Such a condition is often aggravated by the mode of life which is adopted. Irregularity is observed rather than regularity, meals are taken at improper hours, and eaten as fast as possible, either too hot or too cold, while stimulants are too often, and perhaps too freely, indulged in. Alcohol is in itself a frequent cause of this form of headache, the reason for which is apparent when we reflect how alcohol relieves the first kind of headache by dilating and expanding the cerebral blood-vessels. Thus it is that headache may, and generally does, result after a debauch. Stimulants ought, therefore, to be avoided by those who suffer from fulness or repletion of their cerebral blood-vessels or from "rushes of blood" to the head. A somewhat similar condition to that in which there is excess of blood supply to the brain is that where there is interference with the return of blood from the brain. There is here also excess of blood in that organ, but with this difference, that it is blood containing waste, and, therefore, injurious products, that too slowly pass away. The vessels of the brain are practically blocked in this case, and this blocking tells backwards; for, not only are the waste matters left to do whatever harm they may, but the supply of arterial or nourishing blood is lessened, so that there is also a condition akin to that of want of brain-nourishment. The blocking or interference with the blood return may be due to causes within the chest, such as chronic bronchitis or heart dilatation. It may also be due to swellings in the glands of the neck pressing on the veins by which the blood flows back to the heart. More remediable causes are sometimes to be found in the modes of dress. Thus tight corsets or bodices for

women, by preventing free circulation within the chest, may give rise to this form of headache, as may also tight collars and cravats round the neck. Demise has been known to occur during a state of intoxication from the collar and cravat becoming too tight for the neck, which may be swollen, by the increased size of the veins, an accident to which inebriety usually predisposes. The return of blood is thus interfered with—so much so, indeed, that a sort of apoplexy occurs. It was to avoid this little difficulty that our ancestors kept a small servant boy, or other attendant, at hand to unloosen the neck-cloths of their drunken guests as they went under the table and succumbed to the influences of the symposium. In addition to these conditions of lessening and excess of blood in the brain, unusual or diseased products—poisons we may call them—in the blood may be a cause of headache. This we observe in gout and similar constitutional affections. Rheumatism, which is allied to gout, is less apt to affect the brain than its coverings; but when these meninges are affected, distressing headache may be the result. Such headaches when they occur can only be got rid of by attending to the constitutional state, and by the cure of the primary disease which is thus seen to be their real cause and origin. We may now pass on to consider the second variety of headaches, namely, the sympathetic group, or those in which some distant organ is irritated, and whose irritation by sympathy affects the brain. The best example of this form is the bilious or dyspeptic headache, sometimes also known as the "sick headache" (but under this term not to be confounded with the more terrible migraine or hemi-crania), in which the digestive organs are primarily at fault. The brain sympathises

with the stomach or liver in its affliction, and thus comes to suffer itself. The chief cause of this malady is to be found in those errors of diet which lead to indigestion or dyspepsia. Examples of these causes are unwholesome food, late suppers, hasty and inefficient mastication, and the continuous drinking and wine-bibing to which some people give way. Such causes tend to lower the vital tone, and may cause sympathetic head symptoms. This explains why it is that in this form of headache a free vomit or purgative gives relief quickly. But in this connection it is well to point out that the too free use of cathartics may be a cause of the dyspeptic, as we notice it to be provocative of the anæmic (or bloodless) headache. The frequent administration of aperients not only drains the system excessively, but weakens the digestive organs, and throws them into such a condition that headache is readily set up. In the third variety of headache, it is the nervous system itself which seems to be chiefly at fault. Examples of this form are the organic, nervous, and neuralgic headaches, the organic headache is due to disease of the brain or membranes. Little need be said here. It is not the headache itself which is of importance. The cause which gives rise to it is some important change within the cranium, which may sooner or later cause other symptoms indicating the evil and grave nature of the change; such headaches often precede insanity. The nervous headache is more commonly known as migraine, or from the nausea and vomiting which may occur during an attack, as sick headache. In this respect it may be said to be the converse of the bilious or dyspeptic headache, and shows that if the brain sympathises with the stomach, the stomach may in turn sym-

pathise with the brain. From not discriminating properly between the two forms of sick headache, doubts have been expressed as to the nervous origin of "migraine"; and the nausea and other dyspeptic symptoms have been held as indicating disorder of the stomach or liver to be the primary cause. This is not the cause, but the consequence; and vomiting or diarrhoea is not found to give much relief. Dr. Liveing's view that there is an irregular accumulation of nerve-force, which explodes, so to speak, in the shape of headache, and exhibits quite a "nerve-storm," is the one which receives most support at the present day. The term "nerve-storm" is very applicable to it. Various exciting causes, such as brooding over unpleasant thoughts, bodily fatigue, dietetic errors, too little exercise, overstraining of the vision, loud noises of a disagreeable character, unpleasant smells, and even disturbances of the weather, may set up an attack. As the patient feels its approach, he may attempt, and sometimes, successfully, to ward it off. But more frequently he resigns himself to what he feels to be his inevitable fate, and waits as patiently as may be, if he is wise, throughout the terrible, dull, aching, darting pains, and the accompanying nausea, until the sleep or repose comes from which he usually awakens refreshed. The chief peculiarities of this variety of headache are, that it is often inherited from parents, that it is periodic, and usually attended by disturbances of the faculty of sight. Different members of the same family may be affected by it: and where it appears that only one is so afflicted, a careful investigation usually shows that some former members have suffered. The periodicity or regularity of recurrence does not appear, as one might at first suppose, to be due to

infection by some special disease-poison, which is so commonly a cause of those diseases (for example, ague) that occur at regular intervals. In some instances, the regularity of the return is less marked than in others, and various circumstances, such as maternal duties, nursing, change of air and occupation, are said to prevent its appearance for the time being. Usually, also, the attacks become less frequent as the meridian of life is passed, and thus the affection has been spoken of as making youth "look forward to old age with a feeling of delight, and long for its approach, when he has been told his malady will probably disappear."

Peculiar disorders of vision, as already remarked, usually occur in this form of headache. These sometimes take the form of curious spectra, more frequently the disturbances consist in dimness of sight, objects are not seen distinctly, and any straining of the eyes to render them more distinct may be accompanied by pain. This has led to the belief that errors of vision, such as far or over-sightedness, and other forms of irregular sight, may be in many cases the predisposing cause of sick headache. If these disorders or defects of sight are not aided or corrected by proper glasses, the eye is liable to be overstrained in the endeavour to see distinctly. The eye and the portion of the brain which governs it are able to bear this overstrain for a time, but at length give way, and their distress is revealed by a periodic explosion in the form of sick headache. It has been found that the attack may sometimes be warded off by the application of a drug (atropine), which paralyses the muscle within the eye which is chiefly concerned in the over-straining, while

the tendency to the attacks may be got rid of by the use of a proper pair of spectacles. The cessation of the attacks after a certain age is explained by the advocates of this theory as being due to the fact that about that time changes in the sight of weak or erratic as well as of healthy eyes take place; that these changes call for the use of spectacles; and that a proper pair being ordered from the oculist for those who did not understand their need of them before, the predisposing cause is got rid of, and with it the headache. And so it very often happens that both oculist and patient fail to connect the two things together, and give to age the credit due to the spectacles. Other senses may suffer; but not so greatly nor so frequently as sight. Allied to the nervous is the neuralgic headache, a form of *tic douloureux*. This has its seat in one or other of the nerves of the head, and may be excited by decayed teeth, exposure to cold, and similar causes. It rarely occurs, even in these conditions, unless the nervous system is lowered in tone. Many people have decayed teeth without suffering the slightest ache so long as they keep their health at par; once they begin to do too much work, bodily or mental, or expose themselves to conditions which act injuriously on the health, the decayed teeth gives them an unpleasant reminder of their presence in the shape of a neuralgic headache. As to the treatment of these affections, it were, no doubt, easy to give a detailed list of the various anti-neuralgic remedies, from aconite on the one hand, to quinine, galvanism, or a pair of spectacles on the other. But if drugs are necessary, these had better be prescribed exactly and scientifically in the first instance, at least by the physician, who is usually better able than the patient to select from the

long list of medicines used those which may be beneficial in each particular case. As may be gathered from the remarks made regarding the anæmic or "bloodless" headaches and the headaches following indigestion, a patient may believe he is deriving benefit from a drug which is in reality, by its later effects, keeping up the evil. No doubt many patients learn, but only by extreme experience, how they may best treat themselves, and may even contrive better than a medical man, who is a stranger to them, to alleviate their suffering. But as it is only the skilled workman who knows how to manage the particular mechanism with which he alone is acquainted, so it is only the doctor who knows how to use and apply the various drugs at his command. What may, however, be done by the sufferers themselves is, firstly, to avoid the causes of headache, whether these be predisposing or exciting. Many of the more common of these we have indicated. It is well, however, to repeat that any irregularity in the mode of life, such as errors in diet and drink, must be particularly avoided by those who are liable to any form of headache. Where alcohol is found to do good, it should be taken only in small quantities and with the meals; all worry and excitement must be made void; sleep in sufficiency, as well as moderate exercise is essential. When headaches continue to burden the frame and to make life miserable, a change of air or scene, a prolonged absence from business, pleasant society, music or harmony, and other enjoyments may help to get rid of them. Sometimes all that is wanted may be oleum morrhue, or some other nutrient and tonic medicine. During the paroxysms of sick headache, complete rest on couch or bed in a darkened room, is found by many to be the only thing which gives

them relief, while others believe they are assisted to endure by drinking cups of strong tea or coffee. Those who suffer from this tendency to migraine, and have the disorders of vision well marked, might find it worth their while to consult an oculist regarding the condition of their eyes.

Cases and Comments.

A Case of Simple Ulcerative Colitis—Recovery.

BY

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CASES of ulcerative colitis are, according to the available records, not very common in this country. Indeed, the disease itself has but recently been recognised as a malady separate from dysentery. I believe the disease is not so uncommon as these same records appear at first sight to declare, for it is not improbable that many cases of ulcerative colitis are returned as dysentery or typhoid. There is, on the other hand, the possibility that equally often ordinary dysentery is mistaken for ulcerative colitis, and the mistake only discovered after the completion of the case. The following typical case of ulcerative colitis may therefore prove of interest, especially in view of its comparatively favourable termination (which, according to all authorities, is of rare occurrence), and the circumstances which led to such a consummation being attained.

M is a gentleman of means, aged 53, and a free liver who, having until lately lived a healthy outdoor life, was forced by circumstances to alter his habits and take to sedentary occupation about three years

ago. Since then he has complained of dyspepsia, with derangement of bowels, chiefly in the form of constipation, for which he has had to resort to such purgatives as Cockle's pills, calomel, Eno's fruit salt, &c. Sometimes, however—and this usually occurred after a heavy meal or a violent purgative—the irregularity took the shape of diarrhoea or dysentery, each succeeding attack of which lasted longer, and was more severe than its predecessor. The last attack of dysentery occurred about six months ago, persisted for over two weeks with a great deal of tenesmus and hæmorrhage and was cured by soda boracic injections per rectum and bismuth and ipecac by the mouth. The recovery, however, does not appear to have been complete, for, in spite of strict temperance in the matter of eating and drinking, he complained from time to time of uneasiness in the abdomen sometimes amounting to colic, and of constipation, sometimes ending in diarrhoea.

Family history absolves him from all suspicion of tubercle or cancer, and personal history of syphilis or kidney disease.

On the 13th of April last he dined out, dined well but not wisely; and after dinner took a couple of Cockle's pills as he felt "heavy in the stomach." The bowels were moved twice the next day but "not freely." He dined out again on the night of the 14th April, hot spiced curries forming part of the menu. On the morning of the 15th he took an ounce and a half of castor oil, and the diarrhoea caused by it formed the commencement of his illness. On the 16th April he had five or six motions reddish in colour with slight tenesmus, but he did not take any medicine. On the evening of the 17th I saw his motions for the first time. They were

scanty, devoid of fecal matter, and consisted of small shreds of mucus floating in blood-stained watery fluid, looking exactly like water in which minced meat had been washed. There was a good deal of tormina and tenesmus. The temperature was normal. He was put to bed on milk diet and given ext. cobo. liq. with mucilage of espagul—drugs which had greatly benefited him in his previous attacks. On the 18th he was worse, scanty, offensive meat-wash evacuations being frequent and accompanied with pain referred to the sacral region. As the symptoms pointed to a rectal lesion, I introduced an anal speculum and found (1) the sphincter ani very lax, (2) about two ounces of the fluid above described, which gushed out at once, and (3) on swabbing the mucous membrane an ulcer whose upper limit could not be defined was found on the posterior wall of the rectum at a distance of about 4 inches from the anus. The lower edge of the ulcer, which could be seen as well as felt with the finger, was thin, soft, and irregularly punched out or eroded. The rectal examination was undertaken with a view to determine if there was anything of a cancerous nature about the intestinal lesion, and gave a negative result.

The disease henceforward progressed with rapid strides. The number of motions increased, fluid, and clotted blood made its appearance in them, and in spite of energetic treatment as detailed below the patient's condition grew daily and hourly worse—exhaustion, restlessness and anæmia increasing with almost every motion. The treatment now became more or less symptomatic, all our energies being taxed in combating the results of the disease rather than the disease itself. For the sake of brevity I shall mention

the symptoms and the treatment adopted in chronological order, with a few incidental remarks where necessary.

April 19th—Castor oil ziii with chlorodyne m. x in emulsion three times a day.

„ 20th—Syrup of red gum zi in water, t.d. Tenesmus, restlessness and insomnia very great. Morphia suppository at night.

„ 21st—Slept three hours last night, but woke up with a great deal of nausea. Vomited everything taken. Bi and HCN mixture, mustard plaster to epigastrium and ice to suck. I cannot say whether the sickness was reflex or due to the morphia. Motions same as before in number and character.

„ 22nd—Sickness better, but motions continued the same. Ipecac grs. xx every 4th hour. This was kept down after two trials and with the aid of one minim of cocaine (1% solution) given two minutes before each dose of ipecac. Sleep was induced with a hypodermic injection of morphia. Diet—iced milk and soda every two hours. Much thirst.

„ 23rd—Fourteen motions. Ipecac tabloids continued. Also bismuth subnit. grs. xx every 4 hours in the intervals. For tenderness and flatulence linseed poultices every two hours. Starch and opium enema as a local sedative.

„ 24th—Sickness reappeared. Trional grs. xxv to induce sleep. No effect. Had 16 motions. More feculent and less bloody.

„ 25th—Five broad ipecac motions stained with bismuth, without any trace of blood. The temperature for the first time during the illness rose to 100° in the evening. Chloral and bromide for the restlessness.

„ 26th—Slept well. Eight small motions with streaks of blood in some of them. As the patient was low, aromatic spirits of ammonia was ordered and Brand's essence of chicken added to his diet—a teaspoonful three times a day. At this stage the local condition appeared to improve and hopes were entertained of a favourable termination at an early period.

„ 27th—Temp. 100° Seven motions with clots of blood and mucus.

„ 28th—There was a distinct change for the worse. The number of motions increased and there was much blood in them. He was put on plasmon and milk. Opium and starch enemata were given twice a day.

„ 29th—Much blood, partly fluid and partly as large clots, but almost arterial in colour was passed with the motions, which were very frequent, and large black pieces of gangrenous mucous membrane with the submucosa discernible in some of them were also passed. The larger pieces were over 2 inches long and about an inch and a half in width, and altogether more than 20 such sloughs were passed. Ergotin (5 gr.) tabloids were given by the mouth every 4 hours and hypodermic injections of ergotinin were given frequently. By the evening,

the hæmorrhage became so alarming that ammonia and ether had to be resorted to, to keep the pulse going. Calcium chloride (20 grs.) was given every 4 hours and 3i of renal glandin was injected per rectum with 3i of mucilage of starch. Ergotinin hypodermically was continued at intervals though it had failed to stem the tide of hæmorrhage. The temperature became subnormal. The urine had to be drawn off, and the patient was moribund, passing his motions in bed and being roused with difficulty. Three injections of renal glandin at intervals of four hours, however, stopped the acute hæmorrhage, though a few altered clots and some sloughs continued to be passed from time to time. I apportion the credit of hæmostasis entirely to adrenalin, because ergot had failed earlier, and calcium chloride could not have had time to act so rapidly.

„ 30th—The motions improved. A few clots and sloughs were passed with some griping pain. Temp. 101° . The urine had to be drawn off. Bismuth salicylate (grs. xx) and Dovers powder (grs. ii) were given every 3rd hour. Dilute rice water (conjee) was ordered to allay the intense thirst.

Subsequent Progress.—The patient made a gradual but uninterrupted recovery. The motions became fewer in number and more feculent. The bowels were washed out with soda boric lotion, which removed the few remaining sloughs and shreds of mucous membrane, and intestinal irrigation was continued daily. The

parasis of the bladder lasted up to the 9th May. The diet was gradually thickened with Benger's food, Horlick's malted milk, arrowroot and sago. The temperature became normal and the general condition of the patient improved slowly, but perceptibly.

Present Condition.—He is now able to go about and take soft, solid foods. He still passes blood sometimes (once in two or three days) in his motions in the form of streaks or dots and this is noticeably the case when his motions are constipated. There is, however, neither pain nor tenderness. The washing of the bowel is still continued every other day and it is done with a stomach tube of soft India rubber, about 20 inches of which are passed up the bowel, about four pints of warm boric lotion being slowly run into the intestine. There is only one spot where he complains of pain in passing the tube—a point four inches from the anus. This I consider is the seat of the unhealed ulcer from which the occasional bleeding takes place. To stimulate this ulcer I twice injected silver nitrate solution (60 grs. to 1 pint) after washing the bowel out with boric lotion, but the process is not only painful but ineffectual. As the ulcer is so low down I am now trying the topical introduction of ung. hamamelis.

A few points in connection with this case I may here briefly reiew.

I have been struck with the thought that possibly the initial examination with the speculum and finger added to the severity of the case. This may or may not be; but the warning was sufficient to keep me back from the too early use of a long tube or a later attempt at rectal examination, a precaution in which I was supported by the consult-

ants who from time to time generously helped me in the treatment of this very trying case. Hale White writing in "Albut's system of Medicine," says "A rectal examination should never be omitted," but in view of the possible irritation and injury by the speculum and infection by the finger, a rectal examination seems an inadvisable and unnecessary proceeding if the history and symptoms lead to a definite diagnosis.

The insidious nature of the disease at its commencement and the alarmingly rapid progress of the ulceration later are well illustrated in this case.

The ultimate prognosis in this case is a matter for consideration. There is yet an ulcer to heal and we know that after 50, a rectal ulcer may worry us by its chronicity and its tendency to assume a malignant nature. The healed ulcers—and from the number and size of the sloughs passed they must be many and extensive—may lead to contraction of the lumen of the bowel with all its attendant evils. Still, there is much room for congratulation in the fact that the patient has outlived the acute ulceration and hæmorrhage of the bowel—a condition credited with a high rate of mortality.

The effect of adrenalin in stopping hæmorrhage cannot, in my opinion, be overestimated. At all events, in this case, I believe it saved the patient's life and is entitled to a further trial in similar cases of intestinal hæmorrhage.

THE ANTISEPTIC.

AUGUST 1905.

The Micrococcus Neoformans.

DR. DOYEN of Paris is an enthusiastic believer in the microbic origin of cancer, and he has even discovered the special organism which is alleged to be the cause of not only cancer but of all neoplasms. As early as 1885 he isolated the organism of cancer, which he calls the micrococcus neoformans. Since the discovery of the organism Dr. Doyen has steadily carried on his research into the pathogenesis and treatment of cancer, and Dr. Alexis Thomson in the April number of the *Edinburgh Medical Journal* publishes a resume of Dr. Doyen's work on the subject. The micrococcus neoformans, we are told, does not stain with ordinary reagents, but Dr. Doyen has a special fluid with which it is readily stained.

The most favourable medium for its cultivation is a bouillon of lactating cow's udder, with peptone and glucose added in the proportion of one per cent. The cocci are found distributed in all varieties of tumours. They are found in the juice of any cancer. They have even been found in the swollen and congested glands before the appearance of the cancer cells in them.

Inoculation with cultures of micrococcus neoformans has not always been productive of neoplasms in animals. But it is contended by Dr. Doyen that neither is inoculation with cholera or typhoid bacilli successful in producing cholera or typhoid fever. But among the results of inoculation with micrococcus neoformans the following are mentioned:—

"(1) A white mouse, inoculated under the skin of the back, died six months later of intestinal obstruction, caused by a tumour of the transverse colon.

(2) A monkey, inoculated into the substance of the mamma, developed three months later a tumour in the same organ; the tumour presented the characters of a cystic adenoma, like that met with in the human subject, and the fluid obtained from the tumour yielded a pure culture of the micrococcus neoformans.

(3) A white mouse, inoculated under the skin of the back with a culture derived from a sarcoma of the tonsil in a human subject, died ten and a half months later of intestinal obstruction, due to a tumour of the colon.

(4) A guinea-pig inoculated into the substance of the mamma died two months later, and after death a cylindrical adenoma was found in the liver.

(5) A white rat developed multiple nodules of lympho sarcoma of the testicle five months after inoculation.

(6) A white rat developed fibro sarcoma of the Fallopian tubes."

So far as to experimental observations on animals.

In the way of treatment Dr. Doyen has carried on experiments both with toxins and vaccines of the micrococcus neoformans. The preparation of the cancer vaccine seems to be a prolonged and tedious process. The cultures are to be continued for a period of two and a half to three years, during which the most minute precautions are necessary. We need not here go into the details of the method employed in preparing the vaccine. But the vaccine when injected into cancerous subjects is said to produce a reaction like that observed after the injection of tuberculin in tuberculous subjects. The results obtained by the injection of the cancer serum is thus described:—"During the first two or three weeks of the serum treatment, tumours which were previously inoperable undergo visible and tangible improvement; tumours which were adherent to the deeper tissues become mobile; in some cases to such an extent as to become operable. In a series of cases which were regarded as hopeless a certain number have been rid of any discoverable trace of cancer and may be regarded as 'cures'; in others the disease has been arrested."

Dr. Doyen divides cancerous cases from a chemical point of view into five classes.

"(1) Superficial cancers of the skin without glandular infection. These can be cured by the serum treatment alone.

(2) Early cancers of mucous surfaces, of glands, and internal organs, but which are still mobile, limited, and without extensive lymphatic involvement. In these cases the anti-cancerous serum is to be used for about a fortnight, at the end of which the tumours are to be removed by operation.

(3) Progressive cancers which have become inoperable because they are too extensive for complete removal. In such cases the anti-cancerous serum is to be used till it diminishes the infective material and brings it down within operable limits; and then operate.

(4) Cases of cancers of the skin involving extensive areas and therefore inoperable. In such cases the anti-cancerous serum is to be used for several years without interruption and no operation should be undertaken.

(5) And lastly we have the cases of cancers which have reached the stage of glandular and visceral dissemination, with cachexia and marked diminution of vital powers. These cases do not improve under the serum treatment and are to be given up as hopeless."

From the above it will be seen that Dr. Doyen does not intend his cancer

serum to take the place of surgical operations, but uses it more to supplement and help the operative treatment. The serum prepares the ground and the operation does the rest.

The percentage of 'cures' effected by the Dr. Doyen serum is encouraging. But more important than the curative value of the treatment is its value as a protective agent against cancer. Dr. Doyen believes that it will be possible to vaccinate people against cancer with the same success which attends vaccination against small pox. Dr. Doyen's treatment for cancer is still in its experimental stage, and is being subjected to very rigid scientific tests by a body of expert French medical men. We therefore suspend our judgment on its correctness and value for the present. Medical men are not agreed even as to the organismal origin of cancer. And to pronounce a definite opinion at this stage on the efficacy of a serum treatment will certainly be premature.

But at the same time every one will look forward with interest and expectation to the conclusion of Dr. Doyen's labours in the field of successful treatment of one of the most relentless maladies that human flesh is heir to. It is true that Dr. Doyen may fail. But let us not commit the crime of wishing it.

Our Contemporaries. MEDICINE.

A Comparison of Heart Remedies.

BY

FINLEY ELLINGWOOD, M.D.,

Chicago, Ill.

A careful comparison of those remedies which are used for any given disease teaches us the conditions in which each of them will act specifically, thus enabling us to prescribe each agent with more exactness.

In the administration of heart medicines it is common to give digitalis to all cases, indiscriminately. This is a serious mistake, and in many cases is productive of even fatal results. This agent is as powerful for harm as it is for good, unless prescribed with exactness and precision. It is a valuable remedy when the pulse is rapid, weak, or easily compressible, when cough or cyanosis is present, and when there is dyspnea or edema accompanying valvular incompetency of the aortic or mitral valves, or where there is stenosis of the mitral valves. On the other hand, when the pulse is full, hard, and slow, or when there is stenosis of the aortic or mitral valves, with fatty degeneration, or where there is marked arterial sclerosis, it should not be given.

When immediate heart failure threatens, we do not have to consider the possibilities of the existence of these conditions, and the remedy is administered either alone or in conjunction with strychnine, or nitroglycerin, without hesitation.

Cactus grandiflorus is a better general heart remedy than digitalis. It is a remedy for enfeeblement of the heart's action, which is due to defective nutrition of the heart.

This may depend primarily upon disease of the nerve centers, as is quite common in neurasthenic patients. When there is extreme irregularity, or exaggeration of the heart's action, or tumultuous heart action from extreme weakness, this agent is directly indicated, but where tumultuous action occurs from a temporary exaltation of nerve force, or from temporarily increased vital action, the influence of cactus will exaggerate the condition, and in such cases should be avoided.

It is in this class of cases that gelsemium has a direct and specific influence upon the heart. It soothes the nervous irritation, steadies cardiac action, permits the restoration of tone, and contributes towards the return of normal functional operation.

Cactus is a sedative to the action of the heart and will reduce the temperature in those cases in which there is high temperature and great depression of the vital forces, general enfeeblement, and threatened collapse. On the other hand, there are many cases of sub-normal temperature which this remedy will elevate to normal more quickly than strychnine. These apparently opposite influences depend upon that influence of cactus which is exercised toward a restoration of the normal functional activity of the heart.

Strophanthus, in its influence upon the heart, acts directly upon the muscular fibre, by a process which is similar to that which ergot exercises upon the muscular structure of the womb. It induces contractility by producing muscular irritation. It is of value in the treatment of dilated heart, and especially in those conditions which depend upon extreme dilatation. Valvular insufficiency in such cases is sometimes improved by it, but if the nutrition of the heart is at fault, the influence of strophanthus will be only temporary. It should then be given in conjunction with cactus, avena sativa, or phosphorus. In extremely dilated cases, or

where atheroma is thought to be present, it may be combined to good advantage with cratægus.

Cratægus is of value in old-standing chronic cases, with much valvular inefficiency, and especially where there is a tendency to atheromatous degeneration. It should be given in four or five minim doses, repeated as many times each day. In those cases of apparent heart trouble which occur rather suddenly in young people of nervous temperament, who are highly excitable and easily overwrought, and where there seems to be threatened nervous prostration, I have found this remedy of immediate service, and of permanent benefit.

When the exhaustion is complete, and with the exhaustion the patient complains of persistent palpitation, with much difficulty of breathing, deep, sighing respiration, and feebleness from little exertion, I have obtained gratifying results from cratægus. In two cases where the valvular murmurs were very pronounced at first, these yielded most satisfactorily to the treatment. I advised enforced rest and concentrated nutrition.

Convallaria regulates the action of the heart, when influenced by reflex irritation. At the same time it is somewhat beneficial in restoring the nutrition of a weakened heart. It influences the size of the pulse, diminishes the number of beats, increases the blood-pressure and the arterial tonus, overcomes dyspnea, and produces regular, natural and easy respiration, followed by a general sense of well-being. This result is also attained when given for dilation of the heart, fatty degeneration, or hydropericardium, even when the exact conditions are not permanently improved, either alone or in conjunction with other nerve sedatives. It soothes the nervous system, relieving nervous irritation, and produces tranquil sleep.

~~Apocynum cannabinum~~ has not until recently been classed as a heart remedy. It is the remedy when, from heart disorder, with great enfeeblement, dropsy is threatened. Especially is this true if dropsy depends upon compensatory failure, when the pulse is slow, or rapid and feeble, and where there is a general fulness of the tissues. When with feebleness of the heart's action there is hydropericardium, or dropsical effusion, apocynum is indicated.

Sparteine is a heart tonic in a given class of cases, and when prescribed with exactness will be the best remedy. When the heart-beats are unequal in vigour and force, when the rhythm is disturbed, it will give prompt relief, whether the heart is rapid or slow, or whether there is stenosis or valvular incompetence, or both.

Strychnine should be given in heart disease when immediate failure is anticipated. It is a valuable remedy, however, in its application to those cases in which there are faults of nutrition. It assists in restoring the nutrition of a weak heart, by whipping up those organs and functions which are involved in the supply of the nutritive material. It may be given in conjunction with all of the remedies above named, which are indicated when the heart is weak, or where there is a general lack of nutrition. I have given it in conjunction with arsenic with very excellent results. In the weak heart of neurasthenic patients I find the arsenite of strychnine a very excellent remedy.

The bromide of strontium is not directly a heart remedy, but there are many cases of irritable heart where the irritation is increased by any remedy that irritates the stomach, or by the fact that a general irritability of the stomach is present. In these cases this remedy will be found of great value. It may be given in conjunction with cactus, or with hydrastis canadensis, and in some cases with bismuth. It may be given

in from eight to fifteen-grain doses. In cases of general nervous irritability with irregular heart action, all depending upon chronic gastric disorder, this agent is specifically applicable and will produce satisfactory results. — *The Therapeutic Gazette*.

Incontinence of Urine in Children.

If one looks through the indices of most books which are devoted to therapeutics he will find that the bromides, belladonna, and other nervous sedatives are usually recommended as being of considerable value in the treatment of incontinence of urine in children. But when he attempts to carry out such a line of treatment he will find that in a certain proportion of cases the use of these drugs improves the condition temporarily, but soon after their administration is stopped the disorder returns as persistently as before. In most instances this is due to the fact that a careful study of the urine has not been made before the sedatives were used. In a large proportion of cases suffering from this condition it will be found that the urine is more acid than normal, and perhaps concentrated; or it will be found that it is excessively alkaline, and loaded with phosphates. In both instances the incontinence is the result of the irritation of the bladder produced by these abnormal conditions, and unless they are rectified before or at the same time that sedatives are used, the condition is not cured, since the cause persists and manifests its results when the reflexes which are connected with the function of the bladder are no longer quieted by the nervous sedatives which we have named.

In many instances, if the urinary condition is carefully attended to, the use of sedatives is entirely unnecessary, and in those cases which depend upon atony or feebleness of the vesical centres in the spinal cord the sedatives will do actual harm, so that benefit will accrue only when stimulants, such as

nux vomica, arsenic, and phosphorus, are administered.

In those cases in which the urine is excessively acid, a prescription containing sweet spirit of nitre and citrate of potassium, or other vegetable salt of potash, will often produce excellent results, although for a time the increase in urinary flow which may take place under the influence of these drugs may seem to make the condition worse, since the irritable bladder is flooded with urine which it is unable to retain. In the course of two or three days this irritability diminishes, as the vesical walls are bathed in the mild alkaline flow, and thus the full benefit of the treatment is developed.

On the other hand, when the urine is excessively alkaline, the use of three to five grains of benzoate of ammonium twice, thrice, or four times a day will give excellent results; or if for any reason the benzoate is considered undesirable, uritone in one or two-grain doses twice or thrice a day, well diluted with water, will act equally well.

In a brief article in the March issue of the *Archives of Pediatrics*, Dr. Clemens contributes an interesting note upon chronic interstitial nephritis and the alkalinity of urine as two common causes of incontinence in children. The paper is of value not only because of the observations which it contains, but because of the fact that it impresses us with the importance of careful urinary analysis in cases of this character. — *The Therapeutic Gazette*.

Salt, and Bright's Disease.

It has several times been put forward that sodium chloride taken in excess is injurious to the subjects of Bright's disease, and alleviation of the conditions arising in the course of that disease has been procured by exclusion of sodium chloride from the diet. It is still a question, however, whether the

ingestion of excessive quantities of the salt may act as a causative factor in the production of the disease. It is true, as Castaigne showed, that the administration of large quantities of salt may occasionally give rise to a passing albuminuria; the failure to produce this effect in the majority of cases made, however, the observer suspect that where it occurred there was already a lesion, or at least a predisposition of the kidneys. More recently, Silvestri has collected several cases where young subjects, owing to a peculiar craving, consumed large quantities of salt, and subsequently developed typical parenchymatous nephritis. He believes the sequence to be casual, and he thinks that the lesion of the kidney is due primarily to irritation of the epithelium during the elimination of the salt.—*Medical Press and Circular*.—*The Canadian Medical Review*.

Presence of Tubercle Bacilli in the Urine of Tuberculous Patients.

Rosenberger (Philadelphia) examined the urine for tubercle bacilli in twenty-five cases, the residual urine being obtained by means of a sterile catheter. In no case was tuberculosis of the genito-urinary tract diagnosed or suspected, but the sputum always showed tubercle bacilli. Careful examination revealed a few isolated tubercle bacilli in five cases. No clumps nor groups of bacilli were observed, as usually seen in cases of tuberculous cystitis, nephritis, etc. Intra-peritoneal inoculations were made into guinea-pigs, 2 c.c. of the sedimented urine being used. As a result of the inoculations three animals died, and in one of these no tubercle bacilli had been found in the urine of the individual. The surviving animals were kept under observation for three months and then killed; in not one of them was there any evidence of a tuberculous process. Rosenberger appends a table of the twenty-five patients examined, and concludes that

although the small number of cases scarcely warrants a positive assertion, still it is safe to say that in pulmonary tuberculosis the tubercle bacillus is found in the urine in only a very small percentage of cases.—*American Medicine*, December 3, 1904.—*Medical Review of Reviews*.

Sir Frederick Treves on Alcohol.

Sir Frederick Treves, Surgeon to the King, addressing a temperance meeting, declared that alcohol was distinctly a poison, and that its use ought to be limited as strictly as any other poison. He added that it is not an appetizer, and that even a small quantity hinders digestion. Its stimulating effect only endures for a moment, and when this is passed, capacity for work falls enormously. Its use is inconsistent with work requiring quick, keen, and alert judgment. Reviewing medical practice for a quarter of a century, Treves declared that he could say that the use of alcohol in hospitals and by physicians generally had emphatically diminished and is diminishing.—*The Canada Lancet*.

Contagiousness of Diabetes.

Hutinet (*British Med. Journ.*) believes diabetes to be contagious, suggests the contagion to be contained in the mouth, and the saliva to be the propagating agent. He says, however, transmitted diabetes is less severe, more easily treated and more curable. In cases of conjugal diabetes, when one dies the other makes a rapid recovery. There is also in such cases a lack of thirst and polyuria and the glycosuria sometimes disappears spontaneously upon the removal of the source of infection. Should the contagiousness of diabetes become an established fact, the greatest care should be taken to prevent spitting, and all articles of clothing likely to have been contaminated by saliva should be disinfected. Gingivitis in a diabetic subject should be energetically treated.—*The Dietetic and Hygienic Gazette*.

Hæmaturia as a Symptom of Hydronephrosis.

BY

L. BOLTON BANGS, NEW YORK.

(*Med. News*, Feb 11, 1905, Page 253.)

The author first calls attention to the fact that in a careful search of the literature the occurrence of hæmaturia in connection with hydronephrosis has very rarely been recorded, and presents the history of a male 19 years old who had suffered for one year with frequency and pain of micturition, and intermittent attacks of hæmaturia, especially after undue physical violence or exertion. An examination of the separated urines obtained by means of the Harris separator (on account of suspected tuberculosis) indicated disease of the left kidney and diminished functional activity of the right. Exploratory nephrotomy was performed on the left side and extensive hydronephrosis encountered; on account of the condition of the right kidney nephrectomy was not carried out at the time, but subsequently, when repeated examination of the urine showed ample compensatory hypertrophy of the right kidney, the left one was removed. Both operations were followed by marked improvements in the symptoms.—*The Medical Review of Reviews*.

SURGERY.

A Simple Method for the Radical Cure of Hydrocele.

Lawrence advocates as a safe and nearly painless operation the introduction into the hydrocele sac of an aseptic absorbable solid substance. The ideal substance is sterile catgut. The hydrocele is tapped with a small trocar under local anesthesia, the fluid is thoroughly evacuated, and through the cannula is pushed 9 or 10 inches of a No. 2 or 3 sterile catgut. The cannula is then withdrawn and the opening is sealed with collodion or adhesive plaster. Thereafter

for twelve hours the patient is kept quiet. There results a painless reaction.

The author states that a ten years' experience with this method has resulted in a permanent cure for every case, this often after repeated failures from iodine treatment. In four to six weeks the scrotum resumes a normal appearance. For more recent cases, nine inches of No. 2 catgut is used; for old chronic cases with thickened sac walls, twelve inches of No. 3. Of course in double hydrocele or one of the multilocular variety each sac must be drained and have its separate piece of catgut inserted. Some illustrative cases are reported, the first operated on eight years ago. This man had a hydrocele of five years' standing which had been tapped with the trocar four times; the sac refilled in about six weeks. Twenty ounces of hydrocele fluid was withdrawn, and ten inches of No. 3 catgut was introduced. This man went about his former work the same evening, and although the scrotum swelled to about half the size of the filled sac and gave a firm sensation on palpation, the man experienced no pain and conditions were apparently normal in six weeks. *Yale Medical Journal*, September, 1904.

Sudden Death, especially from Embolism following Surgical Intervention.

BY

BYRON ROBINSON, M.D., CHICAGO.

The tractus vascularis is responsible for the majority of sudden deaths, over 60 per cent. It is the apex of the vital tripod of life. The following are some of the causes of sudden death: (1) Embolus; (2) air in veins; (3) acute anæmia; (4) fatty cardiac degeneration; (5) destruction of the cardiac centre; (6) rupture of vessels (aneurysm, apoplexy); (7) myocarditis; (8) syncope (insufficiency of the left segment of the heart), resulting from embolism of the coronary artery, leading to cardiac anæmia and eventually to cardiac

paralysis; hence the sudden death is a natural one and may be really slow, yet to the observer it appears sudden; (9) defective valves; (10) endocarditis; (11) cardiac rupture; (12) angina.

The tractus urinaris accounts for many sudden deaths, perhaps next to that of the tractus vascularis. The factors of sudden death from the urinary tract are: Nephritis, uræmic convulsions, diabetic coma, renal embolus.

The tractus respiratorius presents the following well-known factors to account for sudden death: (1) Pulmonary embolus; (2) obstruction of the trachea (asphyxia); (3) pleuritic effusion; (4) chronic (latent) pneumonia; (5) oedema (pulmonary, laryngeal); (6) laryngismus stridulus; (7) destruction or paralysis of the respiratory centre; (8) obesity; (9) pressure on the oblongata, asphyxia (accumulation of blood in the left segment of the heart and in the lungs), asthma; (10) congestion; (11) apoplexy; (12) emphysema; (13) hæmoptosis.

The tractus nervosus is overrated as a factor in sudden deaths. Perhaps less than 10 per cent. of sudden deaths are due to the nervous system. A slight shock, blow, or over-exertion in a weak, exhausted person may result in sudden death—this would, however, be among the natural causes of death. The following factors in sudden death from the nervous system may be recognized: (1) Exhaustion (latent, chronic, or continued infection, over-exertion); (2) cardiac paralysis (diphtheria, infection); (3) infection (diphtheria, streptococcus, etc.); (4) vagus inflammation; (5) meningitis, (latent or chronic); (6) convulsions; (7) shock; (8) spasm; (9) joy, grief, anger, emotion, fright (icterus); (10) trauma on the abdominal brain, inducing reflex action in distant organs, as a blow on the epigastrium; (11) epilepsy; (12) destruction of the respiratory or cardiac centres, cerebral hæmorrhage, pressure on the medulla (as fracture); (13) cerebral congestion; (14) cerebral anaemia.

The tractus intestinalis accounts for a number of sudden deaths. The most typical example is that of intestinal perforation from typhoid fever (5 per cent.), when the patient is exhausted from defective nourishment and long-continued infection. Causes of sudden death may be found in the appendages of the tractus intestinalis, as the pancreas (necrosis) or liver (acute yellow liver atrophy).

The following are factors residing in the genital tract which account for sudden deaths: (1) Embolus (especially following parturition); (2) ruptured ectopic pregnancy, infection; (3) hæmorrhage (hæmatocoele, hæmatoma); (5) uterine invagination.

Toxic substances cause sudden deaths; such are alcohol, ptomaines, hydrocyanic acid, bacteria, metallic poisons and inorganic compounds. In many patients there are pathological lesions (inflammatory or degenerative, chronic, latent, suppurative) in the heart, arteries, or veins. These foci become the location of thrombi, which may dissolve, break up and float in the blood-channels to the lung, kidney, spleen, liver, brain, and the serous membrane, as emboli. The thrombus is doubtless many times formed at the same time the surgical procedure occurs.

The general distribution of embolism following surgical operations is relatively: (1) Pulmonary, 70 per cent.; (2) renal, 12 per cent.; (3) splenic, 8 per cent.; (4) hepatic, 5 per cent.; (5) cerebral, 4 per cent.; (6) the serous membranes (pleura, peritoneum and joints), 30 per cent. The embolus exists in two states, *viz.*, aseptic and septic.

Aseptic embolus damages chiefly by mechanical conditions, compromising function, respiration, circulation of blood and lymph, renal secretion and nutrition, and injuring the peripheral nerves.

Septic embolus damages not only by mechanical, but by bacterial conditions—infective, toxic, and suppurative processes. Death from embolus is more frequent than is

noted by physicians who do no personal autopsies. Post-mortems are very instructive in cases of sudden death though not always revealing the cause of death. Large numbers of sudden deaths following operations on the peritoneum are due to embolus.—*Medical Record*, January 14, 1905.—*The Medical Review of Reviews*.

OBSTETRICS AND GYNÆCOLOGY.

A Case of Twins in which there was a Three-and-a-half Days' Delay between the Birth of the First and Second Child.

BY

CRAMER.

Monats. fur Geburts. und Gynakol.

Bd. xxi., Heft 4.

A long delay between the birth of twins is not a common occurrence, for Strassman, in *Winckel's Handbook*, shows that out of 70 cases the interval was only from ten minutes to three hours. Nevertheless, many cases have been described in which there was a delay of 15–30 hours, and a few cases have been cited in which 11–44 days' interval occurred. These must be very exceptional cases, and may be explained perhaps by the possibility of the first child being prematurely born, whilst the second went on developing afterwards.

The author's case was that of a primipara, aged 25, who was delivered of the first child one morning at 5 A.M., and then, as she seemed perfectly well, was left alone, although it was known that there was a second foetus in utero. On the third evening, although the pulse and temperature were normal, the lochial secretion was foul, and the remnant of the umbilical cord showed signs of decomposition. Up to this time the placenta of the first child had not been delivered. In view of this possible infection no attempt was

made to deliver the second child, especially as the uterus had not shown a sign of contracting since the birth of the first. Vaginal irrigation with 1 per cent. lysol was ordered every half hour, and the next day it was determined to empty the uterus. The membranes were first ruptured, and the head was found to be movable above the brim. This was pressed down, and the forceps applied, with the patient in Walcher's position, the cervix having been first dilated by hand. Delivery was easily effected, but the placenta could not be expressed when attempts were made. On introducing the hand into the uterus it was found, curiously, that the placenta of the first child was at the fundus, whilst that of the second was low down on the anterior wall. They were separated with some difficulty, but not much hæmorrhage. Then the uterus began to contract for the first time. After a thorough irrigation with 1 per cent. lysol all hæmorrhage stopped. The patient made a good recovery.

The author attempts to explain the long delay between the births by the fact that the membranes of the first child seemed to envelop those of the second, and as there were no uterine contractions the second child could not come down into the lower uterine segment so as to irritate it sufficiently to cause contractions. Also the fact that the placenta were morbidly adherent helps to explain the absence of the contractions, as it was noted that the uterus was particularly toneless at the fundus, where the first placenta was attached. The case is interesting as pointing to the importance of not waiting for the delivery of a second child, but of proceeding at once to artificially provoke delivery, especially in view of the fact that it is almost certain that if there is a long delay infection of the retained membranes and umbilical cord is more than likely to occur. Futh mentions five such cases, in which three of the patients died of sepsis.—THOS. G. STEVENS.—*Journal of Obstetrics and Gynecology*.

Glycosuria in Pregnancy.

Under the charge of D. J. EVANS, M.D.,
Lecturer in Obstetrics, Medical Faculty,
McGill University, Montreal,

J. M. Jackson and J. R. Torbert, *Boston Medical and Surgical Journal*, February 9, 1905, give short histories of four cases of glycosuria in pregnancy. Three were primipara and one a multipara. In one labor was induced, while the others went to full term. In the first case the amount of sugar never reached one per cent., and the patient's general condition was good. Labor was normal. In the second case labor was induced at the 6th month on account of pueritis and their being four per cent. of sugar present. These both disappeared soon after the uterus was emptied. In the third case four per cent. of sugar but no symptoms were present. She was put on strict diabetic diet and in one month was sugar free. Labor was slow, accompanied by high tension pulse and headache. Inertia set in and the os was dilated and forceps applied, the head being low in the pelvis. The placenta was adherent and was removed piecemeal. One hour later collapse set in and the patient died.

The fourth case was delivered by pedalic version on account of haemorrhage. Shock followed delivery and the patient died in coma.

The authors give a review of the literature and conclude that a temporary glycosuria frequently exists during the later months of pregnancy, which is usually due to glucose or lactose and is physiological and does not interfere in any way with the pregnancy.

Where glycosuria exists due to glucose in variable amounts, associated with other symptoms of diabetes, and when diacetic acid or acetone appears in the urine the interruption of pregnancy is advisable in the interest of the mother.

Anaesthetics should be avoided in these cases on account of the tendency to sudden collapse.—*The Canada Lancet*.

The Treatment of Menorrhagia and Hæmoptysis by Inhalation of Nitrite of Amyl.

BY

HORACE COLMAN.

(*The Scottish Med. and Surg. Journal* May 1905.)

In the *Lancet* of 1904, Vol. ii., p. 522, Dr. Hare, of Brisbane, advocated the use of amyl nitrite to check hæmoptysis, and reported several cases due both to phthisis and mitral disease, in which the bleeding had been checked. He noticed in one of his patients that menstruation was also checked completely on many occasions when inhaling amyl nitrite for angina pectoris.

Dr. Colman now reports a case of very severe menorrhagia in a woman, age 56½, whose uterus had been examined for disease, with the result that only thickened endometrium was found. Curetting, large doses of ergot, and rest failed to ensure any real benefit. Dr. Colman then directed the patient to go to bed when menstruation came on, and when it was excessive to inhale three minims of amyl nitrite. The loss was at once checked, and stopped in twelve hours. Treatment has been continued for five months up to the present time, with the result that there is a marked improvement in the general health; the anæmia has gone, and the menstrual flow is diminishing.—COMYNS BERKELEY.—*Journal of Obstetrics and Gynaecology*.

An Ovarian Tumour in a Child of Eight.

BY

NAGEL.

Verhandlungen der Gesellschaft für Geburts- und Gynäkol. zu Berlin. Zeits. für Geburts. und Gynäkol. Bd. liii.,
Ht. 3, p. 580.

A child of 8, whose parents had noticed that her abdomen was increasing in size, was brought to Nagel with a three days' history of vomiting, complete constipation, and

severe abdominal pain. An ovarian tumour with twisted pedicle was diagnosed. Operation proved this diagnosis to be correct, a tumour partly cystic and partly dermoid, as large as a boy's head being removed. The pedicle was twisted and there were a few adhesions. The child made a good recovery. —HENRY RUSSELL ANDREWS.—*Journal of Obstetrics and Gynaecology*.

The Physiological and Therapeutical Action of Aspirin.

BY

FRANCESCO CHIDICHIMO.

Annali di Ostet. E Ginecol., April, 1905.

The author quotes the literature of the subject, and gives the results of his own observations and experiments. Aspirin is found as salicylic acid, shortly after administration, in the urine and in the synovial fluids, but not in the milk of women or of other animals. It may, therefore, be administered to nursing mothers. Aspirin renders the uterine contractions less energetic; it is a valuable drug in ovarian dysmenorrhoea; it diminishes the pain in dysmenorrhoea of nervous uterine origin also, or from inflamed appendages. It is specially valuable in the painful menstruation of virgins, when given in the pre-menstrual period. E. H. L. OLIPHANT. —*Journal of Obstetrics and Gynaecology*.

Rontgen Rays and Sterility.

The observations of Tilden Brown and Osgood (*Am. Journ. Surg.*, Vol. xviii, No. 9, p. 180) require confirmation, but they are of sufficient importance to be cited. These authors state "that men by their presence in an X-ray atmosphere incidental to radiography, the therapeutic use of or testing of tubes, may, after a period of time, be rendered sterile." This statement is based on the fact that eighteen X-ray workers who had consulted the authors were the subjects either of total azoospermia or of oligo-necro spermia,

although none of them had suffered from any venereal disease, or traumatism involving the genital tract. None of them presented physical signs of abnormality of the genital organs, and none were conscious of functional derangement. All those who showed no spermatozoa in their seminal fluid had done extensive X-ray work for over three years. A few who had been so employed for shorter periods showed varying degrees of oligo-necro spermia. The sterility had been produced without any subjective or objective sign denoting its insidious development. Half of the men were married, but no one of them had had a child since engaging in X-ray work. The results of Albers-Schoenberg's experiments on rabbits and guinea-pigs are quoted, and seem to confirm the authors' opinion that the rays blight the spermatogenic cells. Experiments on animals seem to indicate that the ovaries are even more sensitive to the rays than the testes. The authors advise that workers with X-rays should protect the genital organs by means of an impermeable shield. —*The Edinburgh Medical Journal*.

THERAPEUTICS.

On the Action of Perchloride of Iron in Blood Poisoning and Other Disorders.

Physicians and surgeons have for years followed the perchloride of iron method of treating sepsis. Latham in the *Lancet* of November 19, 1904, reminds us that various observers have from time to time called attention to the beneficial action of the perchloride of iron in different forms of blood poisoning. As Sir Dyce Duckworth has pointed out, Mr. G. Hamilton Bell in 1851 was the first to do so with regard to its action in erysipelas. Mr. Bell states that he had made use of it for upwards of twenty-five years without having, in a single instance, failed of success; giving in mild cases

15 drops of the tincture every two hours, in severer cases 25 drops, "persevered in night and day however high the fever and delirium." These statements were confirmed by his brother, Dr. C. Bell, who states that "it is a remarkable circumstance in the exhibition of this valuable remedy in the erysipelas diatheses that, although given in much larger and more frequently repeated doses than have been recommended in our dispensatories, it never produces headache, and when this symptom is present it quickly relieves it; at the same time it reduces and regulates the pulse, thus showing that in this state of the system it has a soothing and sedative as well as an alterative effect." He administered the remedy in doses of 25 minims every two or three hours. Dr. G. W. Balfour also regarded this preparation "as a certain and unfailing remedy" a few doses, he says, of 20 minims "suffice to remove the pain and lessen the heart's action; it never produced headache or other unpleasant symptom, and was continued with advantage through the highest delirium; its curative action seems, as G. Hamilton Bell supposes, to be exerted on the capillary vessels." Mr. J. Hawkes, who administered the remedy in one-drachm doses three times a day, indorses the views of the abovementioned observers.

In scarlet fever beneficial effects of the remedy have been reported by Dr. H. S. Byrd of America and by Mr. Meade of Bradford, both influenced by the analogy which to them appeared to exist between this disorder and erysipelas. Dr. Byrd prescribed the remedy in small doses of three or four drops every four hours. He was so satisfied with the results that he would not exchange it for all the other remedies which he had before used in scarlet fever.

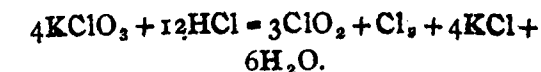
The author's own experience of the remedy in these disorders makes him hesitate to prescribe it with the boldness of some of the authorities above referred to—at all events,

for any lengthened period. Large doses not infrequently increase the fever and set up intestinal irritation, palpitation, and headache. "Every physician is acquainted with the symptoms that arise when large doses of iron have been taken for some time. Irritation of the abdominal organs, which evidently begins in the intestine, is set up and may extend to the peritoneum and be accompanied with the usual symptoms—pain, discomfort, a tendency to vomit, diarrhoea or constipation, and general exhaustion, the last, however, not being apparently dependent upon the condition of the abdominal organs. These symptoms may persist for some days, even when the iron is immediately discontinued, and may then gradually subside." Moreover, if, as the author maintains, the beneficial effects of the remedy are largely due to the free chlorine it contains heroic doses are not called for. The most judicious plan is to give moderate doses, such as were administered in a case recorded by Sir Isambard Owen, every six hours, cautiously watching their effect and administering them more frequently if the patient will bear them; if not, to keep to moderate doses, and if further antiseptic action is required, to effect this by the internal administration of chlorine water alternately with, or in the intervals between, the doses of iron. In this way the irritation which may arise from large doses of the latter remedy may be avoided.

Various writers in the past century have testified to the efficacy of chlorine water in scarlet fever and other forms of fever, especially in those of a low type. Braithwaite was the first to use it internally, and held it to be as truly a specific for scarlet fever as mercury for syphilis or quinine for ague. Sir Thomas Watson calls attention to the high praise bestowed upon this remedy by Messrs. Taynton and Williams in the treatment of scarlet fever. Under their care was a schoolboy suffering from scarlet fever "who was most dangerously ill. The skin was covered with an eruption of a dusky

hue; the nostrils excoriated by the acrimony of the discharge; the greatest difficulty in swallowing anything; low delirium with a very rapid pulse; in short, every symptom of approaching dissolution. In this state he began to take the chlorine water in the evening, 1 drachm in $\frac{1}{2}$ pint of distilled water. The nurse was directed to give him as much as she could prevail on him to swallow. On visiting him the following morning there was evident amendment, and in twenty-four hours he appeared out of danger. Encouraged by this favorable case we gave it to patients of all ages; and we can most solemnly declare that it proved successful in almost every case in which we were called in time, and in which the medicine was faithfully administered."

In the *Edinburgh Medical Journal* (vol. xvii, p. 514, 1872), Dr. W. G. Balfour states that Dr. Matthew Gairdner, of Crieff, was the first to administer chlorine in diphtheria, and with marked advantage. Dr. Balfour further states that whatever be the theory of the action of chlorine in cases of diphtheria, he "has not found it fail in the treatment of this disease when faithfully given, since Dr. Gairdner called his attention to it." The chlorine water was prepared as follows: "Put eight grains of chlorate of potassa in a strong pint bottle and add a drachm of strong hydrochloric acid; close the mouth of the bottle whilst the violent agitation lasts, then add water ounce by ounce with constant agitation until the bottle is full. An adult may use the whole pint in a day." Sir Thomas Watson adds: "The chlorate should be pulverized, and in cold weather the bottle should first be warmed." The amount of potassium chlorate might be increased with advantage. The author suggests that instead of 8 grains, 20 grains of the powdered chlorate should be used with one drachm of strong hydrochloric acid, and water added as above directed to 20 ounces. Peroxide of chlorine and chlorine are contained in the solution. The following expresses the reaction:



We have sufficient evidence, then, that in various forms of blood poisoning chlorine and the tincture of the perchloride of iron may act beneficially. The question remains whether these remedies should be employed independently of Roux's or other serum, or in conjunction with it, and in the latter case at what stages should one or both be administered. This can only be answered by the results of further observations.—*The Therapeutic Gazette*.

Adrenal in the Treatment of Hydrocele.

Dr. J. Rupfle (*Munchener Medizinische Wochenschrift*, 1904, p. 2139) reports the cure of two patients of hydrocele by the injection of 2 c.cm. of an adrenal solution of 1:500 into the sac after evacuation. The only difficulty observed was a burning sensation, which the author hopes to be able to overcome by local anæsthesia, probably induced by a weak Eucaine Lactate solution. Moderate inflammatory reaction and slight effusion soon afterwards disappeared. The author mentions that one of his cases had been treated unsuccessfully by injections with alcohol, iodine, and carbolic acid.—*The Therapist*.

Adrenalin in Uterine Hemorrhage.

Steinschneider, of Franzenbad, recommends local applications of adrenalin solution in cases of uterine hemorrhage not dependent upon gross anatomical changes in the uterus or adnexa.

Although his conclusions as to its value are derived from only three cases, the results obtained were uniform. Two of the patients treated had been suffering two years from

severe menorrhagia, which failed to yield to the ordinary remedies, such as ergot, hydrastis, and stypticin, and which, moreover, were not at all benefited by curettement. Hot irrigation of the uterus also failed to control the bleeding. In the case of the first patient, who generally bled ten or twelve days at a time, hemorrhage was arrested on the fourth day after its onset by an intra uterine application of adrenalin made on cotton wound around a Playfair sound. The same method was used in the other cases.

All the patients were able to continue with the bathing cures which had been prescribed, and all were apparently restored to health.—*Munchener Medizinische Wochenschrift*, January 20, 1905.

Spermin by Clysmas.

The effect of Spermin (C_2H_5N) is now familiar to the profession as a stimulant in failing vitality, and in this connection has been generally appreciated. The most efficacious method of application is by way of hypodermic injection, as the medium is directly introduced into the blood-circulation. Many patients, however, object to injection, and as an alternative the Spermin Essence taken per os is an excellent substitute. Prof. Poehl has good reason to expect that the injection of Spermin by clysmas will be found a preferable method of medication, as it is thereby brought more directly into the circulation than per os, and he has now brought out a suitable form for this purpose.—*The Therapist*.

Spermin Essence (Poehl), an Excellent Tonic in Whooping Cough.

When by a succession of severe attacks of coughing the physical resources show signs of failing, or, in other words, if the cough becomes distressing, the use of

Spermin Essence proves of considerable value in strengthening the power of resistance. Through the stimulation of vital energy it has been found possible to repress the acute form. It is not, however, claimed that Spermin Essence is a specific in the treatment of whooping cough, but that by renewing the power of resistance the disease takes the milder and less objectionable form.—*The Therapist*.

Blue Light for Neuralgia.

Arienzo is cited by the *Journal de Médecine de Paris* as having employed in obstinate cases an ordinary reflector with an incandescent lamp of thirty-candle power, applied for from ten to fifteen minutes, the patient being some fifteen centimeters from the apparatus. Four cases of neuralgia of the trigeminus and one of the auriculotemporal nerve were speedily jugulated by the treatment. The number of treatments averaged ten, one being administered daily. In one case only was it necessary to continue treatment for twenty days. According to Arienzo blue rays have a specific anæsthetic effect; he thinks the light penetrates the tissues and subjacent organs and has a special action upon the vasanervorum.—*New York Medical Journal*.

Practical Points in the Administration of Potassium Iodide.

In the *Medical Record*, April 1st, Huhner, of New York, calls attention to the following points which, while many of them are well known, are so important that repetition is permissible:—

(1) Always give well diluted and never, if possible, on an empty stomach. For dilution nothing is better than milk, as it disguises the taste and prevents disagreeable after effects; the compound syrup sarsaparilla is also an excellent vehicle.

(2) It is important to have a perfectly pure preparation, many of the bad effects are due to impurities.

(3) Strict bodily cleanliness, while taking the drug, will go a great way in the prevention of skin-troubles; these are due to the decomposition of the excreted salt by the fatty acids and the irritation by the iodine formed.

(4) It is possible to make a 100 per cent. solution but it is very difficult; and, if it is prescribed, the druggist will probably give a weaker one.

(5) Iodide of potassium is incompatible with alkaloids and the ordinary soluble metallic salts. So, for example, a calomel dusting in the eye would cause irritation.

(6) Small doses may cause iodism while larger ones will not.

(7) Potassium iodide should never be given in phthisis or where it is suspected, as it is irritant to the bronchial mucous membrane. Where syphilis is associated it may have to be used.—*The Canada Lancet*.

The Therapeutic Use of the X-Rays.

First referring to his early articles on the subject, W. A. Pusey, Chicago, gives (*Journal A. M. A.*, May 13) the results of his later experience with the x-ray. In some disorders such as hypertrichosis and lupus erythematosus, the results have not equalled expectations; in some others, such as tubercular glands and joints and deep sinuses, the results have been variable, though with some marked successes. The value of the x-rays has been most markedly demonstrated in sycosis, tinea, acne, rosacea, lupus vulgaris, blastomycosis, cutaneous carcinomata and senile keratoses. The value of the x-rays has also been shown in hyperidrosis, inflam-

matory dermatoses, pruritus, nevi, keloid sarcoma and as a prophylactic after operation for malignant disease. In some other conditions, abdominal tuberculosis, actinomycosis, mixed tumors of the parotid, there has been apparent benefit from the x-rays, but Pusey does not feel inclined, from his experience, to make any very positive generalizations. In the deeper situated cancers, as might be expected, the treatment is less hopeful, though palliation may be hoped for and some surprisingly good results are reported. In conclusion, Dr. Pusey gives his latest experience with pseudoleukemia, leukemia, and goiter. In the former he has repeatedly seen clearing up of the glands, but in the only case he has been able to follow up there have been repeated recurrences. In true leukemia he has seen like good effects as regards disappearance of the enlarged glands, but generally without any corresponding improvement in the condition of the blood. One remarkable successful apparent cure is reported, the blood examination revealing normal conditions and the patient apparently well. In some small parenchymatous goiters he has seen reduction in size of the tumor, but in most of his cases no benefit was observed.—*The Canada Lancet*.

OPHTHALMOLOGY, A Case of Double Senile Cataract in a Man, Thirty-four Years of Age.

Under the care of DR. FORBES. H. WOLFE,
Tighnabruaich, Kyles of Bute.

N. B., æt. 34, a joiner, came to consult me in August 1898. He complained of inability to see with the right eye. The dimness of vision had come on rapidly during the past few months and, on inquiry, I found that he had sustained a severe blow on the right side of the head from a falling beam, and it was from that time that he dated the dimness of vision. The left eye was perfectly normal. His

mother had been blind from cataract for several years before she died. On account of his age and the history of injury and there being no lenticular trouble in the left eye, I regarded it as a case of traumatic cataract. I sent him to the Eye Hospital for operation, where the lens was removed by the usual method for removing a soft lens—i.e., introducing a broad lance through the cornea into the lens substance, depresssing the scleral margin of the wound, and thus getting rid of the lens substance. On examination some time after this operation I found that as regards the restoration of vision no good had resulted. As is frequently the case a very tough capsule had remained, which completely blocked up the pupil.

As the sight of the left eye was quite normal I thought it as well to leave things alone in the meantime; but in March, 1903, he again came to see me, and complained of some dimness of vision in the left eye. On dilating with homatropin I found that there was a commencing lenticular opacity of the left eye, and so I then tried to lacerate with a stop needle the capsule in the right eye but, owing to its extreme toughness, without any success. I therefore waited for a few days and again tried, this time with Demarres' canula forceps and minute scissors. This time I was successful in lacerating the capsule and removing a portion of it. The result was good vision.

The lens of the left eye gradually became more opaque until, in February 1905, I considered it ripe for extraction. On February 16th, I performed an iridectomy downwards and three weeks later I extracted the lens, making the corneal incision downwards close to the scleral junction and lacerating the capsule very freely with a cystotome. The capsule came out in one piece. The result is good vision.

Dressing consisted of strips of adhesive plaster to both eyes for two days, dry surgeon's lint and a fixed light bandage. On the third

day the adhesive plaster was removed and both eyes covered with dry lint and bandaged. On the fifth day only the eye which had been operated upon was covered. In twelve days the dressing and bandage were dispensed with, only a shade being worn when the light was bright. Healing went on without a hitch and the patient did not complain of a pain of any kind during the whole process.

Vision in both eyes at present is represented by

V..R = $\frac{1}{8}$ c + 11 D = $\frac{5}{8}$; c + 15 D reads Jaeg. No. 1
V.L. = $\frac{1}{7}$ c + 11 D = $\frac{5}{7}$; c + 14 D reads Jaeg. No. 1

I think that this result shows that a preliminary iridectomy makes the operation of extraction of the lens easier, besides giving more space for the accouchment of the lens and thus avoiding bruising of the iris and cornea.

This case is an illustration of how senile cataract may develop in early adult life.

The above patient can now follow his occupation of a master joiner, draws his own plans, and can with ease read the smallest print.—*Medical Press.*

Non-Operative Treatment of Trachoma.

Frank Judson Parker (*Med. Record*, Sept. 17th) sums up his advice for the treatment of trachoma as follows: Surgical treatment should be advised only in those cases in which frog's spawn granulations are present. It should always be followed by after treatment. Operation should not be performed in cases in which the hard, deep-seated granulations are present on account of the injury done to the conjunctiva in removing them. The habits and general condition of the patient are very important features to consider in preventing spread and effecting cure. The non-operative treatment is bichloride rubbing, with the use of one of the organic silver solutions night and morning. In the hard variety, the use of copper sulphate and the silver solution.—*A. J. of Ophthalmology.*

Heredity and Treatment of Squint.

Cohn (*Berliner Klinische Wochenschrift*) tabulates the statistics gleaned from his personal experience in respect to the heredity of squint. The more he inquired the larger the proportion of squint in the family history. Out of 27,000 patients he found 805 with squint and there was a history of squint among the relatives in 16 per cent. of the first series, 25 per cent. in the second, and 33 per cent. in the last. The various relatives were parents in 25 per cent., grandparents in 7 per cent., brothers or sisters in 26 per cent., and uncles or aunts in 12 per cent., a total of 172 relatives with convergent squint to 805 patients with the same. Worth's statistics show 52 per cent. heredity and Jensen's 70 per cent. In all Cohn's hereditary cases the squinting eye exhibited hyperopia, which he cites as a significant fact. He thinks there is probably some unknown factor at work here, possibly a congenital alteration in the internus, which ophthalmologists will do well to seek. We are not positive even as to whether amblyopia is cause or effect of the squint. In regard to treatment he follows the following principles: 1, up to the fourth year he has the sound eye bandaged for a few hours every day while the child is at play; 2, during the fifth year he commences special exercises with convex glasses and the stereoscope; 3, corrects total hyperopia; 4, refrains from operating until the child is 10 years old, and does tenotomy in the sixth year only in case of great disfigurement; he promises improvement but not total cure, and advances the externus in extreme degrees of squint.—*Jr. Am. Med. Ass.*

DERMATOLOGY.

Chronic Eczema as a Complication of the Senile Degenerations.

BY

GEORGE HOWARD FOX, M.D.,

AND

WALTER C. KLOTZ, M.D.,

Assistant G. U. Surgeon, Roosevelt Hospital, O. P. D.

Medwin Leale (New York) says (*American Medicine*, April 15, 1905) this skin lesion having its initial onset during old age can usually be attributed to the circulatory changes, and their consequent degenerations. Usually it is an eczema erythematosum. The pathological changes in the skin are due to deficient nutrition, resulting in an alteration in the epithelial layers associated with a dekeratinization in the upper layers, œdema, and an immigration of exuded cells. After considering the symptoms and clinical picture of the disease, which he regards as purely a local manifestation of the circulatory and other changes, he states that although these cases often prove very resistant to treatment, yet in the majority of cases a more or less permanent cure, and in all cases a great amelioration of the symptoms can be effected by care and perseverance in a rational line of treatment. He lays great stress on making a careful general physical examination, determining accurately the condition of the heart and blood-vessels, the lungs, kidneys, etc., and meeting any pathological condition by its appropriate treatment. The circulation should be properly maintained and the emunctories carefully watched. Water should be taken frequently but in small quantities at a time, to secure rather a constant flushing, than an overdistention of the heart and blood-vessels. Moderate exercise is advantageous. The local treatment should have for its object stimulating and thereby improving the peripheral circulation of the blood and lymphatics. Carefully regulated and systematic

rubblings and frictions best meet these conditions. Using the greatest amount of surface of the palms of the hands and fingers as can be well adapted to the affected surface, he adopts a combination of effleurage and massage the strokes of the hands following as nearly as possible the course of the veins and lymphatics. For lubrication a fine quality of olive oil is used and with this for medication a pure finely powdered zinc oxide; each application lasting from 20 to 40 minutes, given every night, preferably just before retiring to secure sleep. Where more stimulation is necessary a strong tincture of *pix liquida* is used. Every second night before the application the patient is given a bath at 94 degrees Fahr., using a pure olive oil soap. Under these methods of procedure, if carefully followed, one may expect in most cases within from two to eight weeks a more or less permanent cure. He cites an illustrative case.—*The Medical Review of Reviews*.

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Original Articles.

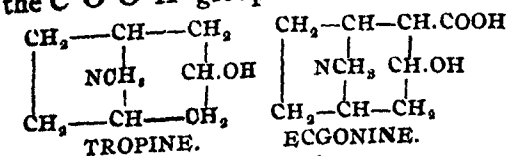
* Stovaine: A Synthetic Analgesic.

BY

THOMAS D. LUKE, M.B., F.R.C.S.,

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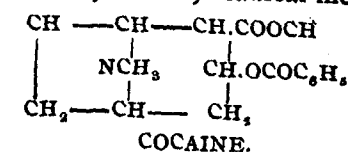
A MORE complete knowledge of the constitution of atropine and cocaine has led, of late years, to the production of a series of local anaesthetics which start from a compound, the relation of which to the natural alkaloids was not at first suggested. Atropine and cocaine are closely allied both as regards their action on the pupil and sensory nerve endings. Both are active mydriatics and local anaesthetics although the analgesic power of atropine is comparatively slight. Their resemblances are immediately related to the similarity of the groundwork of their structure. Atropine is derived from tropine and cocaine from ecgonine, which only differs from the former in that it contains the C O O H group.



Neither tropine nor ecgonine possess any local anaesthetic power nor are they my-

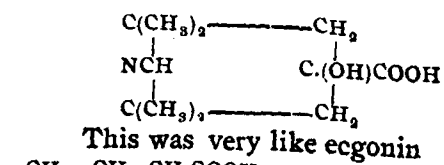
* Specially contributed to "The Antiseptic."

driatics. Cocaine is simply ecgonine with the hydrogen of the hydroxyl group replaced by an acid radical—benzoic acid—while the hydrogen of the carboxyl group is replaced by an alkyl radical methyl.

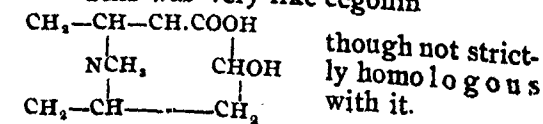


If either the acid radical or the alkyl radical be removed from this drug all local anaesthetic action is lost.

In view of the fact that ecgonine, the parent substance of cocaine, is merely tropine *plus* a carboxyl group, Merling predicted that if such a group were inserted into triacetonalalkylamine (a substance derived from acetone by the action of ammonia, and subsequent reduction) a compound would result which might serve as a nucleus for the preparation of artificial local anaesthetics, and he subsequently verified this prediction by preparing a carboxyl acid of the following structure:—



This was very like ecgonin



though not strictly homologous with it.

On replacing the hydroxylic hydrogen, however, with benzoyl and the carboxyl hydrogen with methyl (as we treat ecgonine to obtain cocaine) he obtained an excellent analgesic, which is widely known at the present day under the name "Eucaine."

While "Eucaine B" is likewise obtained by introducing a benzoyl radical into methyl vinyl-diacetoalkylamine (a substance very similar to ecgonin, and differing from it only in the absence of one of the lateral methyl groups).

If the acid radical in cocaine be eliminated, the substance which we obtain is benzoyl tropine, which is in no way an analgesic but benzoyl pseudotropine, or tropo-cocaine—a stereo-chemical isomer of benzoyl tropine is analgesic to a marked degree.

Eucaine B, in not possessing the carboxyl group is very similar to tropo-cocaine in constitution, while eucaine contains the three radicals of cocaine-acid, hydroxyl and amino tertiary, and so resembles it as closely as possible.

In spite of their possessing marked analgesic power, however, these bodies, the eucaines and tropo-cocaine, have scarcely fulfilled the expectations of the German chemists who are responsible for their introduction. Many awards have been made to them, large sums of money being spent only with the result that cocaine still holds the first place.

The reason is that, in spite of the assertions of Gaetano Vinci and Lebrick A and B Eucaine are just as toxic as cocaine, if not more so, as has been shown by Pouchet. Moreover, M. Reclus has stated, in his well-known work on local anaesthesia,*

* *La Cocaine in Chirurgie.* Paris: Masson & Cie., 1903.

that the analgesia obtained by means of these drugs is slower in onset, and more evanescent. The inventors of the eucaines have, it may be, made a mistake in producing a substance resembling cocaine so closely in molecular constitution, and retaining the piperidinic nucleus, and with it the plainly toxic character of cocaine. Besides this, however, it must be borne in mind that chemists are not solely influenced by theoretical considerations, but are not seldom stopped by practical difficulties which they cannot get over until some day, a new method conceived by some one else, permits the solution of the hitherto insoluble problem.

Until recent years Teutonic industry, with the aid of perfectly equipped laboratories, a regiment of highly skilled chemists—and also it must be added the moral and effective support of all the scientific and medical branches of the nation, has monopolised the manufacture of synthetic pharmaceutical products. In France just now a slight reaction is to be noticed, and some manufacturers, more enterprising than others, are endeavouring to fight foreign competition, by emulating the remarkable technical skill and consistent efforts of their neighbours. A French chemist, M. Fourneau,* Director of the research laboratories of a well-known commercial house, has undertaken the systematic study of local anaesthetics. As a result of prolonged researches he has been able to produce a series of 15 bodies which all possess analgesic power to a marked degree. They belong to the amino-alcohols, and the essential point of difference between them and cocaine is that they do

* Much of the material of this paper has been obtained from a communication made in March 1903 by M. Fourneau to the Academy of Medicine at Paris.

not possess the piperidinic nucleus which, as we have remarked above, is an element of danger. One of them, remarkable for its extreme simplicity, appears to be adapted above all others for use in practical surgery. This new analgesic derivative of tertiary amylic alcohol is, from a chemical point of view, the hydrochlorate of dimethyl amido B, benzoylpentanol or more simply the hydrochlorate of amyl-ine A B (if we use Ladenburg's nomenclature). For purposes of convenience the name of "Stovaine" has been given to it. It is prepared by the action of chloride of benzoyl on dimethyl aminopentanol B, which is itself obtained by the action of bromide of ethyl magnesium on mimethylaminoacetone.

Stovaine crystallises in small bright lamellæ very similar to those of hydrochlorate of cocaine, which are extremely soluble in water.

Aqueous solutions allow the precipitation of alkaloids of all the reagents, and up to the present no characteristic reaction distinguishing this substance from cocaine has been noted.

It is readily soluble in methylalcohol and acetic ether. Absolute alcohol only dissolves one-fifth of its weight. It is insoluble in acetone. It is very slightly acid to litmus paper and neutral to turmeric. Aqueous solutions can be readily sterilised by means of heat as they remain unaltered even by prolonged boiling. After evaporation of a solution the alkaloid is found intact and there is no trace of benzoic acid. The solutions can stand a temperature of 115° C. for 20 minutes in an autoclave. They slowly decompose at 120° C. They are, therefore, more stable than solutions of cocaine to a considerable extent.

The physiological action of stovaine has been investigated by means of experiments on various animals, such as frogs, guinea-pigs and rabbits. The guinea-pig has, however, been found most suitable for this purpose.

The animals employed should be of the same weight and age, and, if possible, from the same litter.

TOXICITY OF STOVAINE IN THE GUINEA-PIG.

(1) The fatal dose varies greatly according to the weight of the animal.

In young animals 15gm. per kilo of the animal is fatal and in the older 2gm. per kilo. Females react more quickly to a dose than males and animals which have been fed recently more quickly than those which are fasting.

SYMPTOMS OF A FATAL DOSE.

The crisis commences 7 to 10 seconds after the injection. A slight trismus is the first thing to be noticed, and the animal seems ill at ease. If left in its cage it moves from side to side and keeps nibbling at the bars. If liberated, the malaise is still more noticeable and the animal seeks a quiet place to hide in.

The true crisis begins with a paresis of the hind legs. Soon after general tonic and clonic spasms of a violent character come on, succeeding each other rapidly and not presenting any remission until the coma, which precedes the death of the animal by an hour or two supervenes. The first of these attacks is invariably a tonic spasm. The animal falls on its right or left side, eyes widely open, limbs extended and neck retracted in forced extension.

This tonic phase may last 2 or 3 minutes. A clonic phase with convulsive

movements follows, the animal turns somersaults, and moves the anterior and posterior limbs of one side as if swimming. The tonic period may last some time so that the animal seems to have got into a cataleptic condition. During these attacks salivation is common but is not usually profuse.

If a concentrated solution of 5% stovaine has been used there is, generally speaking, no incontinence of urine, but if a dilute 1% solution be used, micturition is commonly seen, the quantity of water injected into the animal being considerable.

At the commencement of the attack dyspnoea is present but soon passes off; afterwards when the injection is a toxic one the number of the respirations progressively diminishes, and also they become shallower in character.

In 4 to 6 hours after the commencement of the crisis, according to the individual animal the pulse is small, the cardiac pulsation diminished and the breathing irregular. At the same time the convulsive movements of the limbs relax and the animal soon dies of asphyxia. During the crisis the reflexes corneal-conjunctival-sphincteric, and abdominal are not sensibly altered but appear rather exaggerated than otherwise.

MINIMAL TOXIC DOSE. 15c. gm. in an animal of 600/800 gms.

With this amount only a slight amount of trismus is obtained and a little opisthotonos.

STRONGLY TOXIC DOSE. 18 c. gms. in a guinea-pig of 600/800 gms.

The symptoms are the same as with a fatal dose but shorter in duration (3 to 4

hours). The convulsions cease, the animal makes an effort to stand up, and eventually succeeds in doing so.

After being put back into its cage it shows no further symptoms but often begins feeding.

In pregnant females abortion is usually caused when a strongly toxic dose is administered.

Post Mortem. Peripheral and intestinal vaso-dilatation is observed. The liver is congested, and dark red; the gall bladder is often turgid, the kidneys dark in colour and the spleen unchanged. Slight hæmorrhages are to be noticed in the meninges. The lungs are congested and hæmorrhagic and emphysematous. Moreover, the animals die, as a rule, with symptoms of pulmonary congestion. There is no abnormal amount of fluid in the pleura. The genital organs are also congested and hæmorrhagic, and in females carrying young severe placental hæmorrhages have been noticed. Leucocytes, and hæmatin crystals are found in the urine.

ACTION ON THE TEMPERATURE.

The action of a toxic dose on the body temperature is quite characteristic. In a few hours a fall of 8 degrees in temperature may be noticed. A female guinea-pig of 730 gms. was given a dose of 20c. gm. approximately, at 1-50 p.m. when the body temperature registered 38.6 C. At 5-30 p.m. the temperature had fallen to 30.5 C. The animal died about 9 p.m. In this case the temperature fell about 1 per 15 minutes, but in others the fall was even more rapid. With a minimal toxic dose no fall of temperature is noted but in some cases even a rise.

The difference in the action of stovaine and cocaine in toxic doses on the tempera-

ture is noteworthy, for we find that cocaine, probably from its vaso-constrictor action, has exactly the opposite effect, and raises the temperature.

In 1887 Mosso of Turin, demonstrated by experiment that this drug possessed a remarkable power over the body temperature, raising it independently of convulsions or section of the spinal cord, and he considered this to be due to direct changes in the tissue, or action of cocaine on the heat centres supposed to exist in the spinal cord. Reichert also confirmed this. He found that doses of 2 c. gm. per kilo in dogs caused a rise of from 2° to 4° C. Hare found the same. In short, cocaine is a powerful pyrogenic agent while stovaine is equally powerful as a pyrolytic agent.

As regards the comparative toxicity of cocaine and stovaine, the following experiments are both interesting and striking.

A. (1) A rabbit weighing 2 kilos was injected intra-venously, with a 1 per cent. solution of cocaine.

At 3-43 p.m. 2c.c. were put into the auricular vein.

" 3-55 "	2 c.c.	" "
" 4-5 "	2 c.c.	
" 4-15 "	2 c.c.	
" 4-25 "	2 c.c.	
	10 c.c.	At this stage death occurred.

A. (2) A rabbit of the same weight was similarly treated with 1 per cent. stovaine solution.

3-50 p.m.	2 c.c.	The rabbit survived the injections.
3-55 "	2 c.c.	
4 "	2 c.c.	
4-5 "	3 c.c.	
4-20 "	2 c.c.	
4-25 "	2 c.c.	
4-30 "	2 c.c.	
4-35 "	1 c.c.	
4-38 "	1 c.c.	
4-43 "	1 c.c.	
4-47 "	20 c.c.	

It is well known, however, that the rabbit is an animal which is very tolerant of cocaine, and also of stovaine, but, on the other hand, the guinea-pig is very sensitive to both the drugs.

B. (1) A guinea-pig of 640 gms. was treated with an intra-peritoneal injection of 3½ c.c. of 1% solution of cocaine hydrochlorate at 5-57 p.m. and the animal died at 6-16 p.m.

B. (2) A guinea-pig of 620 gms. was similarly injected with 7 c.c. of 1% solution of stovaine at 6-14 p.m., and though it for some time showed signs of constitutional disturbance, it began to walk about at 7-35 p.m. and survived the treatment.

C. (1) A guinea-pig of 480 gms. was injected in the back of the neck with 2½ c.c. of 1% solution of cocaine, and died in 15 minutes.

C. (2) A guinea-pig of 390 gms. was similarly treated with 3½ c.c. of 1% solution of stovaine, and after about half an hour's malaise recovered completely.

It has been established that the fatal dose of cocaine for the guinea-pig does not exceed .05 gms. per kilo. This is the figure given by Livon. *From the experiments described we see that double this amount did not kill even young guinea-pigs.

We are, therefore, entitled to conclude that stovaine is a much less toxic substance than cocaine, and perhaps to hope that its introduction into practical therapeutics will mark an advance over cocaine.

It must not be forgotten, of course, that similar claims to superiority have

* "Dict de Physiologie"—(Riche) Vol. 3, p. 932.

been made for almost all the analgesics which we possess, as they were introduced, but we think that the experiments described justify an attempt to introduce stovaine into the domain of practical therapeutic agents. M. Reclus has since 1903 been using stovaine in practical surgery, and experimenting with it, but as yet has not published any note of his results.

The only record of the actual employment of stovaine in practical surgery which I have noticed is that of Chaput,* who has used this drug for lumbar puncture "rachistovainisation," and performed operations on the lower limbs, the perineum, the abdomen painlessly while the patients were under its influence. He considers that its use is advantageous in the treatment of fractures and luxations of the lower limbs. He employs a 10% solution, and uses from 2 to 8 c. gm. of stovaine for each case. He finds that a needle perforated at the side instead of the end is the best to use with the syringe. A dose of 3 c. gms. of stovaine injected into the subarachnoid space is sufficient to allow of the performance of any operation on the perineal region, the foot or leg as far up as the knee. A dose of 4 to 5 c. gm. provides a reliable analgesia for the performance of an operation on the thigh or for the radical cure of an inguinal hernia. Laparotomy is not a suitable procedure for which to use rachistovainisation, for the region involved cannot be rendered analgesic without involving the intercostal muscles.

Chaput finds the pulse to be slower, even during the occurrence of bleeding, the pupil contracts, and blood vessels dilate, with some consequent congestion of

* Revue de Chirurgie, Dec. 1904.

the face, and the medulla. There is no risk of syncope whatever. The after-effects are innocuous and not noteworthy in any way. The patient can be fed immediately the operation is concluded, and any headache or backache that may be present is slight in degree. There is no elevation of temperature as seen with rachicocainisation. Retention of urine does not usually occur, even if the anal region be the seat of operation. Chaput has not seen any untoward results from the use of stovaine.

Summary of the advantages of Stovaine as a local anæsthetic.

1. Its low degree of toxicity. It is less toxic than eucaine A, or B, according to Pouchet, while it is only $\frac{1}{3}$ or $\frac{1}{4}$ as toxic as cocaine, the fatal dose of this latter drug being only 5 c.c. in the guinea-pig while that of stovaine is 15—20 c. c.

2. Stovaine is a vaso dilator while cocaine is a vaso constrictor.

This fact is of great practical importance for the tendency to sudden syncopic attacks, always present when even moderate doses of cocaine are used, is absent when we use stovaine, and consequently in any surgical procedure under stovaine we are able to use the sitting-up position without any misgiving.

3. Solutions of stovaine can be sterilised by boiling as they do not decompose in any way until a temperature of 120° C. is reached.

4. Stovaine has no tendency to induce hyperpyrexia even when injected into the spinal meninges; the occurrence of very high temperatures after the use of cocaine in this manner we know to be quite common.

4. Stovaine is considerably less costly than cocaine, a fact of some importance in hospital work.

5. As regards actual analgesic power stovaine seems to be practically equal to cocaine, although it may be at times a little less intense in action.

Disadvantage.—The one disadvantage which we are aware of is that stovaine cannot be used along with adrenalin solution, for if it is the skin at the point of injection becomes gangrenous. When we bear in mind that the chief advantage of adrenalin is localising the action of the cocaine and preventing constitutional symptoms (in view of the low toxicity of stovaine), we realise that this disadvantage is but a slight one.

*PROLAPSE OF THE RECTUM.

BY

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Prolapse of the rectum comprises the descent of a portion of the bowel through the anus. This protrusion consists of mucous membrane alone or of mucous membrane and other coats of the bowel, and sometimes includes a fold of peritoneum. The affection is sometimes erroneously called prolapsus ani. Erroneously so, because the anus is only an aperture and is fixed, and although it may be to a degree everted, it cannot be prolapsed. The rectum is held in place by the peri-rectal areolar tissue and fascia, the levator ani, the reto-coccygei, and the two sphincter muscles, and the stretching or

* Specially contributed to "The Antiseptic."

relaxing of these allows prolapsing. A weakened condition of the muscles and structures constituting the pelvic floor or a lacerated perineum predisposes to prolapse of the rectum, and perpetuates it when the bowel has descended. The protrusion in turn tends to further relax the musculo-fibrous structures. Prolapse varies greatly in degree, but may be classed under three general headings:

1. Prolapse of the mucous membrane alone.
2. Prolapse of the mucous membrane and other coats. In exaggerated cases the peritoneum is included.
3. Prolapse of the upper portion of the rectum into the lower (invagination) or intussusception.

Prolapse of the Mucous Membrane.

This is merely an everting of the mucous membrane of the lower rectum, and is due to the looseness of the sub-mucous connective tissue. It is the most common variety, and occurs chiefly in children between two and five years, and also in women rather than in men. During defecation the mucous membrane protrudes from the anus but returns promptly afterwards, usually of its own accord, although occasionally requiring manipulation. This condition is physiological in the horse.

ETIOLOGY.—The acute variety is found most frequently in children and *vice versa* children nearly always present the acute variety of prolapse. The straightness of the infantile sacrum predisposes as does also a relaxed condition of the muscles and other fibrous structures about the anus, such as frequently occurs in

anæmic and tubercular subjects from the abstraction of fat from the peri-rectal cellular tissues. The exciting cause, however, is usually straining either at stool during constipation or diarrhoea, or as a result of phimosis, stone in the bladder or intestinal worms. Prolonged coughing or screaming may also cause prolapse.

In adults prolapse comes on gradually, as a rule, although sudden prolapse does occasionally occur. The more frequently the bowel prolapses the more stretched and relaxed the parts, and this weakened condition in turn favours future prolapsing. Conditions producing œdema of the pelvic tissues such as pregnancy, parturition, fecal accumulations, also hepatic troubles induce prolapse by allowing a stretching and separating, especially of the long fibers of the bowel. Paralysis, ulceration, incision or trauma of the sphincter, or sodomy by weakening its action, which normally should narrow the outlet. Repeated straining due to anal fissure, dysentery, cystitis, stricture of the urethra or enlarged prostate, produce muscular tenesmus which induces prolapse. Mechanical dragging down of the mucous membrane by polypi, tumors, foreign bodies or hemorrhoids is a frequent cause. Hemorrhoids and prolapse are very frequently associated, and the prolapse may involve all or only a part of the circumference of the anal opening. It must be remembered that an internal hemorrhoid may be the primary cause of a prolapse, especially the lateral variety, only one side of the bowel coming down. The pathology being that the pile excites the bowel to contraction, and in endeavouring to expel the tumor the mucous membrane is dragged down with it.

SYMPTOMS.—In mild cases the ring of mucous membrane protrudes during de-

fecation, but returns spontaneously or by the patient's manipulation, and remains so until the bowels move next time. In the early stage, before ulceration occurs, the protrusion is deep red in colour, depending on the condition of the sphincter, and is perfectly painless. The surface is marked by the intestinal folds. If ulceration is present the mass will be red and bloody, and considerable pain will be experienced. Later, after the mass has protruded, it will become œdematous and difficult to replace, and in old and frequently prolapsed cases the sphincter becomes relaxed, and though the mass may be easily returned, it will not remain so. When the mucous membrane alone is prolapsed the tumor is thin, the folds radiate from the orifice, which is circular and parulous, and the protrusion is found to be continuous externally with the skin, and internally with the mucous membrane.

DIAGNOSIS.—Prolapse is to be diagnosed from polypus by being softer to the touch, and having a smooth surface which is uniform in appearance, by the prolapsed tissue terminating in the rectal wall, and not being attached by a pedicle, and the larger the polypus the more pronounced and longer is the attachment.

Internal hemorrhoids are frequently difficult to differentiate, but the prolapse usually involves the entire circumference of the bowel, and has a soft, velvety feel, and if carefully examined a slit-like opening in the lower end will be found to open through the prolapse into the lumen of the bowel.

External hemorrhoids, if of the thrombotic variety, are hard, and usually smooth and lubricated or moist, and are always

separate and distinct growths which are freely movable.

The age of the patient will be of some assistance, as hæmorrhoids and polypi are uncommon in children, and the protrusion is more than likely to be prolapse.

Prolapse of the Deeper Coats of the Rectum.

This variety consists in the descent of other coats, perhaps all of the rectum, and in exaggerated cases includes the peritoneum. When the protrusion is two inches or more in length always expect the peritoneum to be involved, for in any such case a coil of small intestine, an ovary or a part of the bladder wall may be included. The prolapse usually comes on slowly as an exaggerated stage of the first variety through long continued action of the primary cause, and occurs more frequently in adults, although it does occur in children. Exceptionally it may come on suddenly as a result of severe straining in either children or adults.

In both this and the previous variety the part of the rectum near the anus protrudes first. This protrusion is thick, firm and pyriform in shape, with a slit-like opening in the lower end. This opening is usually at the back of the lower surface, or even on the posterior wall of the protrusion, and is drawn back by the traction of the meso rectum, although sometimes in males the traction is forward, because of the vaginal attachments. The amount of the rectum prolapsed is variable, at times very little coming out, and again the tumor is as large as a child's head (Tillman). In rare instances a large part of the colon may be prolapsed. If such a case is dissected all the coats of the bowel are found œdematous and swollen, especially at the most

dependent part, and often ulcerated. The areolar tissue is infiltrated, and the muscular tissue is hypertrophied. The extruded part is, therefore, enlarged not only by œdema and congestion, but also by the development of new structures. Therefore, the prolapse does not recede to its normal size when replaced, and is often too large to be retained. In old cases an hypertrophy of the exposed tissues occurs. The mucous membrane is thick and dense, leathery, in structure, especially in the most prolapsed part. The submucous tissues are infiltrated with a hyaline substance, and the muscular layers are hypertrophied. When the prolapse is recent it may be replaced, but descends the next time the bowels move. In old or extreme cases replacement is difficult and painful, although gradually the anus becomes patulous, and the sphincter paralysed so much that each time the sufferer defecates, or even moves about, the mass protrudes and makes life a burden. The bowel is abnormally increased in size, and too large for its proper position within the pelvis and although it may be reduced it will not remain so because the tenesmus set up by its presence expels it promptly. In some instances the mucous membrane is eroded and granular, and easily bleeds. In such cases the odour of the sloughing tissues may simulate malignant disease. A prolapse that has existed for some time is often accompanied with an oozing hæmorrhage, which requires astringents to control.

Symptoms.—The symptoms of this form of prolapse are similar to those of the preceding, only more aggravated. As this is a chronic condition, the sphincter is weakened, the pain at this stage is not severe, there is a constant mucus discharge, and in severe cases incontinence of fæces often results. Strangulation is

present only in young and robust persons, and is rare in infants or the aged. When it does occur it may be only temporary, but if it continues ulceration and gangrene will follow, which may terminate fatally if the peritoneum is involved. When the lower part of the rectum alone is involved in the gangrene, a spontaneous cure may take place, but by the separation of the protrusion and the resulting cicatrix, a stricture is finally produced which leaves the patient in a more deplorable condition than before.

Complications are prone to arise with involvement of the peritoneal coat, for it is likely to carry down with it a loop of small intestine, an ovary, or the bladder wall. When these organs are brought down, they are usually detected by touch in the anterior part of the tumor. The intestine slips away from between the fingers with a gurgling noise due to the contained gas, or sometimes on percussion it will be found by the resonance. Pressure on the ovary causes a faint, sickening feeling. The bladder is detected by introducing a sound through the urethra. Each condition constitutes a true hernia of the rectum, and must be immediately replaced if possible because spontaneous rupture of the rectal wall has occurred in these cases. Hernia of the rectum occurring with the prolapse is usually recognised by an unusually large, tense swelling in the anterior part of the prolapse. If the buttocks are raised, the hernia usually reduces with a gurgling sound, and the prolapse may then be easily reduced. If the strangulation is not promptly relieved, death ensues from perforation of the bowel and peritonitis. Usually there is no sulcus or depressed line visible at the peritoneal or bladder junction with the bowel, and so there is no way of determining by inspection the presence or

absence of peritoneum or bladder in the prolapse.

Diagnosis.—The differential diagnosis between these two varieties is often important. Prolapse of the mucous membrane alone is usually recent, while involvement of the other coats of the bowel is found in cases only of long standing. This implies that it is but an exaggerated stage of prolapse of the mucous membrane, and this is generally so, but the deeper coats may be prolapsed from the beginning as the result of violent coughing or straining. The tumor, when consisting of mucous membrane alone, is always small sized, but when more of the rectum is involved the protrusion may be enormous. When the mucous membrane alone is prolapsed, the tumor is thin and soft to the touch, and the folds radiate from the orifice, which is circular and patulous, but when the whole rectum prolapses the tumor is conical in shape, and its walls are thick and firm. The opening into the bowel is slit-like, and usually points backward owing to the traction of the meso-colon, or else points forward because of the vaginal attachments.

Prolapse of the Upper Portion of the Rectum into the Lower.

(Invagination.)

This is a true intussusception, any part of the large bowel may be found from the cæcum to the rectum. The orifice of the appendix has been seen alongside the included bowel. In the previous varieties the dislodged tissues protruded from the anus, but in this form the upper part slips into (telescopes) the lower part, the whole mass remaining within the pelvis. Only in extreme instances does the bowel protrude from the anus. When it does, it appears as a cylin-

drical, sausage-shaped tumor, covered with a dark red, hyperæmic, mucous membrane. This variety is most frequent in children, but does occur in adults. The etiology of this form of prolapse is not clear. The bowel in endeavouring to rid itself of a tumor or polypus by its vermicular action may become extruded. Yet in the great majority of cases the cause is not known.

Symptoms.—The immediate effect of this variety of prolapse is obstruction of the bowels, but this, however, is seldom complete for the fæces are forced through by the increased contraction of the healthy bowel above, and, in fact, sometimes diarrhoea occurs. The first symptom of the constriction is a sharp pain developing suddenly. It may pass off in a few hours and return again, or it may continue from its onset. Vomiting may or may not occur, and if it does, it is sometimes relieved by direct pressure. Abdominal tenderness may even be absent in some cases. The presence of fæcal vomiting indicates complete obstruction, and not the part of the bowel involved. Œdema of the intestinal walls, due to obstruction of the mesenteric vessel, soon follows, and the serous surfaces become darkened, blood and lymph exuding between the surfaces and agglutinating them. The stools may be blackened. If the constriction is severe enough, the prolapsed portion sloughs off, and a circular cicatrix is left. Thus Nature attempts to remedy the trouble, although the scar may in time produce an annular stricture. Sloughing takes place usually after the first week, and generally within three weeks, although it may occur much later. Death results in about one-half of the cases where spontaneous separation occurs, and may be due to one of several causes. The local peritonitis which unites the

bowel may become general, or the ensheathing portion, through ulceration and perforation, may allow extravasation of fæces. Aitkin reports a case where the ulceration and perforation was due to the pressure of the end of the contained portion against the side of the container. Perforation may, however, occur at any weak point of union of the intussusciens and the intussusceptum. On palpitation, a tumor may be felt and may be characteristic, although sometimes it may be obscured by thick abdominal walls or distention of gases. The tumor when found is cylindrical, sausage-shaped and movable, even changing its position at times. Compared with acute obstruction of the bowels, intussusception of the large bowel is more chronic, less painful, diarrhoea is more pronounced, or the evacuations are larger, and the vomiting is variable. Such a condition may continue for weeks, and death result from exhaustion, or a general peritonitis may develop at any time, especially during the separation of the slough.

Diagnosis.—The diagnosis of this variety is made by introducing the finger within the rectum and feeling the sulcus between the invaginated and invaginating parts. The bottom of the sulcus, the point where the invaginated becomes the invaginating, may be felt with the finger if it is not too high. If beyond the reach of the finger, a long probe or catheter may be used. Once the sulcus is felt the diagnosis is easy, but when not found we must depend upon the symptoms of intestinal obstruction, and the case must be differentiated from volvulus, stricture, internal hernia, pressure on the bowel of outside tumors, and obstruction due to biliary calculi, foreign bodies or impacted fæces. The differential diagnosis is sometimes impossible, but in general it may be

said that an acute onset is due to acute invagination, volvulus or internal hernia. In perforation and peritonitis the vomiting usually remains bilious, and not faecal, tympanitis is less, and the patient voids gas and faeces. The temperature is raised in peritonitis and normal in obstruction. Invagination produces partial occlusion, moderate tympanitis, bloody stools, tenesmus and palpable tumor may be found. Volvulus may have a history of previous peritonitis, or internal hernia, the story of an old hernia that has not come down. In this variety of prolapse any portion of the bowel may be involved. Bulteau collected seven hundred and sixty-three cases of invagination, of which two hundred and twenty were involving the small bowel.

Prognosis:—When the mucous membrane alone is involved, a spontaneous cure is frequently effected, simple remedies assisting Nature to a speedy end. In extreme cases such a cure does not come about, especially in the aged, because thickening has occurred, and surgical procedure is necessary. By medicinal or surgical means, either alone or combined, a cure may be effected in nearly all cases. In adults the prolapse generally involves the small intestine when intussusception occurs, but in children the large bowel alone is usually involved. When only the large bowel is affected the congestion may be moderate in amount, and continue so for weeks before strangulation or ulceration occurs. This is known as chronic intussusception. Strangulation is more frequent when the outer portion is composed of small bowel than when it is the large bowel, because of the greater tightening at the constriction.

The Humanity of Surgery, pertaining to the Art and Skill of the Surgeon.*

BY

SURGEON-MAJOR R. E. WRAFTER, B.M.S.
(Retired), DEHRA DUN.

IN the beginning of Medical science, the surgeon or the practitioner in surgery was looked upon as a mere mechanic. According to Celsus he ought to be young, or, at all events, not advanced in life. His hand must be steady, expert and never tremulous; he must use the right or left with equal facility; that is, he should be ambidextrous; his sight must be clear and penetrating; his mind intrepid, and although unmoved when he proceeds to operate, he must not be in haste nor cut less than is necessary, but finish his operation as if the cries of the patient made no impression upon him without an anæsthetic. The very derivation of the term surgery, or chirurgery, from two Greek words, meaning "hand work," signifies its earliest application. Formerly, the surgeon was considered the barber—not above the rank of a blacksmith or a horse doctor—and was regarded as of a lower order than the physician, or one who has received his degree from an incorporated institution, under whose guidance he acted. We have not yet entirely outlived this impression in India, for even at the present day it is held by some that it requires a higher degree of intellectual capacity and a sounder judgment to be an eminent medical practitioner than it does to be a great surgeon. Further still, the surgeon is not uncommonly called "a butcher." People say "he loves to cut;" he is frequently spoken of "as a man who thinks no more of operating on human flesh than of sawing on so much wood." Perhaps these criticisms are erroneous, surely not just. In many quarters little has

* Specially contributed to "The Antiseptic."

been done to counteract such impressions, but civilization and education is slowly solving the problem for us. Who does not know that the surgeon shares equally with the physician the responsibilities of diagnosis and after-treatment as well as shouldering all the burdens connected with operative technique? The modern surgeon, who is not skilled in clinical diagnosis, fails to measure up to the standard set up by advancing science. Moreover, he who is lacking in knowledge of disease and the use of remedies, will certainly never grow into full greatness. This is well expressed by Dr. Ushhurst. "The importance and even necessity of a thorough knowledge of practical anatomy can, indeed, scarcely be over-rated: yet, it is more essential for the surgeon to be well versed in pathology and therapeutics (or, in other words, to be an accomplished physician), than it is for him to know the attachments of every muscle in the body, or all the possible variations of arterial distribution." Let no one suppose that here is a plea for granny methods at the expense of scientific surgery. It is but the blending of mind and hand, the joint partnership of judgment and action with proper faith in each. Without going into eulogies of the magic touch and fevered brow type, we can truthfully confess, so to speak, that the great surgeons of the generation just preceding us were men of power and that they deserved more credit for the results they attained than we do for the success we have achieved. They helped us to grow out of the mechanic into the modern operator; from the bone-setter to the diagnostician, and they have left us much to emulate. "We think our fathers fools, so wise we grow; our wiser sons, no doubt, will think us so." One of the common conceptions of surgery is that the knife is considered its symbol,

that most dreaded of all instruments is taken to typify the whole surgical art and such expressions as "going under the knife," "nothing but the knife will do," "he will have to undergo the knife," etc., are not unfrequently heard, both from the laity and from medical men. The peculiar feature of it all is that the knife, while, of course, one of the most important is really used less than many of the other instruments. A man of stern countenance brandishing the scalpel would not be considered a true picture of the surgeon; rather should be represented with a hand full of hemostatics or a needle and suture, instruments no more material yet requiring greater ingenuity and far less gruesome. Besides, there are many minor operations done wholly without the knife, such as the reduction or replacing of a dislocated lower jaw, and the setting of simple fractures. After all, the singling out of the alarming implement as the popular embodiment of the surgical art is but a sign of the fascination, for some minds, of the terrifying and the dramatic. In this instance the opinion smacks of the day when the surgeon was considered the barber—a veritable relic of Barberism or barber-chirurgeon. The good surgeon, then, is a good physician and all that this implies. One's definition of the term must be set in the broadest mould. No mere dose-giver or head-rubber; no fearful nor timid man, no time-server—none of these need apply. Neither is there room for the so-called "successful" or "leading" doctor who obtains his success or lead through a blind belief in the healing power of Nature or *vis medicatrix naturæ*. In the last analysis, we must all trust that beneficent force, but you should not let that maxim haul you around by the nose. Success means how much of good you can do, how much

better you can make the world for having lived in it; not how little you can accomplish and still exist, not simply a negative life *plus* the luck of circumstance. There should be no half-heartedness about this physician side of the surgeon. It is just as necessary for the medical man to be bold, positive and resourceful, as it is for the surgeon to possess calm judgment, and to temper his opinions with that conservatism which must not be confounded with timidity, but which is the natural expression of the judicial mind. Such a poise can be acquired only by looking at both sides of every question. For the surgeon who can quote a remark of one of our greatest authors: "It is not always true that, because an operation can be done, it ought to be done." And to the physician, let us repeat the axiom of Kocher: "It is not necessary for every practitioner to act surgically, but it is imperative that he should learn to think surgically." To as great a degree even as the physician, it falls to the lot of the surgeon to pay humanity's debt by giving his time, knowledge and labour for the benefit of the unfortunate poor. Possibly his work is done at a larger sacrifice than that of the general practitioner, because modern operating unquestionably consumes time and demands enormous physical exertion. Let us not boast, however, of being more charitable than others, but rejoice instead at the richer opportunities presented to us. Is it not a beautiful ideal to have the world say of each one of us: "And well he knew to understand, the poor man's cry as God's command?" Mawkish sentimentality holds no sway over such feelings, to know that you have saved the life of one of these by your own hand is a compensation beyond and above any extraneous reward. Such is the tribute of professional science to humanity, and

this consciousness of having directly rescued or prolonged the lives of one's fellow creatures is the humane inspiration of the healing art; but, perhaps, in no other branch of the profession is the relation of cause and effect, so manifest or the personal responsibility so obvious as in surgery or chirurgery. A case may be treated for weeks and months, medicines administered and the patient managed with consummate skill; he may be carried over difficulties and snatched from dangers—and yet so many factors enter in as to preclude us from saying that any one dose turned the tide or any one act alone produced the result. Not so with the surgical case. In every operation a life is immediately at stake and the operator himself is the accountable actor. The very risk is fascinating and, therefore, the gratification is greater. To remove a tumour or morbid swelling, which is slowly, but surely, killing the sufferer; to evacuate a pus collection, breeding sepsis and death: to correct a deformity and see the joy over the outcome; to ligate a bleeding blood-vessel and thus actually keep life's red fluid in the body, no human feeling compares with these sources of profound mental satisfaction, which are the surgeons' daily heritage. There are many diseases that are purely medical in aspect, there are some in which both the physician and the surgeon are needed, and there are others amenable alone to surgical treatment. The latter class is rapidly enlarging. First the pelvic organs, then the vermiform appendix and the gall-bladder, and later the stomach have been taken from the hands of the internist and a rational basis of therapeutics established through the researches of the surgeon. Dr. W. J. Mayo called attention to this vividly in a late address; "the post mortem or neuroscopic examination has been an expression used

for years, yet what did we know about appendicitis until surgery led the way, or about gallstone disease, supposed to be an "innocent post mortem finding" until operation opened up the field? Did a knowledge of extrauterine gestation come from the autopsy? By no means. It was through the surgeon's knife. The surgical borderland of to-day lies in the upper region of the abdomen, a locality until recently considered almost purely medical. Those who practise surgery are either ennobled or degraded by it. Their characters are developed and sweetened or else made coarse. Looked upon as so much slashing surgical operations do not but brutalize those that perform them; viewed in the light of God-given occasions for exercising skill and healing humanity, they are the means of uplifting and purifying. The heroism frequently exhibited by patients must have its effects upon the surgeon's character. Who can behold uninfluenced a calm, mental and normal attitude towards or near physical suffering. Who of us has not seen the sufferer himself do his part as well as we did ours and sometimes surpass us in courage? To have ministered to one of these is worth a lifetime of worry. With the well-poised surgeon this reflection of the humanity of his patient will detract in no degree from his boldness or self-control. It should rather give him more sensible consciousness of the right and a larger conception of his duty to do it. After all, "nerve" may be defined as knowing what you are doing. An operator, who possesses that confidence born of intimate knowledge of his subject, feels at home under all conditions and every surgeon approaches with less dread operations with which he is familiar; mere assumption of bravery is a counterfeit; recklessness is not "nerve." The renown-

ed Professor Valentine Mott, of New York City, in his later days, stepped into the amphitheatre where one of his younger colleagues was doing a herniotomy and saw him theatrically cut through the tissues down upon the sac. The old surgeon exclaimed, "the Lord save the man," and walked away from the table. Glancing back again, after a few minutes, he remarked, "He did." To be of the most potent avail, the aid of surgery must be invoked in due time. As a last resort it may furnish a ray of lingering hope-blessed oasis in the desert of trouble; and wise is the surgeon who knows when to press and when to withhold his hand in humanity's cause. Too late—these words express the saddest of all thoughts in the English style or speech. In surgery they mean hopelessness, despair (operations done too soon are curiosities); operations done too late are the common reproach of surgical skill. All the humane instincts of our nature demand that a disease dependent upon surgical treatment be submitted to such procedure at a time when the conditions are promising for a successful issue, not temporized with until the last chance is passing away. Do not allow the disease or injury to kill the patient before the operation can save him; keep it ever in mind that surgical mortality (save injury or hurt) is owing chiefly to havoc wrought by the pathological changes already present and only in comparatively rare instances to the operation itself. It is humane surgery, therefore, to operate when a life can be spared and not to delay until it is placed in jeopardy. Let us perceive, then, that in the practice of surgery there are conditions calling for the exercise of a larger and deeper portion of humanity than the surface markings seem to indicate. The key-note of surgery is hopefulness, or, as expressed by another,

"magnificent optimism," and its devotees constantly exhale this phrase. It is unjust to think of the surgeon as one who "loves to cut" at all hazards, who puts the operation above the result and who cares not for consequences. The very essence of our calling directs us to strive for permanence and perfection. Humanity teaches us that it is an exalted privilege to relieve suffering, whether among the poor or richer classes; it also bids us know that it is much nobler and more merciful to permanently cure the complaint in either class of patients. Surgery's mission is to heal, to restore, to remove for ever the offending lesion. Should there be recurrence or ill consequence, art and science have failed. Failures there will be, and where are they not found? But how few are these when a thought is given to the enormous numbers of operations performed almost daily at hospitals or dispensaries throughout the whole of India. All surgical patients should be handled with gentleness. Many surgical diseases and injuries are attended with considerable pain, which may be much aggravated by injudicious manipulation or movement. Patients should always be treated with kindness and courtesy, more especially women and children, and although the stupidity and surliness of some persons who apply for advice at our hospitals and dispensaries are often very trying to the doctor, they should be borne with as much as possible, for such persons are frequently found suffering from some painful disease or injury, or from the dread of the means which may be necessary for their relief. Even if a patient's disease or injury admits of no remedy, a little care and kindness on the part of the surgeon often soothes and relieves their feelings. Hospital patients, with few exceptions, like those of their surgical attendants

best who have a cheerful manner, who will listen to and sympathise with all their little troubles. Many of these patients are, perhaps, from some distance from home and their friends, and consequently they have many little anxieties to think of. These anxieties, although they may be about most trivial matters, will often retard the patient's recovery, if not relieved by a little proper sympathy. General surgery includes the history of surgical diseases and injuries, and the measures instituted for their relief. Special surgery treats of particular surgical diseases and injuries, including obstetric and ophthalmic surgery. Surgical pathology, surgical injury and military surgery are terms of convenience employed to include those conditions having special surgical relations. All these are not referred to here.

Cases and Comments.

Treatment of Acute Dysentery with Magnesium Sulphate.

BY

T. S. CHINNASWAMI,

2nd-Grade Civil Hospl. Asst., Sivakasi.

I BELIEVE the treatment of acute dysentery with magnesium sulphate is of recent origin. I have had opportunities of watching the result of its action in cases of acute dysentery in the Central Jail, Coimbatore, where I was one of the medical subordinates during 1903-1904. The epsom salt treatment was the rule there in acute dysentery and it has more than justified its employment in that disease. The cases most suitable for its administration are those with scanty hard scybalous motions with either slime or blood and accompanied by tenesmus or tormina. The

practice was to give $\frac{3i$ of the salt in 1 oz. of peppermint water (adult dose) every hour and the application of a flannel binder to the abdomen. 5, 6 or at most 8 doses sufficed when free large semisolid painless fecal motions were produced where the opposite condition had been the rule for a few days previously. The patient was next, given the usual astringent powders as the Dover's powder or the compound aromatic chalk powder with bismuth and the cure was complete in a few days. The diet was as usual spoon—1 pint of milk, 4 ozs. of sago and 2 ozs. of sugar, with an extra pint of milk. The rationale of this treatment appears to be that the epsom salt acts by liquefying the hard fecal matter in the large bowel and expels it with any irritant matter causing the dysentery. I hope this simple, safe and speedy cure for dysentery will replace the vomited specifics of old as the nauseating Ipecacuanha bolus or the castor oil and astringents, &c.

[We quite agree with Dr. Chinnasawami that the treatment is more suitable to the inmates of jails than to those outside them. Ed. A.]

Two Cases of Cerumen in the Ear producing Deafness.

BY

M. RAMASAMI PILLAI,

Hospital Assistant, Bellary.

Last year a middle-aged village woman came to my dispensary complaining of dry cough of more than three months' duration and inability to relish food. Her tongue was slightly coated but her bowels were free. The throat was generally relaxed with a few enlarged pharyngeal follicles. I thought there was something wrong with the liver and the cough might be due to it or the throat. I gave her a mixture of dilute nitromuriatic acid and vegetable bitter and painted the

throat with iodide of glycerine for a few days. The condition of the throat became normal and the tongue was cleaner but still she complained of cough and the peculiar taste and ceased attending the dispensary. Six months later I met her casually. The cough and bad taste still continued. For the previous four or five months she could not hear well. When I saw her she was very deaf and I had to speak very loud. Now and then she had also hiccough, which did not, however, trouble her in any way. Nor did she mind the other symptoms. Her one anxiety was about her inability to hear, over which she was always brooding. She became very irritable and could not bear to see her daughters and daughters-in-law speak to each other in her presence. She imagined that her deafness had lowered her in their estimation and they must be making fun of her. On examining the ears, the meatuses were found blocked with plugs of hard cerumen. I applied soda bicarb. solution (10 grs. to 1 oz.) for four or five days. When the cerumen was soft, I scooped out as much as I could and syringed the rest out completely. Still there was no material improvement in her hearing power. On further examination, I found the passages quite clean and there was nothing abnormal in the state of the membrana tympani. Under the impression that there might be slight retraction of the membranes, I tried inflation by Valsalva's method. The effect was instantaneous and the patient was able to hear as she never did before. The remaining symptoms disappeared subsequently without further treatment.

2. A Muhammadan lad of 15 attended the dispensary for deafness of a month's duration. Both the ears were full of wax, soft but sticky. It was thoroughly syringed

ged out and the tympanum inflated by Valsalva's method. Hearing was at once restored. A fortnight later the boy came again complaining that the deafness had returned. The same treatment was repeated with a similar result. He was also given an alkaline solution to be used at home. But 10 or 12 days later he came back with his original complaint. This time the wax was softer and was removed very easily and he was able once again to hear well. He continued to use the solution at home for a fortnight more but found the deafness had returned again. I lost sight of him afterwards. The rapid and repeated accumulation of wax in this case was very amazing.

EDITORIAL NOTICE.

The Editor will always be pleased to receive communications on matters of importance to the profession for publication in the 'Antiseptic.'

Articles, letters, and all communications intended for publication, and books for review, should be addressed to the Editor, Lady Napier Villa, Egmore.

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THE ANTISEPTIC.

SEPTEMBER, 1905.

Cholera in Madras.



SIATIC Cholera is an old friend of Madras. We have it always with us, sometimes in the form of a severe epidemic, sometimes in the form of a stray case here and there. But of all the epidemic outbreaks of cholera which Madras has experienced, the present is one of the severest, both in point of extent and mortality. And what are the causes which have mainly contributed to bring about this virulent epidemic and an alarming death-rate?

The public have taken it for granted that the water-supply is entirely responsible for the present outbreak of cholera. So it would seem to a casual observer. Successive failures of monsoons have reduced the quantity of water in the Red Hills lake to a very low point. And what little water there is left becomes almost a solution of decaying vegetable matter and mud before it is pumped up and started on its way to Kilpauk. The very low pressure produced by an insufficiency of water causes stagnation and, as a result, there are incrustations inside most water pipes in the city, especially in those

pipes far away from the main where water pressure is lowest. Water drawn from most pipes in Madras smells fairly strongly of sulphuretted hydrogen.

These facts undoubtedly prove that the present supply of drinking water in Madras is distinctly bad and may quite likely have operated as one of the contributory causes of the epidemic outbreak of cholera now prevalent in Madras. But we are far from being convinced that it is the original or the main cause of the epidemic. An epidemic of cholera which is caused by drinking water usually starts in different parts of the town simultaneously. But if we trace the present epidemic to its starting point we find that it originated in one locality in the north of Madras. And when it happens that this is the identical locality in which almost all the plague cases we have had in Madras also originated, the locality deserves our careful study. It is the locality consecrated to the traffic in human beings commonly called the coolie emigration. The emigration depots themselves are under medical supervision, and are generally described as earthly paradises where perpetual youth and health reign and death can claim no victims. But the fame of these depots as the only portals which admit the starving Indian coolie to the precincts of 'King Solomon's mines' has spread far and wide. And the starving and the destitute from all parts of the Presidency flock in large

numbers, to what, in their opinion, is a haven of refuge, which opens out to them, in a foreign country, a vista of happiness and prosperity which was denied them in their own native land. When some of the districts surrounding Madras became famine-stricken the exodus from those districts to the neighbourhood of the emigration depots increased. It was among this unfortunate crowd of miserable famine coolies whose hankering after the flesh pots of the emigration depots had brought them to the neighbourhood of Casimode that cholera first broke out. We are told that cholera broke out simultaneously among the inmates of the depots and the famine-stricken would-be emigrants outside the depots. But this statement is denied by the medical officer of the depot. But, however that may be, it is admitted, on all hands, that the outbreak of cholera started in the neighbourhood of the emigration depots among people who had been drawn to that locality by the temptation of getting into those depots. It is evident from that, that unless the movements of this migratory and pauper population were under some sort of control, it would be almost impossible to stamp out the epidemic. The Municipal authorities were handicapped as they had no authority to deal with these wandering paupers. As the neighbouring districts were famine-stricken it was clearly the duty of the Government to have at once opened relief camps and taken away the starving coolies who, while they

themselves were helpless, constituted a serious menace to the public health of this large city. But the Government either through poverty of thought or the force of habit never likes to admit that any part of the country under its administration is famine-stricken till the very last moment. So like an ostrich the Madras Government buried its head in the sand and saw not the famine which was apparent to everybody else, and thus missed an opportunity of averting what has since become a terrible tragedy. But the tragedy has not altogether been free from a touch of comedy. The attempt that was made in some quarters to make out that some of these cases of cholera were really cases of intestinal plague may possibly be the precursor of a grand scientific doctrine establishing the unity of all diseases and prescribing a free use of Lt.-Col. King's 16-day incubated plague inspectors as a universal prophylactic. The theory demonstrated the fact that while plague in the intestines was destructive of life, plague on the brain was fatal to reason. Sensationalism has its uses especially among a lethargic population. It makes the sleepy Hindu sit up and makes his 'flesh creep' while he contemplates the likelihood of an immediate termination of his earthly existence. While on an indolent Government it acts exactly in the same way as a touch with a red-hot poker does on a sleeping man.

But sensationalism apart, we don't find any reason to take too pessimistic

a view of the situation. We have delayed introducing our sanitary reforms too long, and we are only paying the penalty for our tardiness. If the present unsatisfactory state of Madras has had the effect of waking up its citizens and making them travel a little faster along the paths of sanitary reform and municipal progress, it would have served a useful purpose.

Our Contemporaries. MEDICINE.

Elephantiasis of the Scalp.

BY

G. A. MACDONALD, M.B., C.M.

Elephantiasis of the scalp does not appear to have been described. The writer observed the following case in a Swahili, who was born in and lives in Zanzibar. In boyhood he noticed a small lump over the occiput. This gradually increased until the present condition (Figs.), at the age of 20, was attained. Since the onset he had suffered, at varying intervals of from 1 to 3 months, from febrile attacks, during which the swelling enlarged and became acutely painful. These attacks were characterised by severe rigor, fever, loss of appetite, and headache, which lasted several days. All the affected parts became much swollen, hot, and intensely painful. These symptoms gradually subsided, but the swelling not entirely, and there was left after each remission a greater degree of thickening and hypertrophy.

The appearance of the scalp tumour is typical. The skin is rough, thrown into deep irregular folds and very coarse. The hair is very scanty, and what is left of it also coarse. The skin cannot be caught up between the fingers. The affected tissue cannot be moved over the deeper structures, it is hard, dense,

and does not pit on pressure. The thickest part of the mass measures about $2\frac{1}{2}$ in.

Externally the patient shows no signs of filarial swelling in other parts, such as the legs, arms, or scrotum, but on examination of the glands there is further evidence. The occipital and submaxillary glands are much enlarged, as well as those in both posterior triangles of the neck and both axillæ (especially on the left side). The glands in the groins are not affected to so marked an extent, but around the saphenous openings (especially on the left side) they are greatly increased in size. Thickenings and cord-like swellings are left along the lines of lymphatics on the inner sides of the thighs. During the febrile attacks the patient states that there is always swelling and pain in one or other of the affected regions. The blood was found to contain filariæ in great numbers. —(*Jour. of Tropical Med.*, April 1, p. 97.)

Sixty-six Yards of Tape-Worms.

BY

CHAVIGNY.

A soldier in South Algeria contracted tape-worms, and on treatment with pelletierine passed an enormous mass of tape-worms which half filled the chamber utensil. On examination there were found two complete worms, including their heads, and fragments of four others of which the heads were not discovered. There were thus present portions of six tape-worms; the total length of the fragments expelled measured over 66 yards. —(*Lyon Medical*, Nov. 27, p. 839.)

Renal Calculus in a Child.

BY

J. PORTER PARKINSON, M.D.,

AND

DOUGLAS DREW, F.R.C.S.

A boy, aged 9½, was admitted into hospital on Aug. 21. Thirteen months previously blood was noticed in the urine. Thereafter hæmaturia occurred at intervals and he

complained of a gripping pain at the anus which appeared to have no relation to the hæmaturia.

The urine was acid and contained a large quantity of blood and some granular casts. There was some rigidity of the abdominal muscles on the left side, and on deep pressure under the kidney slight tenderness was found. On admission an attack of hæmaturia had existed for a fortnight. He was kept in bed and the hæmaturia rapidly disappeared, but on getting up it reappeared. A skiagraph showed a stone in the left kidney. The kidney was exposed and dislocated on to the loin, where it was carefully palpated, but, as frequently happens, nothing could be felt.

The organ was split open along its convex border and the finger introduced into the pelvis, where the main calculus was felt and removed; many other minute calculi were felt, many of which were concealed in the recesses of the calyces. To ensure that none escaped removal the calyces were washed out with a strong stream of hot water. A probe was passed down the ureter into the bladder, but nothing abnormal was felt. Sixty-seven uric acid calculi were removed, the largest measuring $\frac{1}{2}$ in. in its long diameter. Recovery followed.

Cases of renal calculus in children are very uncommon, which is surprising considering the frequency of vesical calculus. The remarkable features of this case were the profuse hæmaturia and its relation to exercise, and the absence of all other symptoms of calculus except tenderness so slight that its significance was doubtful. But for the skiagraph the diagnosis would have remained in doubt. —(*Brit. Jour. of Children's Diseases*, Oct., p. 411.)

Lead Poisoning from Wall Papers during Pregnancy.

BY
LEFOUR.

A woman, 7 months pregnant, was seized with abdominal pain supposed to be related to her condition. Her husband suffered in the same way, and was advised to have his appendix removed. During an absence from home of some weeks, all symptoms subsided, but on her return they reappeared. A miscarriage had already taken place in similar circumstances. A slight blue line was seen on the gums and the wall paper was suspected. The paper of the bedroom contained 23 grs. of lead per square metre, and the papers of two other rooms smaller amounts. On changing the paper and under appropriate treatment the symptoms were relieved. A living child was born at the eighth month, and though delicate seemed likely to live.

The writer examined 11 samples of wall paper taken at random and found 9 to contain lead and the other 2 copper. The quantity of lead varied from 18 to 119 grs. per square metre, the larger amounts being in "velvet" papers. (*Jour. de Med. et de Chir. Prat.*, Nov. 10, p. 826.)

Sciatica—Injection Treatment.

LANGE (*Munchener medicinische Wochenschrift*, No. 52, 1904) after trying, but without success, various medical and surgical measures for the relief of sciatica, finally obtained complete relief in five cases. He employed a solution of eucaïne B. in .8 per cent. salt solution, injecting it under the skin near the sciatic notch, until a large wheal formed. The needle is then pushed down, until a jerking of the leg showed that the nerve had been touched. Then 70 to 100 cubic centimeters was rapidly injected. Mild local pain lasted for two or three days. In three of his cases a second injection was required for complete cure. Functional and permanent relief was almost instantaneous in all cases.—*The Therapeutic Gazette*.

Sugar in Alimentation.

Lemoine cites the results of experiments made by several observers which indicate that saccharose has a high force producing power when taken by healthy persons undergoing fatigue. Other experiments on healthy individuals resulted in a loss of strength and dyspeptic troubles. The author seems to agree with Kaufmann that sugar is a material peculiarly adapted to furnish energy for immediate need.—(*Press Medicale. Medical Review of Reviews*.)

Note on a Case of Fatal Peritonitis following an Overdose of Purgative Pills.

BY

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On May 12th I was called to see a patient who was a married woman, aged 32 years, and the mother of two children. She informed me that being "a few days over her time" she had taken seven Beecham's pills on the evening of May 11th and four similar pills on the night of the 10th. She thought that this treatment "would set her all right." She stated that she had never had any illness. I found her suffering from excessive diarrhoea and she said that she had vomited twice during the night. On the next day the diarrhoea had practically stopped, no vomiting had occurred, but there was a considerable amount of abdominal tenderness. On the 14th the symptoms of peritonitis were well marked and I called in Mr. D. C. Rayner in consultation who concurred in the diagnosis and treatment. The patient died on May 18th.

The coroner decided to hold an inquest and instructed me to make a post-mortem examination, which I did some 12 hours after the patient's death, Mr. Rayner being also present. We found extensive enteritis and peritonitis but the appendix was perfectly healthy.

thy. There was no perforation but the inflammation involved all the coats of the bowel. The internal organs were healthy and the deceased was not pregnant. The jury returned a verdict that death was due to peritonitis caused by the excessive amount of pills. I recently read an advertisement in one of the London halfpenny newspapers stating that "females especially will find that Beecham's pills will restore free and regular conditions,"—a statement which may certainly be described as somewhat ambiguous.—*The Lancet*.

Treatment of Obesity by a Milk Diet.

Le Menant (*Jour de Med.*) communicated to the Society de Medicine the results obtained by him in the treatment of two cases of obesity by a reduced milk diet. The treatment consisted simply in directing the patients to take nothing but milk, drinking as little as possible. In five weeks one patient lost 21 pounds, and a second 16 pounds. In 15 years which have elapsed the writer has treated about thirty cases by this method, with results highly satisfactory. Commonly the amount of milk ingested each day is one and a half liters, taken in small quantities, ordinarily unboiled and cold, with the exception of the morning, when the milk may be taken hot, but without bread. The milk diet is ordinarily continued from four to nine weeks, after which the mid-day meal is taken, but the milk is continued in place of supper. Every week the patient is weighed after he returns to an ordinary diet, and if there is a marked augmentation in the weight, the milk diet is resumed for a week or more. In this way he gradually reaches a weight at which he remains stationary. The loss in the first week is commonly from two to twelve pounds, the average case being from four to five pounds. The treatment is better borne in summer than in winter. Constipation is not an unfrequent complication.—*The Medical Times—The G. M. J.*

The Successful Treatment of Foreign Bodies which had been Swallowed by the Internal Administration of Cotton-Wool.

BELL (*Liverpool Medico-Chirurgical Journal*, January, 1905) reports two cases of prompt passage by the bowel of a foreign body, swallowed by a child, brought about by administration of cotton-wool. The object in the first place was a gold brooch, and in the second a brass knob from a bedstead. The knob had been in the stomach three days before the cotton-wool treatment was instituted. In each case the foreign body was passed the morning after the treatment, although in the case of the knob castor oil and large amounts of food had been given without success. A small handful of absorbent cotton was employed in each case. It was given mixed in bread and milk and in jam sandwiches. The object in each case was passed enveloped in cotton.—*The Therapeutic Gazette*.

Syphilitic Epilepsy.

J. T. Moore, Galveston, Texas (*Journal A.M.A.*, June 10), gives an account of a case of epilepsy occurring in a man 35 years of age who had suffered from an alleged fracture of the right frontal bone about five and a-half years before, the epilepsy dating back about three years. Syphilis was denied. The convulsions began on the right side of the face and extended from there over the rest of the body. The focal symptoms did not warrant operation, and as there was some roughening of the tibia and some enlarged glands, he was given iodid of potash in gradually increasing doses. The attacks, however, became more frequent and severe, in spite of the use of bromids, chloral, etc., and in a few days he was put on 1-10 grain doses of bichlorid of mercury, with the result of rapid improvement and complete cessation of the attacks. Syphilis was suspected in this case because of the age at onset, the other symptoms strengthening the

suspicion, which was fully confirmed by the results of treatment.—*M. R. of R.*

Chinese Manners.

From an interesting paper on "Ærophagia and Flatulence," in the *New York Medical Record* (April 29th) we learn some curious facts about the gaseous changes in the intestine. Dr. Spivak, the author, speaking of voluntary eructations of gas from the stomach, quotes the following quaint custom as illustrating the amount of control that may be gained over the movements that produce the expulsion of gases. In China, it is the habit of a host to deprecate any worth in the hospitality he offers his guests, a form of self-negation that is considered the highest politeness. After a banquet, speeches are not made, but the host rises to say that he fears his guests have fared but poorly, that it is a shame to have asked them to so meagre a repast, and that he feels sure their hunger is not appeased nor their thirst abated. Loud protests rise from the guests, who vie with each other in lauding the quality of the viands and the excellence of the liquor. When the complimentary epithets of their vocabulary are exhausted, they rise and approach their host in turn, each as he reaches him placing his hand on his belly and bringing up wind in his face to testify to the richness of his hospitality. This is after-dinner gas with a vengeance.—*Med. Press and Circular*.—(C. P. & R.)

The Use of Bromide in Sea-Sickness and in Combination with Drugs.

BY

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Bromide given, five to ten grains, three times daily, a few days before sailing, quiets the vomiting centers.

If the sea-sickness develops later the bromide should be given in effervescent draughts.

Bromide of potassium given in combination with quinine, or salicylic acid, will prevent cinchonism; is also used to allay the depression and nausea which follow the use of opium.—*The Medical Brief*.

A Functional Test of the Diseased Heart.

M. Herz (*Deutsch. med. Wochenschr.*) The power of the heart to do its work may be tested as follows: The physician, allowing the patient's elbow to rest in his left hand, supports the wrist lightly with his right. The patient is then made to extend and flex the forearm as slowly as possible, doing practically no work except that necessitated by the effort to keep the forearm from moving more rapidly. The pulse is counted before and after the test. If the heart is normal there is practically no difference in the two pulse-rates, but the slightest morbid condition shows itself in a marked retardation of the heart's action as a result of the test. In obesity the test is positive when there is actual degeneration of the myocardium, but not when the interference with the heart's action is purely mechanical.—*Interstate Med. Jour.*

Fatal Poisoning with Sodium Chloride.

In *American Medicine* of April 22 Dr. C. M. Combs has reported an unfortunate accident which resulted in fatal poisoning by sodium chloride, a substance usually considered non-poisonous. No similar case appears to have been recorded previously. Vaginal oophorectomy was performed on a woman, aged 35 years. Her general condition was good, the operation was short and simple, and no apprehension was felt as to her recovery. To prevent thirst and renal congestion 500 cubic centimetres of normal saline solution were ordered to be injected under each breast. By mistake a stock bottle containing an almost saturated solution of sodium chloride was used instead of the diluted 0.9 per cent. solution. The injection was given while the operator was making the

final toilet of the peritoneum. Four hours later, when the patient was seen, she was unconscious. The mistake was ascertained when the stock bottle was found empty. The woman had received 1920 grains of sodium chloride. She remained comatose for six hours. Then she was maniacal and talked until death, which took place 24 hours after the operation. At first the pulse was 190 and bounding; later it was too rapid to be distinguishable, and the respirations rose to 70. There were insatiable thirst, a slowly ascending temperature attaining a maximum of 104° F., and constant nausea. The vomit contained five grains of sodium chloride to the drachm. During the 24 hours 300 cubic centimetres of urine were excreted which contained 11 grammes of sodium chloride—a normal amount considered absolutely but large relatively to the quantity of urine. There was neither albumin nor sugar. The red blood corpuscles were shrivelled and crenated from exosmosis. Dr. Combs thinks that the rapidity of the pulse and respiration was due to an effort of nature to compensate for the diminished oxygeniferous powers of the corpuscles. The treatment consisted in keeping the patient in a continuous hot pack and allowing and even urging her to drink large quantities of water. The combined excretions (urine, sweat, faeces, vomit, and tears) appeared to remove nearly half of the salt.

Febris Enterica Sine Febre.

* BY

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J. B., æt. 16½ years, a wine-bottle labeller, was admitted into Matthew Ward in St. Bartholomew's Hospital on January 9th, 1905. He was in good health up to January 7th. On the 8th he vomited and had abdominal pain. On the 9th he had headache and was sleepy. There was nothing of importance to note in his family or personal

history. He was a well-nourished youth. The pupils were large, the tongue dry, with a light brown coating. The temperature on admission was 102.4°, the respiration 30, and the pulse 112 full, soft, and regular. There was a diffused impulse at the apex of the heart in the left nipple line, fourth space, and a soft systolic murmur was heard at the apex. The lungs were free. The spleen was enlarged and tender, the abdomen not distended but slightly tender. No eruption. The stools were partly formed and dark. On the 10th January, and the following day, there was found a slight Widal reaction. The boy appeared but slightly ill. The temperature fell to normal the day after his admission, reached 100° that afternoon, and was normal again at night. On the fifth day it was 99.8° in the morning, and subsequently fell below normal till the 16th January, when it was again normal. On the 17th January, or the eleventh day of the illness, the Widal reaction was promptly manifested. No rash appeared. The stools became ochrey and powdery, but there was no diarrhoea, and latterly there was constipation. Convalescence proceeded favourably. The spleen was still palpable on the twenty-fifth day.

On February 14 the first sound of the heart was found merely prolonged. On the forty-second day some sloughs were passed attached to very constipated motions, but there was no hæmorrhage. Rapid improvement followed. The temperature remained sub-normal till the day of the boy's discharge from the hospital on March 3rd. The urine presented no abnormal characters.

There was some doubt as to the exact date of the early symptoms, judging by the occurrence of a slight Widal reaction on the (apparently) seventh day of the disease. The illness, though decidedly marked by distinct symptoms and signs of enteric fever, was of a mild character throughout. Such cases are certainly not common. Dr. Frank informs me that they were observed in the

German army during the siege of Paris, in 1871, and the apyrexia was attributed to the lowered vitality of the men at the time. Gerhardt, of Berlin, and Dreschfeld, of Manchester, have reported examples, and epidemics of such cases have been recorded.

Dreschfeld regards the prognosis, in spite of the apyrexial character, as grave as in ordinary cases of enteric fever. One of his patients died from intestinal perforation, and two cases recorded by Wendland ended fatally.

Dr. Archibald Jubb, of Glasgow,³ recorded a well-marked example of this form of enteric fever, in which the temperature remained practically normal till the seventeenth day of the illness. At that date thrombosis occurred in the left femoral vein, accompanied by pyrexia (102.4° the highest point), which lasted for five days. Subsequently the temperature fell to normal, and remained so to the end of the illness. As Dr. Jubb points out, the Widal serum reaction is of particular value in such instances, rendering the diagnosis more certain, and securing for the patient early and appropriate treatment which might otherwise be withheld in consequence of the unusual clinical features of the disorder.

1. *The Practitioner*, 1893.
2. Albutt's *Syst. of Med.*, Vol. I., p. 814.
3. *Brit. Med. Jour.*, December 3, 1904, p. 1511.

The Practitioner.

SURGERY.

[Written for the MEDICAL BRIEF.]

Diabetes and Its Surgical Treatment.

BY

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The name diabetes had its origin in a Greek verb, which means "to go through," to go through the kidneys. The word mellitus means honey. Diabetes mellitus means honey in the urine, sugar in the urine. Such urine smells sweet, and it is sweet to the taste. Sugar is then present in the blood and the other fluids of the animal economy. It escapes in the urine and may be detected by the Haines' test for sugar in the urine. No man, however grand and good, has ever fathomed the mysteries of this great disease. None can tell us its exact nature. No man has exactly explained its cause. Some great medical minds will direct us to the liver and tell us it is glycogenic perversion.

Others will point to the floor of the fourth ventricles, brain tumors, etc., in vain. Others tell us the pancreas is involved in fifty per cent. of all cases. Some say it is a disturbance of metabolism, and how true this is.

The latest thought seems to indicate that the pancreas and the islands of Langerhans are involved in inflammation or, perhaps, degeneration.

It seems we cannot yet agree upon any certain cause as to its etiology. It is certain we can find no pathological lesions characteristic of diabetes. We define it as a constitutional disease, a perverted nutrition, with a marked symptom, known as sugar in the urine. There are some curious facts to confront us in this disease.

1. The first curious fact is that the urine, or other fluids, of a diabetic will produce diabetes, glycosuria, if introduced into another patient or animal. This has been proved by actual test many times.

2. The second curious fact is that the pancreas is changed by pathological lesions in fifty per cent. of all cases.

Going back to the first curious fact, please note these points. Injection of the urine of a diabetic patient into dogs will produce glycosuria, diabetes even after the sugar has been removed. Then you may inject the contents of the intestine of a diabetic into the intestines of a dog and you produce glycosuria in the dog. Again, introduce the contents of the intestine under the skin of a rabbit and you produce glycosuria in the rabbit; just like producing syphilis by injecting syphilitic virus.

I point out these facts to teach you that diabetes is, in all probability, an infectious disease, and that it should be taken out of its present classification as a constitutional disease and be rated as an infectious disease, as syphilis, typhoid fever, measles, or scarlet fever.

This is a new thought, but I hope you will ponder it well.

THE CLINICAL PICTURE.

Diabetes Mellitus.—The quantity of urine is enormous, twenty to thirty pints. The specific gravity is high, 1025 to 1045. Sugar is abundant. The disease is attended with abnormal thirst and voracious appetite. There is feebleness of the muscular system and progressive emaciation. It is usually chronic, and fatal. Such is the clinical picture of diabetes mellitus.

Diabetes Insipidus.—Insipidus is the Latin word for insipid; insipid urine, tasteless, not sweet, having no sugar. In this case there is also enormous quantities of urine passed, polyuria. It is pale, watery and tasteless. But in this disease the urine is of low specific gravity, 1001 to 1005, and it contains no sugar. It is also attended with increased appetite and abnormal thirst. Patients who have this form of diabetes may realise no serious inconvenience, except the increased vol-

ume of urine. They may live with the disease for forty years, and die with some intercurrent malady. However, it may result in progressive wasting and prove fatal. Thus you have a clinical picture of diabetes insipidus.

Diabetes is more common in men than in women, and in the over-nourished than the poor. It is not a disease of the kidneys, because there are no certain pathological lesions of the kidney. It is to be regarded as a perversion of nutrition, based on a pathological pancreas, revealed by abnormal metabolism of the carbohydrate foods. The only constant symptom in the kidney is the abnormal flow of urine. There may or may not be a diffuse nephritis.

The Pancreas in Diabetes.—Total extirpation of the pancreas by a surgical operation is followed by diabetes in all cases within a few hours. The volume of urine becomes enormous. Sugar appears in the urine. Progressive wasting becomes established. Thirst and appetite voracious, and the disease proves fatal in about fifteen days.

After extirpation you may graft the pancreas back under the skin at any point and if the graft proves successful your diabetes will speedily be cured. The urine will be reduced in quantity, sugar disappears, thirst and appetite return to normal, wasting is checked, and recovery is complete.

Remove ninety per cent. of the pancreas (leaving ten per cent. *in situ*) and you will have no sugar in the urine, excepting when you eat the carbohydrate foods.

Remove all of the pancreas and graft back ten per cent. of it under the skin and again you will have no sugar except as you take the carbohydrate foods.

Two striking thoughts present themselves to view:

(a) That the pancreas has an office to perform, an internal secretion, which pre-

vents all mankind from having diabetes. What a sublime protection from the Architect of the Skies!

(b) The author suggests a surgical transplantation of the pancreas of some domestic animal under the skin of the diabetic patient as a radical cure of diabetes. (See treatment.)

Foods enter largely into the management of the case. No carbohydrate food should be allowed. It is well to observe that the pancreas has a double function, an external secretion, a digestive ferment which enters the bowel through the canal of Wirsung; and an internal secretion, which is absorbed into the blood, and by some chemical action prevents the appearance of diabetes in the whole race. The authorities are agreed that atrophy of the pancreas is present in fifty per cent. of all cases of diabetes. Atrophy of the pancreas destroys its function, the same as though it were removed, and diabetes must intervene. Inflammation of the pancreas, or tumors therein, will destroy its function and diabetes will appear. Microscopical changes in the cells of the pancreas may destroy its function, whereupon diabetes will appear. I believe that in no distant day the medical profession will recognize diabetes as a pancreatic disease and that it will be recognized as an infectious disease and not a constitutional disease.

DIFFERENTIAL DIAGNOSIS.

DIABETES MELLITUS.	DIABETES INSIPIDUS.
1. Begins from chill or injury.	1. Gradual injury or emotion.
2. Abnormal thirst and appetite.	2. Abnormal thirst, good appetite.
3. Urine pale, 5 to 30 pints.	3. Urine pale, 20 to 40 pints.
4. Specific gravity, 1025 to 1045.	4. 1001 to 1005.
5. Sugar, 5 to 10 per cent.	5. No sugar.
6. May be albumin and tube casts.	6. Rare.
7. Impotency.	7. May not.
8. Occurs at all ages.	8. Young most common.
9. Prognosis bad under 40.	9. Not often fatal.
10. May last 15 years.	10. May live 40 years.
11. Progressive emaciation.	11. Well nourished, may be.
12. Tongue dry, red and glazed.	12. Negative.
13. Saliva scanty.	13. Reduced.
14. Death usually in coma.	14. Usually other disease.

A low specific gravity and the absence of sugar are the striking features which distinguish diabetes insipidus from diabetes mellitus, but will remind you of chronic interstitial nephritis.

Treatment.—You should remember that the blood and other fluids of a diabetic are saturated with sugar. It appears, therefore, in the urine as a waste product. The intelligent physician will, therefore, forbid the use of all sugars. Starches and other carbohydrates are readily converted into sugar and should, therefore, be forbidden. The carbohydrates are as follows: Sugars, syrups, candies, starches (potatoes, bread, etc.), fats, fat meats, vegetables and fruits. All these should be interdicted, because, they are either sugar or readily converted into sugar. Bread and potatoes are examples—of starchy carbohydrates. Wheat is composed of starch and gluten, a carbohydrate, and a proteid. The proteid is good, but the carbohydrate not. All carbohydrates must be avoided, as far as possible, but you must not starve your patient. Feed your patients on the proteid. The proteids are all lean meats, eggs, milk, cheese and gluten.

Medicinal treatment is not satisfactory. Opium or codeine are sedative to the glyco-genic function. They will, therefore, frequently be of service. Strychnia and ergot are vasomotor tonics and may be indicated. Assafoetida may be administered for the sinking sensations at the epigastrium. Diabetic coma is usually fatal. It rarely responds to treatment. The fluid extract of jambul is anti-diabetic and frequently reduces the sugar.

I usually advise students to feed their patients on pancreases obtained from the butcher, with the hope of supplying the pancreatic deficiency in the system.

The pancreatic extract may be administered to supply the same deficiency. However, this is not highly regarded by many physicians.

Original Surgical Treatment.—In the *Dallas Medical Journal* for July, the author said the following:

"I now come to my original surgical treatment. It consists in grafting under the skin of the diabetic patient a part of the pancreas of the ox, or other domestic animal. The animal should be instantly killed, and the patient properly prepared. The operation should be quickly and cleanly done. The pancreas should be transplanted subcutaneously, while still at the body temperature."

This pancreas, if the graft proves successful, will perform the function of the pancreas which has become diseased, and which, therefore, allows the patient to have diabetes. Once the internal secretion of this newly-grafted pancreas takes place, the diabetes is cured.

I quote again from my lecture :

"This treatment is based on the physiological fact that total extirpation of the pancreas by the knife is followed in all cases by diabetes; but afterwards, if the pancreas can be grafted successfully under the skin, the disease disappears, and the patient is cured. I believe that the office of the pancreas, through its internal secretion, is to prevent all mankind from having diabetes. If the pancreatic function is destroyed, either by removal or by disease, we may transplant the pancreas of some animal to supply the internal secretion. The studies of grafting the pancreas will justify my original and logical treatment."

There is another observation I wish to make. It is a treatment directed toward overcoming the acidity of the blood. The blood of the diabetic patient is rendered too acid by the presence of diacetic acid and acetones. This acidity is called acedosis. The blood should normally be alkaline, so that it can receive oxygen, and take up carbon dioxide from the tissues.

This blood being too acid, as explained above, it cannot take up the carbon dioxide out of the tissues, therefore he suffers from auto-poison.

Carbon dioxide has an affinity for the hemoglobin of the red blood corpuscles in an alkaline blood only. Therefore, this acidity of the blood causes an interference of the physiological action of the blood. This acidity may, also interfere with the perfect oxidation of the blood in the lungs. All these factors put your patient further and further down the scale.

To correct this acidity I will suggest for you to inject normal saline solution under the skin, with a large percentage of sodium bicarbonate. This will render the blood alkaline, and permit the physiological activities to proceed normally.—*The Medical Brief.*

The Frequency of Multiple Syphilitic Chancres.

Although in the diagnosis of syphilis considerable importance has been attached to the solitary character of the initial lesion, it has long been known that multiple chancres are not uncommon. Papegaey has recently studied the statistics of this question and finds that of 12,069 syphilitic chancres 3,065 were multiple, or over 25 per cent. of the total. On adding figures derived from other sources he estimates that there is 1 case of multiple chancre to 3 in which the lesion is single. There were 2 chancres in 2,474 cases; 3 in 391; 4 in 100; 5 in 43; 6 in 26. Much higher numbers have been observed in special circumstances, as by Fournier 23 chancres and by Beurmann 25 chancres—in both cases on the breasts of nurses. The presence of 10 to 12 sores should not exclude a diagnosis of syphilis. Such cases are not more severe than those in which the initial lesion is single.—(*Four. de Med. et de Chirurg. Prat.*, Dec. 25, p. 1904.)

Balsam of Peru in Diabetic Perforating Ulcer of Foot.

BY

UNSCHULD.

Balsam of Peru will frequently produce cicatrization of a perforating ulcer of the foot in a diabetic patient, after the usual treatment with boracic acid, iodoform carbolic acid and per chloride of mercury has failed. The writer has employed it with complete success in 11 cases, and in a twelfth obtained great improvement. According to the case it may be applied pure, on compresses diluted with spirit, or as an ointment with a lanoline base. The last-named is to be preferred for diabetic patients in whom walking is not contra-indicated.—(*Munch. Med. Woch.*, Mar. 21, p. 609.)

The Treatment of Fissure in Ano.

BY

P. L. MUMMERY, F. R. C. S.

In the acute cases the pain disappears at once, and usually the fissure is cured if the sphincters are thoroughly dilated; this however necessitates an anaesthetic and cannot always be done. Many cases, again, can be cured by application of suitable ointments, but in the more painful cases this often fails owing to the patient being unable to properly apply the ointment on account of the pain which its introduction causes. A method which was suggested by Dr. Tuttle, of New York, has proved very successful at St. Mark's Hospital—the local application of pure ichthyol. The fissure is first exposed as much as possible and some orthoform powder is blown into it with an insufflator; this gets rid of the acute tenderness and enables the speculum to be passed. The fissure can then be examined, and for this purpose a small laryngoscope mirror is often useful. More orthoform is then blown into the fissure and it is painted over with a little pure ichthyol on the end of a probe; a small piece of cotton-wool is next placed over it to protect the surround-

ing mucous membrane from the action of the ichthyol, and the speculum is withdrawn. This operation is repeated every few days until the fissure is cured, which usually occurs in 4 or 5 days. The pain usually disappears after the first application.

In the more chronic cases of fissure something more radical is necessary. At St. Mark's Hospital the fissure and the greater part of the external sphincter are generally divided under cocaine anaesthesia, and the indurated edges cut away so as to leave a wound which has free drainage externally. It is very important to make the incision come out well on to the skin and to always divide the fibres of the external sphincter exactly at right angles. This operation is done in the out-patient department, and the patient comes up to the hospital every day to have the wound dressed. The wound generally heals up readily, and rarely is it necessary to take a case of fissure into the wards. But it is much better to confine the patient to bed for the first week or ten days after dividing a fissure.—(*Clinical Journal*, Mar. 8, p. 331.)

House-Flannel and Plaster-of-Paris Splints.

BY

EDMUND OWEN, F. R. C. S.

With house-flannel and plaster-of-Paris, splints suitable for all sorts of cases may be made. The flannel having been cut into shapes and laid, ready, an inch or so of water is poured into a basin and fresh plaster is shaken into it; out of the paper bag, until it forms a little island in the middle; then, as quickly as may be, it is stirred into the water until a creamy mixture is made in which the flannel is to be soaked. It is well to have two pieces of shaped flannel on each side of the limb, one of which has a surface which is daubed with the cream on one side only, the dry side being placed next to the bare limb.

An assistant holds the pieces close against one side of the limb whilst the surgeon quickly fixes them in place by a few turns of a wide muslin roller. Without any loss of time the other side of the limb is similarly treated, only in this case the splints are put on outside the muslin bandage which held the other pieces in place. If the splints have been put on nicely there will be a space running up the front of the limb between their borders which is covered simply by muslin.

The splints rapidly become as hard as boards. And then, or next day, the surgeon may run the scissors up the narrow gap, take off the splints trim their edges and loosely re-apply them.

The old plan of winding plaster-laden bandages round and round a limb, without any provision for their prompt removal, has quite given place to these splints.—(*Brit. Med. Jour.* Mar. 25, p. 689).

OBSTETRICS AND GYNÆCOLOGY.

Clinical Notes of a Consecutive Series of Cases of Eclampsia.

BY

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Maternity Hospital, etc.

DURING the past 18 months I have treated the following 15 cases of eclampsia. With one exception they have all been in the Glasgow Maternity Hospital. All were treated by saline injections except Case 7. The saline solution I use is not the ordinary normal one. To the latter, I add one drachm of acetate of soda to the pint. I wish this to be distinctly understood, as the injection of normal saline solution is not the method of treatment which I have practised and advocated for years. In addition to the saline

injections the patients were freely purged, and hot packs were used in most cases. The hot back is most useful, and has a wonderfully soothing effect. I have seen a patient, who was tossing and tumbling about in bed, become quite quiet within a few minutes of the application of a pack. In the majority of these cases bleeding was resorted to. Formerly I used to bleed only in plethoric cases, but lately I have bled nearly every patient. The amount of blood to be withdrawn should be judged by the effect upon the pulse. From 12 to 20 ounces can usually be taken without any risk. I usually inject two pints of the solution directly into the vein. In one case I did not inject it directly into the vein, because I could not be sure that it was absolutely sterile. The withdrawal of the blood removes from the body a certain amount of the poison, and the addition of the saline solution of the blood remaining, dilutes the rest of the poison and helps to flush it out. One need have no hesitation in bleeding to a considerable amount, if saline is immediately injected. In three of the cases the bleeding was done post-partum.

In the obstetrical treatment of the cases it will be noticed that immediate delivery by *accouchement force* was resorted to in the earlier cases in the series, and that most of the others were allowed to deliver themselves or forceps was applied after the os was fully dilated. After a very extensive experience I have come to the conclusion that delivery by *accouchement force* is not necessary, except in cases where, in spite of treatment, the fits continue to occur. It may be said that in this series of cases I have not practised what I preach, but these cases were treated in this way as an experiment. The results from *accouchement force* could not have been better, but the results in the other cases were equally good, and the patients were not subjected to the risks of forcible dilatation of the cervix.

To sum up this method of treatment:—Bleed the patient and transfuse a couple of pints of the solution, purge freely, and use hot packs. If labour has not come on leave the uterus alone unless the fits continue to occur. If the os is nearly or fully dilated you may as well deliver at once, while the patient is under chloroform. When the patient is very restless chloral and bromide may be given, but a hot pack will often do more good. Morphia was used in one or two of the cases before admission, and in one afterwards, but not by my orders, as I have not used it for some years.—(J. of O. and G.)

Gangrene after Eclampsia.

BY

GUTBROD.

Monats. fur Geburts. und Gynakol.

Bd. xxi., Ht. 6.

THE patient, the subject of this communication, was a primipara of 22, who had one fit before and 15 after delivery, with complete coma for a day following delivery. She was treated with chloral, morphia, blood-letting, and hot packs. The next day it was noted that wherever skin had been in contact with skin, the parts had become gangrenous. This affected the whole left hand and the sacral skin, which had been in contact, the inner sides of each knee-joint, the left heel, and the dorsum of the right foot. After 46 days' treatment, all had healed except the right foot, in which the tendons were quite exposed. Eventually the foot had to be amputated, owing to abscess formation and implication of tarsal joints.

Since describing this case, which the author believed to be the only one of its kind reported, he has seen a second case somewhat resembling it. In this case the patient was a widow in her fourth confinement, who was discovered in an unconscious condition. Fits came on afterwards, and a child was born without assistance. During the follow-

ing day more fits occurred. During the period of unconsciousness, which lasted all night, there was an enormous amount of mucus secreted from the bronchial mucous membrane, which had to be constantly mopped out. Five days later, a patch of gangrene was found on the right great toe, with much redness of the foot and leg. In addition corneal ulcers developed, and it was not until four months later that the patient completely recovered.

In both these cases the albumen in the urine was small in amount, and the author believes that when this is the case, the eclamptic seizure is a very serious one. The possibility is that the poison then is not got rid of by the kidneys so much as by the skin. The theory suggests itself that this poison being excreted by the skin sets up a process which ends in necrosis of the cutaneous tissue, just as in many cases of eclampsia, necrosis of the kidney or liver substance is sometimes found. At the same time it cannot be excluded that some small injury may have occurred in the second case to account for the gangrene, and possibly the hot pack in the first might have had some part in the causation of the condition.—THOS. G. STREVEN. (J. of O. and G.)

Malignant Disease of the Fundus Uteri treated by X-rays through the Abdominal Wall: Recovery.

BY

DRS. A. T. CLEVELAND AND D. D. DAY
(*Brit. Med. Jour.*, April 25, 1905).

The patient, a married woman of 40, was seized with abdominal pain just before a profuse menstrual flow. This was followed by frequent and debilitating uterine hemorrhages. The uterus was enlarged and a sound passed four inches. Laparotomy was performed, but an irregular mass was discovered growing into the left broad ligament, which was adherent to the pelvic wall, and implicated the sigmoid flexure. Removal of the

growth would have necessitated resection of some inches of the sigmoid, and considering the fixity of the mass and the impossibility of removing the entire disease, this was considered inadvisable. No doubt existed as to the malignancy of the neoplasm.

She recovered from the surgical intervention but suffered from considerable pain and had a bloody discharge. A hard mass could be felt in the left iliac fossa.

She was subjected to X-ray treatment as a forlorn hope. With a moderately high tube excited by a mica-plate static machine the rays were applied directly over the pelvis for 15 minutes at a time, three times a week, the tube being about six inches distant from the skin of the abdominal wall. After 13 exposures she developed some dermatitis and the treatment was discontinued.

One month later her weight was the same and her general condition unaltered. She gradually began to improve after this, and the pain and discharge became less. The following month she was subjected to 12 exposures. A month later she had gained 13 pounds. Treatment was irregular after this, but after six months she was pronounced cured. An examination at this time showed a complete disappearance of the tumor and the uterus was freely movable.

[As no portion of the growth was removed at the time of operation, the diagnosis of malignancy has not been absolutely established in this case.—REVIEWER.] *The Post Graduate.*

Inversion of the Uterus in its Medico-legal Aspect.

BY

MIRANDA (GIOVANNI).

Archivio di Ostetricia e Ginecologia,
Oct., 1904.

THE author was invited to report to the examining judge on a case of inversion of

the uterus which had caused the death of the patient, and more especially to state if blame was to be attributed to the midwife who had attended the deceased. The following questions were asked:—

1. Given the history of the case, was spontaneous inversion possible?
2. Did the midwife in any way contribute to this result?
3. Could she, while kneading the uterus, have produced inversion by traction on the cord, even though pulling lightly?
4. Is it possible to assert that the midwife could have foreseen the possibility of this accident, in view of its rarity in ordinary cases?

The patient had been delivered sitting upon two stools, and Dr. Miranda was of opinion that the patient's general condition predisposed to a condition of inertia uteri, which was the predisposing cause of the inversion, and that massage applied to the uterus in the abnormal position was the exciting cause of the accident. The massage thus applied and the traction on the cord by causing the initial depression of the uterine parietes, were the starting point of the complete inversion. The midwife, by neglecting the accepted rules of obstetrics, in making her patient assume this abnormal position, created the determining cause of the inversion, through her lack of skill. The responsibility of the midwife is much diminished by the existence of the predisposing cause, and by the rarity of the accident, which made it difficult for her to realise the danger to which she was exposing her patient. Dr. Miranda states that the accident is one of great rarity in the human subject, occurring only once in about 200,000 cases.

E. H. L. OLIPHANT.

162502.

Puerperal Eclampsia of Intestinal Origin.

BY

CHAMBRELENT.

(*Jour. de Med. et de Chir. Pratiques*,
Feb. 10, p. 110).

A healthy woman, whose urine had been repeatedly examined during pregnancy without albumin being found, was seized at the commencement of labour with a typical eclamptic attack, consisting of tonic and clonic spasms and biting of the tongue. Chloroform was administered and she was delivered as quickly as possible. No further fits occurred and the urine remained free from albumin. The day before labour she had eaten freely of pheasant in such "high" condition that her husband refused it. The following evening she ate some snipe which were less decomposed. In the belief that the convulsions were of intestinal origin she was ordered a purgative, which produced large extremely offensive evacuations. Though such cases are rare, Bar has recorded a case of puerperal eclampsia after eating very "high" game, and it has also followed the ingestion of oysters.

THERAPEUTICS.

The use of Citrate of Sodium in the Vomiting of Infants.

BY

E. AUSSET.

(*La Pediat. Prat.*, April, 1905.)

E. AUSSET, of Lille, has followed up the experiments of Variot, Poynton, and Wright, and obtained excellent results from this method of treatment in infants who could not digest cow's milk. Gastric tolerance was re-established quickly in all the cases, and the vomiting ceased more rapidly than with other methods, such as with Vichy water. He employed a solution in distilled water 1 in 60. The drug must be freshly prepared and the doses given varied from a coffee-spoon to a table-spoonful in each

bottle, or given immediately before each time the infant is put to the breast.—VINCENT DICKINSON. (*The B. J. of C. D.*)

Action of Bitters on the Stomach.

BY

STARZHESKO.

(*Roussky Vrach.*)

STARZHESKO has found experimentally that bitters increase the psychical stream of gastric secretion. It remains to be decided by further investigations whether this increase is the result of a simple reflex, or of a complicated nervous mechanism, involving the cerebral cortex. The practical deductions from this research are summed up as follows: Small amounts of bitters must always be used, as the administration of large doses has the opposite effect from that desired, and the repeated use of large amounts may produce a permanent hyposecretion in the stomach. Bitters must always be administered in such a form as to excite the nerves of taste while the drugs are taken. In other words, the use of bitters in the form of pills and wafers or capsules is not rational. Bitters must always be given before eating, and best ten minutes or fifteen minutes before.—(*N. Y. Med. Jour.*)

Nasal Obstruction and Nutrition.

BY

P. FRIDENBERG.

P. FRIDENBERG says that the loss of the sense of smell may lead to a blunting of taste, cause lack of discrimination in diet and to the abuse of spices and condiments. Loss of appetite may be due to difficult aeration alone. Any abnormal intranasal condition diminishing the secretion of nasal mucus, thus preventing it passing naturally backward and being swallowed, will lead to stomach trouble and thus affect nutrition. Breathing can only take place between the acts of swallowing. Much air is likely to

be taken into the stomach often resulting in vomiting. Mastication is imperfect and the jaw and teeth imperfectly developed. Nasal obstruction leads to the accumulation of discharge in the nasopharynx which is generally swallowed, thus introducing into the stomach a vicious factor which leads to chronic catarrhal and fermentative processes.—(*N. Y. Med. Jour.*)

Treatment of Seasickness.

BY

J. METCALFE SHARPE.

J. METCALFE SHARPE believes seasickness to be a nervous vomiting. The reflex action, he says, is transmitted by the vagi to the solar plexus. He has found that by converting one eye into an "ametropic" and allowing the other to remain "emmetropic," the symptoms are greatly ameliorated. His method of treatment is as follows:

Two or three drops of a solution of atropine (4 grs. to the ounce) or other mydriatic are put into one eye daily; or one eye is merely bandaged. In this way the principal focus is altered and the motion of objects on board the ship, which doubtless forms the impulse, is not so uniformly transmitted to the brain. The results are excellent. Cases, more or less blind in one eye, that have been observed, have not experienced sea sickness since blindness.—(*British Medical Journal.*)

Cactus Grandiflorus in Heart Affections.

BY

DR. FINLEY ELLINGWOOD

(*Of Chicago.*)

For many years digitalis has been accepted as the classic heart remedy, but there is another which is but little known to the profession at large, which is in every way superior to digitalis, and that remedy is cactus grandiflorus. This agent, the night blooming cereus, is native to the West India Islands

and Mexico. The medicine is prepared from the stems and the flowers. In its administration a small dose will often accomplish all the desired results, and observers unite in the statement that large doses are in no way better than those of from two to five minims of the fluid extract. The remedy exercises a direct influence over the sympathetic nervous system. It restores normal action to the heart, by acting directly upon the cardiac plexus, regulating the functional activity of the heart. It certainly improves the nutrition of the heart to a very perceptible extent, and we have noticed the entire removal of progressive murmurs after its continued use. It increases the contractile power and energy of the heart muscle, through the cardiac ganglia and accelerator nerves. It increases the musculo-motor energy of the heart, elevates arterial tension, increases the height and force of the pulse wave. It is the heart tonic, *par excellence*, as it produces stimulation from actually increased nerve tone, through improved nutrition of the entire nervous and muscular structure of the heart. It produces no irritation of the heart muscle like strophanthus, or gastric irritation like digitalis, nor is its action cumulative. When the following indications for its administration are present, it will act promptly and with great satisfaction to the prescriber: When there is an irregular pulse, due to feebleness of the heart's action, with dyspnea, weight and oppression in the chest, or when there is violence with irregularity of the heart's action, which depends upon atonicity or enervation, and especially when there is a sensation of constriction, as of a band around the heart or around the chest, this agent is indicated. In cases of progressive valvular inefficiency, when the heart muscle is enfeebled, or when there is mitral or aortic regurgitation, from any cause, with atonicity, this remedy should be prescribed, and persisted in. It is also valuable in functional irregularity of the heart, especially if due to gastric irritation. It soothes irritability of

the stomach and imparts tone and improves the function of digestion, in marked contrast to digitalis. The following precautionary statement, however, should be made: When there is violent heart action or persistent palpitation from increased tonicity, or in the presence of a temporary exaltation of nervous or muscular tone, this agent is contraindicated. It will certainly aggravate the conditions present. Atonicity is the keynote of its administration.... In that now quite common heart disorder, which results from the excessive use of cigarettes, we certainly have no agent that can be relied upon for promptness, efficiency, and permanency of action that will in any way compare with cactus. Any combination of heart tonics that we may be inclined to make will not compare with the action of this single remedy.—(*New York Medical Record*, June 3rd, 1905.)

OPHTHALMOLOGY.

Eye Symptoms in General Diseases.

BY

CYRUS S. MERRILL.

(*Albany Med. Annals*, July.)

The relation between eye diseases and certain general diseases is so intimate that not infrequently the eye symptoms are the first indication of the general malady, and the physician who does not appreciate the significance of the former will lose the opportunity of combating the general disease at a time when treatment will be of the most benefit. The ophthalmologist, on the other hand, should recognize that eye symptoms are secondary to and caused by general disease; otherwise he may fail to benefit his patient by restricting himself to local treatment.

By watching the movements of the eyelids we sometimes discover symptoms diagnostic of exophthalmic goiter. In the conjunctiva look for discoloration, such as is produced in

jaundice, and the peculiar tint found in anaemia and chlorosis. Inflammation of the subconjunctival tissue and superficial layers of the sclera may indicate rheumatism or syphilis. The spontaneous rupture of conjunctival vessels suggests the possibility of similar accidents occurring in the brain. Ulcers of the conjunctiva are suggestive of tuberculosis. Phlyctenular keratitis suggests improper nourishment, and in children adenoids and inflammation of the nasopharynx. Interstitial keratitis is almost diagnostic of inherited syphilis. In the iris there may be manifestations of rheumatism, syphilis, gonorrhoea, tubercle and sarcoma. A careful study of the reactions of the pupil will afford much assistance in determining many lesions in the nervous system. A haziness of the retina due to oedema and inflammatory exudation, congestion of the optic disc with blurred outlines, tortuosity and enlargement of the retinal vessels, with or without hæmorrhages, is the picture of retinitis and generally suggestive of nephritis or syphilis. The choked disc picture is diagnostic of brain tumor. It is evident, therefore, that careful examination of the eye and the accessory structures is of vast importance in many general diseases and should never be omitted.—(*The A. J. of Ophthalmology*.)

Advances in Ocular Therapeutics.

BY

HENRY B. HOLLEN.

(*Medical Age*, Detroit, July 10.)

HENRY B. HOLLEN points out those medicaments which are of especial importance, and which are considered of service in the treatment of ocular disorders.

Adrenalin has been found valuable in many conditions producing congestion and exudation, such as conjunctivitis, keratitis, scleritis, iritis, dacryocystitis and trachoma. In ocular traumatism with pain, lachryma-

tion and extravasation it renders early and material relief. Nitrate of silver, as utilized in the Crede method for combating ophthalmia neonatorum, has enjoyed general acceptance, but in some cases produced considerable irritation.

Other preparations are nargol, protargol, argentamin, argonin, itrol, largin, actol and abrin. Organic silver preparations are serviceable in suppurative conjunctival inflammation, phlyctenular states, purulent dacryocystitis, gonorrhoeal ophthalmia and ophthalmia neonatorum. Holocain, eucain and nirvanin have been used as substitutes for cocain. As substitutes for atropin have been mentioned, eumydrin, scopolamin, homatropin and euphthalmin hydrochlorate. The latter is recommended mainly on account of its brevity of action, absence of untoward effects and minim disturbance of accommodation. Aspirin, a salicylic synthetic, is useful as a specific antirheumatic in rheumatic and gonorrhoeal eye affections, because of the profuse diaphoresis it causes. Copper sulphate is being superseded by cuprol, a combination of copper with nucleinic acid, and which, possessing all the therapeutic efficacy of the sulphate, eliminates almost entirely its objectionable features. It is of distinct service in chronic conjunctivitis with cicatricial alterations of the mucous membrane after trachomatous disease. A 10 per cent. solution of cuprol produces either no pain at all or very slight pain, and causes very little irritation.—(*The A. J. of Ophthalmology*.)

[Written for the *MEDICAL BRIEF*.]

Diagnosis and Treatment of Iritis.

BY

L. G. WOODSON, M. D.,

Professor of Ophthalmology and Otology in the Birmingham Medical College; Visiting Surgeon to the Hillman Hospital, etc., etc. Birmingham, Ala.

Iritis, an inflammation of the iris, is characterized by certain signs and symptoms, both objective and subjective.

The objective symptoms are discoloration of the iris; contracted and immobile pupil; posterior adhesions; ciliary congestion. The congestion is confined to a zone about one-fourth of an inch surrounding the periphery of the cornea. The subjective signs and symptoms are, pain—variable—lachrymation, photophobia, dimness of vision. Pain usually worse at night.

The disease is caused by syphilis (about sixty per cent. of the cases), rheumatism (from twenty to thirty per cent.), gonorrhoea, gout, diabetes, infectious fevers and traumatism, making up the remaining percentage.

The disease is divided into three classes, serous, plastic and suppurative, the plastic being much more common and representing possibly about seventy-five per cent of the cases. Iritis is most common between the ages of twenty and forty-five years, though it is occasionally observed in children in the first few months of life, caused by inherited syphilis, and at a later period in connection with interstitial keratitis.

From the standpoint of the general practitioner I regard iritis as being one of the most important diseases of the eye, because it is exceedingly common, and unless recognized in its incipency and properly treated, is certain to lead to a grave impairment of sight, or total blindness.

It is difficult to understand how it is possible for an intelligent practitioner to make a mistake in diagnosis of a disease in which the symptoms are so pronounced as in iritis. The condition is usually confounded with conjunctivitis, glaucoma, and cyclitis. The following points differentiate between these various diseases: In iritis, we have a contracted pupil, discoloration of the iris, dimness of vision. In conjunctivitis the pupil and iris are normal. In iritis we have pain, ciliary congestion. In conjunctivitis there is no pain other than a gritty sensation in the eye, and vision is normal. In iritis there is no discharge. In conjunctivitis there is mucopurulent discharge. In conjunctivitis the inflammation is of a raw red, and the injection is confined to the blood vessels of the conjunctiva; while in iritis the congestion is confined to a circumcorneal zone about one-fourth of an inch wide, of a pink color, the vessels engaged lying beneath the conjunctiva.

Differential points between glaucoma and iritis: In iritis we have the symptoms already mentioned. In glaucoma we have a widely dilated pupil, shallow anterior chamber, tension of the eye-ball and severe pain. It is sometimes exceedingly difficult to differentiate between iritis and cystitis. In cystitis we have all the symptoms of iritis except the changes in the iris; pain, as a rule, is more severe; tenderness on pressure over the ciliary region impairment of vision is greater than is found in iritis, though the differential diagnosis is of little importance between iritis and cyclitis, as they are usually due to the same causes and are amenable to the same general principles of treatment.

The treatment of iritis should be both local and constitutional. Local remedies consist first, last and all the time in the use of atropine to dilate the pupil and to prevent adhesions, or to break down those adhesions which have already formed before

treatment is begun. Atropine not only dilates the pupil, but it paralyzes the ciliary muscle relieves pain and places the eye in a state of physiological rest, which is most important in all inflammatory conditions. The strength of the atropine solution should be four grains to an ounce of water; one drop of this solution should be put into the eye every two or three hours during the acute stage of the disease, until the pupil is thoroughly dilated, then it should be used less often, as indicated. The eye should be protected from bright light by the use of smoked glasses, although if the photophobia be very severe, confinement to a dark room for a few days may be necessary. Great relief may be obtained by the use of hot applications, cloths wrung out of hot water and placed over the closed eyelids for from fifteen to twenty minutes at a time and repeated three or four times a day.

The abstraction of blood by artificial or natural leeches may occasionally be called for; my preference in these cases is for the artificial leech. Mercury and iodide of potassium should be given in all cases. Mercury in some form when syphilis is the cause, should be pushed to its full physiological effect. In gout, rheumatic and diabetic forms, salicylate of soda, fifteen to twenty-five grains three or four times a day, should be given. The bowels should be kept well open and moved regularly, and the patient's general health treated by tonics, such as quinine, strychnine, iron, etc. The prognosis in uncomplicated cases, as a rule, is good where treatment is begun early before adhesions have formed.—*The Medical Brief.*

DERMATOLOGY.

Eczema, Infantile: Treatment of.

The author considers this a form of auto-intoxication due to disordered digestive action, and consequently the first indication is to attempt to regulate the gastrointestinal tract. If the child is breast-fed, feedings should be at a definite time and for a definite period. Bottle-fed children should be given properly modified milk. Older children should be fed chiefly on milk, with a limited amount of eggs and vegetables. If any meat is given, white meat is to be preferred. No tea, coffee, or alcohol should be allowed. The bowels must be kept regular. Arthritic infants should be given alkalies; scrofulous ones cod-liver-oil, iron, or calcium glycerophosphate. In the sluggish eczema of children over five years arsenic may be administered. In cases which resist dietetic and internal treatment local applications are necessary. First the skin must be made as aseptic as possible by means of mild and non-irritating antiseptics or preferably by boiled water. The affected parts should be washed with cotton swabs—which must be thrown away after once being used—dipped in the solution. This is to be done several times a day and is to be followed by a dressing. If crusts are present they may be loosened by a poultice of potato starch, and later, if the area is not large, powders should be applied. On the scalp sterile oil containing a little salicylic acid is useful. Bathing is usually contra-indicated. Before using ointments, powders and solutions should be tried, and when these latter have initiated the treatment, ointment of salicylic acid, sulphur, tar, or oil of cade are indicated. In oily and impetigenous eczemas, dressings of silver nitrate have a favorable action; later tar or salicylic acid should be used. Finally, in children who resist the foregoing treatments, weak pastes of pyrogallol or chrysophanic acid may be tried. C. Clenet (*Revue*

Francaise de Medecine et de Chirurgie, No. 32, 1904).—*Monthly Cyclopaedia*, Feb. *The D. & H. Gazette.*

CORRESPONDENCE.

To

The Editor,

"THE ANTISEPTIC."

Civil Hospital Assistants.

SIR,

When every other department had been reorganised to cope with the increased price of food, the Government awoke to consider about improving the prospects of the Civil Hospital Assistants, and were at it for a protracted period of several years. The public, alike the Hospital Assistants, were eagerly expecting the results of their lengthy broodings. The Government sanctioned a house rent of Rs. 5 for the mofussil and Rs. 8 for the presidency town; or constructed a house on the so called standard plan, and remarked that, for want of funds, the further prospects contemplated were to lie over. The poverty-stricken Hospital Assistants were eagerly expecting the promised freshes and many of them with grey hair long hesitated to retire in the hope of drawing a decent pension. They little thought that they had not the fortune like the Sanitary Inspectors to have a surgeon-general in Doctor King who was a godfather to them, and used so much ink and paper to raise them in the world's estimation notwithstanding the conviction of the public that he did all this only to be enshrined as a bread-giver for a minority of the down-fallen half-educated natives of the land. At last there came a time when the expected freshes happened to be a bubble, which burst. The Hospital Assistant found that the prospects as sanctioned by Government did not elevate their position even to a

degree pecuniarily or otherwise. They had been graded on Rs. 25, 35 and 55, and promoted septennially on passing examinations. The Hospital Assistants pregnant with hopes for the advancement of their status in many directions bowed dejected when the sanctioned table of prospects was spread out before them. Though they were scaled up to Rs. 70 as Rs. 25, 35, 45, 55 and 70, and allowed quinquennial promotions, their promotion even to the grade of Rs. 55 was made risky, they having to be selected (by what merits it is not understood), while they would have been promoted as a matter of course on passing an examination without fear, fever or favour according to the old rules. They need not even enjoy the dream of promotion to Rs. 70 grade as such can be the happy luck of chance of but 100/100 of the total strength of the Hospital Assistants. It may be inferred from these that a plan was devised to dupe the famine-fallen Hospital Assistants by making an outward show that their matter received best attention; but practically matters have been made only worse.

Arithmetically considering a Hospital Assistant who has served for 25 years (this is the highest which one can hope to serve for) would have been paid as per old scale Rs. 1025×12 , while one of the new scale Hospital Assistants would have drawn (a), Rs. 975×12 only during the 25 years, if he remain without promotion to the Rs. 55 grade, or (b) Rs. 1075×12 if promoted to the Rs. 55 grade and terminated his service in this grade, or (c) Rs. 1150×12 if he be one of the solitary few enjoying the Rs. 70 for 5 years. The increase in pay that a Hospital Assistant of the new system would draw over that of the old is either a minimum of Rs. 50×12 or a maximum of Rs. 125×12 during his

full service of 25 years. In other words an increase of Rs. 2 a month is all that has been given to them, or of Rs 5 a month in the case of the fortunate few.

If exists a thing as transmigration, the condition of the Hospital Assistants can be hoped to be improved as soon as Lt. Col. W. G. King, I. M. S., transforms himself into a Surgeon-General with a heart full of kindness, sympathy and honor.

VOX POPULI.

[We do not believe in transmigration, although we have been told that a virtuous cow hippopotamus once got transmigrated into an under-graduate of the Calcutta University. The transmigration of Lt.-Col. King into a Surgeon-General will be a far more portentous event. We decline to contemplate its possibility.—Ed. A.]

SIR,

Many of the medical practitioners of the southern districts might be familiar with the term "kanai" (கனைய) which is extensively used in the Tamil districts to denote a passive or low febrile state with the following symptoms. The body and head are always warm or sometimes hot, chiefly at nights, with a temperature of from 99° to 101° , without the usual constitutional symptoms, such as malaise, headache, thirst, constipation, &c., &c., usually attending simple febrile or other specific inflammatory states of the system. The patients—mostly children—are found to fret and grind their teeth during sleep. They take food indifferently and become lean and bare-chested in spite of the best attention to diet and hygienic conditions. Constitutional diathesis of childhood like rickets or syphilis (congenital) or tubercular affection of the system or "worms" or "dentition" are conspicuous by their absence and the children to all appearances look all right.

The usual remedies indicated in such a condition, viz., quinine, arsenic, bitter tonics, cod-liver oil, plain or emulsified, the Easton's or Parish syrup, the hypophosphites anthelmintics, purges, change of air, &c., have yielded no satisfactory results. The patient either goes on with these symptoms till the 12th or 15th year, when, with the change of life at this period the condition is said to disappear spontaneously or is said to be cured in the middle by the administration of an oil largely prepared and sold by native physicians, known as "கனைய எண்ணெய்." It is not unusual to find every household having a quantity of this medicine which is likewise used for other sundry ailments of children as indigestion, constipation, fever and chest cold and the popular impression is, that we don't possess a good remedy for the condition known as 'Kanai.' The oil in its composition appears to consist of vegetable bitter tonics, anteperiodics and laxatives with castor oil for its basis.

I hope any of your well informed or busy practitioners will do a service to the profession by kindly publishing the name, aetiology, symptoms efficient treatment and the morbid state found to exist in this condition of the system.

SIVAKAMI } T. S. CHINNASWAMI,
24th August 1905. } and Grade Civil Hospital Assistant.

ACKNOWLEDGMENTS.

We acknowledge, with thanks, receipt of the following journals:—

The Edinburgh Medical Journal. The Polyclinic. The Bristol Medico-Chirurgical Journal. The Medical Brief. The International Journal of Surgery. The California Medical Journal. The Alkaloidal Clinic. The Dietetic and Hygienic Gazette. The Good Health. The Indian Medical Gazette. The Practical Medicine. The Madras Review. The Viveka Chinthamani. The Arya. The British Journal of Children's Diseases. The Sanitary Record and Journal of Sanitary and Municipal Engineering. The Northumberland and Durham Medical Journal. The Canada Lancet. The American Journal of Ophthalmology. The China Medical Missionary Journal. The Medical Review of Reviews. The Post-Graduate. The St. Louis Medical and Surgical Journal. The Therapist. The Canadian Practitioner and Review. The Australasian Medical Gazette. The American Practitioner and News. The Caledonian Medical Journal.

The Montreal Medical Journal.

The Louisville Monthly Journal of Medicine and Surgery.

The Monthly Cyclopædia of Practical Medicine.

The Buffalo Medical Journal.



WE HAVE JUST RECEIVED THE FOLLOWING:—



SRI KRISHNAN BROS., Chemists and Opticians, Madras.

The Antiseptic.

Vol. II.]

OCTOBER, 1905.

No. 10.
Annual Sub-
scription Rs. 5.

Original Articles.

* Venesection and Drainage of the Legs in certain cases of Heart Failure.

BY

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EVERY practitioner is familiar with cases of heart failure when the ventricles are dilated, while their muscular walls are weak and unable to carry on a proper circulation in the systemic and pulmonary systems. Heart failure may result from many causes, such as old standing disease of valves, hypertrophy that has subsequently degenerated in cases of granular kidneys, fatty degeneration, dilatation sequent to chronic emphysema and bronchitis, etc. Such patients, in the later stages of illness, arrive at a condition of disablement, with great distress and danger from failure of the strength of the right ventricle leading to congestion of the lungs, due to return of blood from the vena cava and consequent oedema of the legs, ascites and renal congestion with scanty and albuminous urine. Bronchitis, inability to sleep and jaundice from con-

gestion of the liver may add greatly to the patient's distress and the probabilities of a fatal ending.

In such cases, whatever the primary origin of the heart disease, there is overfulness of the systemic venous system; the right heart being over-distended and failing to contract with sufficient strength to empty the blood out of its cavities becomes greatly distended, its walls are stretched and the muscular fibres act at a disadvantage from the too great strain upon them. A muscle that is over-stretched and elongated will not contract to the same stimulus as a muscle in a healthy condition.

In a typical case of threatened heart failure from over-distension of the right ventricle, the patient is usually seen propped up in bed, the face pale or dusky, with blueness round the lips. The external jugulars are distended and may pulsate from tricuspid regurgitation; if the vein is emptied by pressure with the finger, it rapidly fills from below though the flux into the vessel from above be prevented. The pulse will be weak at the wrist with low tension and probably irregular in rhythm. The breathing will be embarrassed, shallow and distressing to the patient so that he can hardly speak; while the want of sufficient sleep and inability to take nourishment properly add much to the dread of impending dissolution.

* Specially contributed to "The Antiseptic."

These cases vary as to the amount and distribution of the dropsy and œdema resulting from obstruction in the heart, and it often happens that the occurrence of considerable œdema of the legs affords great relief to the circulation and respiration. The following is an illustrative case:—

Elizabeth T., 33 years of age, suffered from rheumatic fever nine years ago, health had otherwise been good till 5 months previous to admission into hospital when she had a normal confinement from which, however, she did not make a good convalescence. She was troubled with cough and expectoration, especially at night, when she was unable to lie down; there was frequent vomiting after food and shortness of breath distressed her. When admitted to the hospital the veins of the head, face and neck were engorged. She was jaundiced and sat propped up in bed; there was much distress in breathing and palpitation on the least exertion; pulse was 104, very irregular, with several abortive beats between each effectual one, and tension very low. The apex beat of the heart was displaced outwards and downwards, and the impulse was diffused while a systolic mitral regurgitant murmur was heard on auscultation and the distended right ventricle was felt feebly beating at the epigastrium. Dyspnoea was distressing, accompanied by troublesome cough and expectoration. There was œdema of the legs extending up the thighs to the back. The urine contained a trace of albumen, sp. gr. 1025; about a pint and a half was passed per diem with a deposit of lithalis.

The liver was much enlarged from passive congestion and there was a moderate degree of ascites.

The patient's condition was urgent from complete heart failure due to over-distension

of the right ventricle; this caused much distress and threatened early death.

The patient was too ill to sit in a chair with the legs hanging down to increase the œdema and so empty, to some extent, the over-full venous system. I therefore had the head of the bed raised by means of blocks of wood, so that the patient sat upright with the body sloping downward to the feet, and fracture boards being placed under the mattress the pelvis did not sink into the bed. The feet and legs were rendered aseptic as far as possible by boracic fomentations. Increased œdema of the legs soon followed, but the venous distension in the neck continued. Drainage of the legs was then effected by the insertion of a Southey's tube in each leg, which was fixed in place with strapping, while a long rubber tube conducted the fluid to a receptacle under the bed. Each foot and leg was covered with antiseptic dressing up to the knee. One hundred and twenty-six ounces of serum were then drawn off which relieved the breathing. Twelve days later, at the patient's request, the tubes were re-inserted in the legs and three hundred and thirty-six ounces of dropsical fluid were removed. The relief given was only temporary; vomiting was troublesome. Two days later the dyspnoea again became urgent with increased engorgement of the veins in the neck and epigastric pulsation. The heart's action was more irregular. The right jugular vein was opened and ten ounces of blood withdrawn while 1/30 of a grain of strychnine was injected subcutaneously. This gave marked relief. Next day the patient became violently delirious with screaming, and died in thirty-six hours.

I will now quote another case in which venesection lead to highly favourable results.

The patient was a very stout, heavy man, weighing over twenty stones (*i.e.*, over one hundred and forty pounds). He was sixty years of age. Twenty years previously he had suffered from an attack of acute rheumatism, and said that ever since he had at times been liable to swelling of the legs; this condition had confined him to his bed for three months previous to his admission. On examination, his heart was found to be enlarged, with a diffused impulse, the apex-beat being displaced outward and downward; the right ventricle was also felt distinctly in the epigastrium; its action was irregular and the sounds were very indistinct. There was a mitral regurgitant bruit, both ventricles were dilated, and the pulse was small, irregular and weak. Over the chest the breath sounds were very weak, with other signs of emphysema; at the bases behind there were rhonchi and rales, indicating bronchitis with congestion of the lungs. The patient suffered considerably from dyspnoea. The liver was felt enlarged and tender, extending nearly to the umbilicus; there was moderate jaundice. Ascites was marked, and the abdominal walls, as well as the legs, were tense with solid œdema. The legs were tense with œdematous swelling; the skin was inflamed and erythematous from the feet half way up, the thighs each measuring thirty-six inches round each leg.

The left leg was deeply ulcerated, granulating, and producing a very foul secretion.

The urine was of fair quantity; specific gravity 1010, with a trace of albumen.

A fortnight after admission the patient had a severe attack of dyspnoea, with convulsive twitchings of the forearms, while consciousness was impaired. He

became markedly cyanosed, black in the face, with great distension of the veins in the neck. The signs of congestion of the lungs increased.

The right external jugular vein was opened and fifteen ounces of blood were withdrawn; at first the blood spurted out, afterwards falling to a dribble. The patient was a little relieved, but appeared to be in a dying condition, so that it was not thought well to draw more blood. A pad and bandage were applied to the neck.

About three hours later, during an attack of coughing the wound in the vein started bleeding profusely, and about twenty ounces escaped before the vein could be ligatured. Just before this was effected, the patient suddenly looked up and remarked: "Why, I feel quite well now". During the next fortnight he improved greatly in every way. Then a second attack of urgent dyspnoea occurred, and the patient became cyanosed and almost comatose, with a fluttering pulse. The left external jugular vein was opened, and twenty-five ounces of blood being withdrawn, the vein was secured. The patient at once showed marked improvement, his breathing became easy, a good colour returned, and the pulse became more regular. From this time he steadily improved, the ascites and œdema disappeared, the ulceration of the legs healed, and he was discharged eleven weeks after admission to the hospital and resumed his work as a miller.

This patient was an unfavorable subject for venesection on account of his long-standing mitral regurgitation, which had previously led to œdema; while the epigastric pulsation, the pulmonary congestion, the enlarged (cardiac) liver with ascites, and his generally "water-logged"

condition when admitted to the ward showed great embarrassment to the circulation. During the severe attack of dyspnoea with cyanosis his brain was probably congested, as indicated by his comatose condition and semi-convulsive movements. The man was so nearly moribund that only fifteen ounces of blood were drawn from his jugular, but it is clear, from the sequel of the case, that a larger withdrawal of blood was needed to remove the congested condition and relieve the over-distended right ventricle. The ultimate absorption of his ascites and cedema showed restoration of the balance of circulation following the treatment.

***The X-Rays and Hyperstatic Electricity in Chronic Disease.**

BY

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In the study of medicine, we are often amazed at the little care taken in administering, not only doubtful drugs, but drugs of a very poisonous nature, to patients suffering of chronic disease.

When we study the delicate lining membrane, constituting the innermost coat of the stomach, it is a wonder that the deleterious effects of such drugging is so disregarded.

Physicians (as a rule) think nothing of prescribing for their patients (per orum) drugs, ranging from that of the vilest acid to the most caustic alkali, because precedence has taught them to do so.

* Specially contributed to "The Antiseptic."

Seeing the many wrecks thus produced by reckless internal medication (early in my student days), I sought such means and measures of cure, more mechanical in nature than chemical, or a combination of both, given in such a way, as not to make any particular organ or organs bear the brunt of a destructive process in order to cure one of its fellows.

Early in the year "99" or "1900" I began to study theoretically and practically the possibility of curing certain diseases with the X-rays, and my work was rewarded by cure after cure of cancer of many years' standing, from which treatment the patient suffered no pain nor was there an appreciable scar left to tell the tale.

Quickly following these came the cures of some of the most hopeless cases of lupus, eczema, indolent sores, or ulcers, local tubercular infections, splenic leukemia and keloids.

Acne cleared away as if by magic to the powerful effects of the "rays."

There were, however, many diseases which I found would not yield to the X-rays; notably among these were those conditions seemingly of a nervous origin such as chorea or St. Vitus' dance, hysteria and other peculiar nervous phenomena shown in young girls.

Here the hyperstatic currents, taken from the coil (of the "Western" type such as I use), and run through a vacuum electrode placed over the vaso-motor and other nerve centres of the particular area affected proved to be invaluable, in the cure of these puzzling conditions.

Taken directly from the coil as above described, we get a happy combination of vibratory massage, and electric stimulation plus violet rays, which cannot be obtained in any other manner.

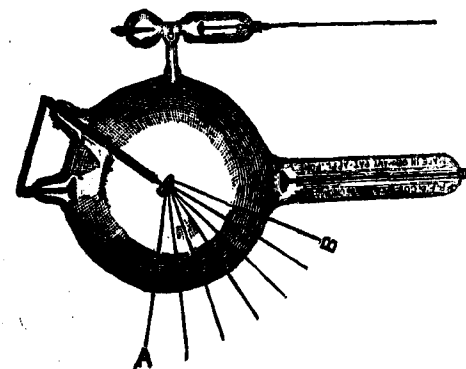
It is now over five years since I began the study and use of the X-rays and hyperstatic currents, for treating disease, and in that time have been instrumental in curing so many heretofore considered incurable pathological conditions, that I feel it not only my duty, but that it would be a source of great pleasure, to those seeking to cure others, to give an outline of the methods used in my laboratory with a report of a few cases.

In giving X-rays treatments, the operator must bear in mind that he is dealing with a powerful therapeutic agent, and that it has its *indications—dosage limit—idiosyncracies* and *mode of administration* just as any other powerful agent in our materia medica.

These transverse, vibratory, etherial waves are generated by either a static machine or a dynamo plus induction coils, and allowed to enter a vacuum tube coming out of same as the X-rays.

So far as we are concerned in giving treatment we have to deal with the direct (destructive) and the indirect (stimulative) rays.

The direct or destructive rays come between the lines *a* and *b* (see figure one) while outside of these lines, we get the indirect or stimulating rays.



This is important for many reasons: suppose, for instance, we wish to stimulate granulation in a part; knowing this, we would not place the part within the field of the destructive rays; for the same reason we should not place an epitheliomatous area under the influence of the stimulating rays for here we wish destruction of epithelial tissue; the failure to note these points in treatment has brought about many complications and disappointments, especially do I report the following case to illustrate.

Hypertrichosis:—Miss C., Louisville, Ky.—This young lady having noticed that a few hairs had appeared upon the side of her face, sought the advice of an X-rayist in this city. As a consequence she received for her trouble a heavy growth of hair covering both sides of her face, lip and chin, while the hair in her scalp had so fallen out as to make her completely bald on each side of the head.

It was in this condition that she came to me for consultation; believing that the hair in her scalp had received the direct or destructive rays, while the hair on her face received the indirect or stimulating rays, I simply reversed the order of things, giving the direct on the face, the indirect on the scalp, the results being entirely satisfactory.

INDICATIONS.

So far the X-rays seem to be indicated in lentigo, farus acne, rosacea, lupus, verrucae, hyperidrosis, epithelioma, hypertrichosis, naevus, angioma, eczema, syco-sis, acne, rodent ulcer, seborrhea, and many other diseases of the skin and appendages. Carcinoma of the breast, stomach and liver (if taken early), catar-rhal inflammation of the uterus, tubes, ovaries, stomach and liver, splenic leuke-

mia, neuralgia, especially sciatic neuralgia, many tubercular infections, adhesions of the pleura and appendix, Hodgkin's disease, deep-seated ulcers, such as ulcer of the stomach.

DOSAGE LIMIT.

The dosage limit is characterized by a blushing of the exposed surface termed the reaction.

Its establishment is followed by the symptoms of heat, redness, swelling and pain.

It is similar to the sun-burn both in appearance and feeling to the patient, unless too much treatment is given (before it is noticed) and we have as a result "a burn."

IDIOSYNCRACY.

Just as in other drugs we have special idiosyncracies so we find it true of the X-rays.

Some patients will show a violent reaction at one or two sittings, while with others eighteen to twenty treatments fail to produce this symptom.

Brunettes are usually slower in taking the reaction than blondes.

In the case of a baby of two years whom I treated for eczema, three five-minute exposures produced the desired reaction.

MODE OF ADMINISTRATION.

It is of prime importance that the operator (who has *much* of this class of work) protect his body from these rays both destructive and stimulative.

Self-Protection.—The author advises the use of a tin cap, similar to the helmet, an upright portable screen lined with lead foil that he may stand behind a pair of

glasses similar to automobile glasses, except that the cloth be replaced by lead foil.

Care should also be taken not to demonstrate to your patients the bones in your hand or arm, as the accumulative action of the many short exposures may cause you much pain and anxiety.

There are a number of tube shields, now on the market, claimed, by their inventors, to thoroughly protect the operator and patient, but the most satisfactory shield I have ever used was a contrivance made under my direction by a carpenter.

This apparatus was made of wood lined with sheet lead in the shape of a box.

This tube was placed inside of this box, the lid closed, thus entirely excluding the light from view except a little at the ends of the tube, and at the under side where the rays are especially emitted being open and grooved for diaphragms of different dimensions.

This box by a series of rods and screws is made to tilt in any direction.

With these few remarks, in which I wish to impress upon the operator the necessity in using the first law of nature, we will pass to study a few more practical points.

Protection of the patient.—Those parts which lie within the field of the rays, and which the operator does not wish to expose to the light should be covered by sheet lead, which can be easily patterned, by cutting and bending to fit almost any portion of the body, thus limiting the treatment to the part needing treatment, only this is very important, as it is not our desire to treat healthy tissue.

Condition of the tube vacuum.—The so-called soft tube and hard tube indicate the condition of the tube vacuum, the former meaning that we have attached for treatment a low vacuum tube which seems to be more suitable for superficial lesions, while the latter term expresses a tube of high vacuum, which is used in deep-seated lesions. How to detect the condition of the tube vacuum in giving treatment has caused a great deal of study upon the part of the operator.

I usually tell the condition of the tube vacuum by the color in the tube.

If the tube is light green with a little violet I call it "soft."

If grass green with no violet—"medium." If bottle green and flickering—"hard." Of course "extra soft", "extra hard," etc., are easily obtainable when one bears in mind that the more violet in the tube, the softer the tube becomes, or, in other words, the lower the vacuum, and the darker the light becomes, etc., the higher the vacuum.

The time of each seance—differs with the individual. Of course a baby would not take as long a treatment as a full-grown adult.

It is usually a safe rule to follow to give each treatment for at least five minutes, gradually increasing to ten until reaction appears; six to twelve hours should elapse between treatments.

Distance of the tube from the patient.—The tube should be placed from two to eight inches away from the affected area, according to the size of the diseased parts, and the amount of destruction the operator wishes to produce; for example, in acne we wish the light diffused over the whole face, the light should come from

the tube placed at from ten to twelve inches away, while in a keloid or epithelioma we wish destruction and should place the tube from two to four inches from the lesion.

To further illustrate these points I report the following cases, treatment given by myself in my own laboratory.

CASE 1.—Miss Mattie McAlister, Catalpa Street, Louisville, Ky., U. S. A.

Keloid—(involving the left arm), about the size of the United States of America half dollar brought about by vaccination several years previous.

Having never read of a complete cure of these dreaded forms of tumors, I was at first sceptical as to the possibility of giving favorable results in this case, but owing to the reward offered to me by the mother to cure her daughter without operation and giving me the privilege of experimenting, I decided to try.

Imagine the satisfaction to myself, mother and patient, to note that after heroic treatment covering a period of about six weeks, we were rewarded by a complete cure.

CASE 2.—Miss Deaking, New Albany, Ind., U.S.A. Splenic Leukemia—(wrongly diagnosed as abdominal tumor by many).

Miss D. came to my laboratory showing every symptom of advanced splenic leukemia, spleen enlarged to four or five times its natural size, with gastric disturbance and other pressure symptoms, with the blood count showing a much depraved condition of the stream.

Treatments of X-rays, vibratory massage and hyperstatic currents were alternately given together with a form of iron and bone marrow for three months, after

which time the spleen had subsided to its natural size, all other symptoms following suit.

This patient is now able to teach her school and does her ordinary household duties, takes long walks, all of which she says she enjoys.

It has been one year since she was discharged and having seen her on the day of this writing, I can positively state that there is not the least indication of her former trouble.

CASE 3.—Mr. Elliott, Portland Ave., Lou., Ky., U. S. A. Goitre—about the size of a pigeon egg, was advised by his physician to paint over the goitre with the tincture of iodine. The growth enlarged rapidly under this treatment. The patient was placed under the X-rays, using a high vacuum tube for 10 minutes daily—distance 8 inches.

After each X-ray treatment the goitre was vibrated and the application of the hyperstatic currents were used for several minutes daily.

This treatment diminished the goitre until it could no longer be distinguished. Iodoform capsules of one grain each three times daily was the only internal medication used.

CASE 4.—Miss Adkisson, Fort Sill, Oklahoma, U. S. A. Epithelioma near lip on face, size U. S. silver dime, eight ten-minute treatments with the soft tube, distance of tube two inches produced reaction after which same disappeared.

CASE 5.—Mr. Louis Kellu, Lou., Ky.—Epithelioma of eyelid and nose—eighteen treatments soft tube—time ten minutes each—distance six inches—cured without noticeable scar.

CASE 6.—Mrs. B. H., 1512 W., Maple St., Louisville. Ky. "Cancerous Wart"—(Epithelioma) about the size of a silver dime, located posteriorly on the neck. This started as a small pimple or wart many years ago, but thinking it of an innocent nature, she allowed it to grow year after year, constantly being irritated by the clothing, until it began to take on cancerous characteristics, at length breaking down, ulcerating and discharging until it became so annoying that the patient alarmed at her condition came to me for consultation. I advised X-ray treatment with the application of suitable dressings, to which she acquiesced. Treatments of 10 minutes daily were given until reaction appeared—after which all cancer symptoms subsided and later the entire wart disappeared, leaving a clear, healthy skin in its place.

CASE 7.—Mr. Watts, 120, Jefferson St., Lou., Ky. This man had been suffering with rheumatism of the knee and ankle for many years.

He had tried so many of the much-vaunted rheumatic cures, including the salicylates, liniments, alteratives and illimants, until he had become so sceptical as to the possibility of being cured by drugs, that he sought a physician who might offer him other agents for his trouble.

I immediately advised the use of the hot air oven hyperstatic electricity, X-rays and vibratory massage.

His pain was relieved after the third treatment. Subsequently he progressed uninterruptedly into a complete cure and since that time (Nov. 20, 1904) he has worked daily in his blacksmith shop. The only therapeutic agent given per orum was water (H₂O) and that in abundance.

CASE 8.—Mr. Sullivan, Detroit, Michigan, U.S.A. Sarcoma of the testicle, recommended to me by Dr. Wineberg of Lou., Ky.

This man, a shoemaker by trade, was compelled to quit work on account of his condition.

Testicle swollen to five times its natural size, the large hardened lumps could be felt between the fingers distinctly.

Had been advised at the Louisville City Hospital to undergo castration.

After twenty-two six-minute treatments with medium soft tube, distance six inches, a terrific reaction appeared, the epidermis peeling off in large pieces.

A dressing of compound stearate of zinc was applied daily.

In two weeks after treatment the testicle resumed its natural size, and as he expressed it in a letter, became, "A new man," and "was back at the bench".

* PROCTITIS.

BY

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Proctitis or inflammation of the rectum is quite commonly met with in general practice, and requires careful diagnosis and prompt treatment. Several different varieties are distinguished, although the symptoms in general are much the same in all and the case frequently terminates in fistula.

* Specially contributed to "The Antiseptic."

Proctitis is divided into acute and chronic varieties, each of which has several forms, according to etiology or development. Thus the acute consists of the catarrhal, dysenteric, diphtheritic and gonorrheal; the chronic, of the catarrhal, syphilitic, tubercular, papillomatous and stenosing.

The catarrhal acute form of proctitis is due to intestinal disturbances and occurs chiefly in children, although occasionally it is found in adults. Usually the mucous membrane alone is involved, being congested, even tumefied at times, and the epithelial layer may be shed off during the engorgement. In dysenteric proctitis, the whole colon is frequently involved, especially in the tropical variety. The rectum, like any other mucous membrane, is liable to the invasion of diphtheria, but infection is rare. Gonorrheal proctitis is commonly found in women on account of the close proximity of the vulva and rectum and is usually the result of uncleanness, sodomy or abscess of Bartholin's gland that has ruptured into the rectum.

The catarrhal chronic proctitis may result from repeated attacks of the acute or it may begin as a deeper and chronic inflammation. Constant reinfection and irritation together with a sluggish venous flow tend to prolong any inflammation in the rectum. In aggravated cases, the surface is granular with multiple ulcerating points. Hypertrophy of the glands occurs, causing papillomatous growths which project into the lumen of the rectum (papillomatous proctitis). When the inflammation extends deeper than the mucous membrane and involves the areolar and muscular tissues around the rectum, a constriction results later, from the contraction, and we have a stenosing proctitis.

In adults, proctitis may result from faecal impaction in the rectal pouch, exposure to colds, as sitting on a cold or wet seat, foreign bodies in the rectum, hard substances in the faecal mass, as fish bones, pins, hulls of cereals; injury from the tip of the syringe, strong purgatives or arsenic, bichloride of mercury, irritating suppositories, the extension of inflammation or colitis, or the irritating discharges from the bowel above. Esmarch reports a case of proctitis as a symptom of gout, the rectal inflammation alternating with other symptoms. Proctitis may also result as an extension of inflammation from hæmorrhoids, prolapse or eczema about the anus. Both acute and chronic proctitis may result from inflammation of neighbouring organs, as the bladder, prostate, vagina or uterus.

Symptoms.—The symptoms vary with the severity of the attack and the duration of the trouble. The chronic forms are less painful and tender than the acute. A sensation of weight, heat or fullness appears in the rectum and may amount to actual pain which in severe cases may involve the uterus, bladder and sacral region and even radiate down the thighs. With this tenesmus, a constant and ineffectual desire to empty the bowel occurs and this continual straining frequently produces a prolapse of the mucous membrane, especially in children. Irritation of the trigonum vesicæ causes frequent micturition or sometimes retention. By this time the engorged membrane is bleeding, perhaps with a mere streaking of the passages or occasionally considerable discharge of clear blood. Kelsey reports a case where this loss of blood was the first symptom that attracted the patient's attention. A case of proctitis with hæmorrhage without any of the antecedent symptoms is rare. Later mucus and pus are voided. Exami-

nation at this stage reveals ulceration to some extent. It may be very superficial and limited to one or two small points or have many focuses, some of which may be quite deep and involve the whole thickness of the mucous membrane or even perforate the bowel. When ulceration occurs above the peritoneal fold it results in peritonitis, and when below that line, in abscess and fistula. A chronic proctitis may in this way cause a stricture.

In all forms of proctitis the anus is red and painful, the sphincter and levator ani muscles irritable and spasmodic, and associated with the local symptoms there is always more or less constitutional disturbance. In chronic proctitis, the symptoms are less marked, diarrhoea alternates with constipation and the discharge occurs only with defecation. The inflammation may be limited to only a small part of the rectum or may be more diffuse and involve all the organ.

The symptoms of dysenteric proctitis are similar to the catarrhal chronic except that more of the bowel is involved and the systemic influence is more marked. When the diphtheritic variety is found, the other members of the patient's family should be cautioned about using the same closet. The gonorrheal form has its characteristic free, creamy white discharge issuing from the anus, the rectum becomes hot and swollen and the pain is burning and intermittent. The anus chafes and the sphincter is spasmodic. The proctitis is usually of short duration and can easily be differentiated on account of the presence of the disease in the vulva or urethra and by finding the gonococci in the pus. It may, however, if untreated, degenerate into a chronic proctitis. The discharge is freer and contains more pus than any other form

of proctitis. It must be remembered, though, that gonorrheal proctitis is rare; Gosselin saw only one case in three years at Louccine.

The following case in my own practice some time ago gives a vivid picture of this form of trouble: Case No. II, referred to me by Dr. G. W. W., and first seen by him, suffered from gonorrheal infection of the whole genital tract. Abscesses had developed in Bartholin's glands and rupturing into the rectum had produced labio-rectal fistula on either side of the vagina, from which there was considerable discharge. The examination revealed sinuses into the rectum above the external sphincter. Rectal examination showed on inspection a free discharge from the vagina and also from the rectum when the patient was requested to bear down, although the sphincter, which was spasmodically contracted, would ordinarily retain the discharge. The anus was quite inflamed. The digital examination showed that the rectum was tender and disclosed an abrupt stricture about two inches and a half above the anus. This stricture was at nearly the lower level of the internal sphincter muscle and was annular in shape and diaphragmatic in form; that is, a thin membranous septum. No marked induration was felt at any point, but as the finger was withdrawn it was covered with blood and pus and a few shreds of mucous membrane.

The observation through the speculum was especially instructive. The active inflammation began immediately above the external sphincter and appeared localized below the stricture spoken of. The whole mucous membrane had a honeycomb appearance and was covered with white fibrous shreds resembling the "tripper faden" of urethritis, only much

larger. They were easily removed, but left the mucous membrane inflamed and bleeding. As the rectum was dilated, the stricture could be seen to stretch and tear. The trouble appeared to be localized within the lower two inches of the rectum.

Prognosis.—Proctitis is not very serious, as a rule, unless the cause cannot be found and removed. When the cause is removed the case commonly heals kindly unless complicated by ulceration, abscess, or fistula. Sometimes a perirectal lymphangitis or phlebitis may protract the case or cause a fatal termination. Acute proctitis will pass off in ten days or so, leaving no appreciable, permanent alteration in the bowel except in those cases where ulceration or gangrene has occurred. Chronic proctitis is liable to continue indefinitely unless the cause can be removed. The mucous membrane is thickened and indurated and loses its sensibility more or less, so that a large bolus of faeces may collect without stimulating the rectum to expulsion. Stricture of the rectum generally has some chronic proctitis associated with it; below the stricture the mucous membrane is congested and covered with pus or mucus, while above the stricture ulceration occurs.

A thorough examination of a case of proctitis is important and a digital examination should be made in every patient presenting a chronic diarrhoea, because many of the causes given above as predisposing to or exciting proctitis may be promptly determined. When the patient is placed in the knee chest position, the proctoscope is well oiled and introduced, and as the obdurator is withdrawn the air rushes in and dilates the bowel and by turning the proctoscope from one side to the other and gradually withdrawing it the whole surface of the rectum may be carefully and thoroughly explored.

Treatment.—The treatment of proctitis varies considerably with the exciting cause and therefore before instituting any treatment a thorough examination must be made. The parts being irritated and inflamed, the examination is very painful unless an anesthetic, either general or local, is administered. In many instances where, for various reasons, chloroform should not be given at the time of the examination, the patient may be relieved of most, if not all, of the pain by applying a two per cent. solution of cocaine. A general anesthetic has much in its favor, because when the patient is asleep the sphincters may be thoroughly dilated, thus relieving the tenesmus and greatly facilitating subsequent examinations or treatment. At the same time, any local trouble or cause of the proctitis may be removed, thereby accomplishing two things at one sitting.

Acute cases require absolute rest in bed, because when the patient is up and about his duties the dependent position of the vessels together with the thinness of their walls and the associated congestion and inflammation produce a venous stasis which seriously impedes or prevents regenerative changes.

The diet should be plain and of such a variety as will insure soft or semisolid evacuations. It is also advisable to maintain a largely absorbable dietary that the bowels may move infrequently, thus sparing local movements of the parts. Twice each day the bowel should be touched with two quarts of cleansing solution as hot as can be borne. To begin with, a temperature of 105°F. may be used and the temperature raised each day. Plain boiled water with the addition of a handful of salt has given me the best results. I have devised a douche tip of

my own to be used in these cases, because I have found it impossible to obtain a free return flow with any I have been able to find and unless the exit is large the fluid will pass up into the colon and carry the infection up with it, instead of washing it out. By practical experience, I find that douching in this manner washes out a large amount of infectious material, such as secretions, fecal accumulations and hordes of micro-organisms; dissolves mucus and pus, flushing them out as shreds; contracts the vascular structures, thereby stimulating circulation, and relieving the local congestion and depleting the tissues.

Following the douche, about two drachms of astringent antiseptics or other medicinal mixtures are injected and the patient instructed to retain it. Silver nitrate, hydrastis, glycerole of tannin or acetate of lead in various combinations and strengths, according to the case, are the most reliable drugs. If the pain and tenesmus are not relieved, laudanum and starch water may be injected every two or three hours until the patient is relieved. From twenty to sixty minims are often needed in this way.

Hot fomentations applied over the hypogastrium give much relief when the inflammations extend over a large area and when there is general, diffuse pain and tenderness. In mild cases limited to the lower end of the rectum, the applications of cold to the anus and perineum or the injection of cold water into the rectum relieves the congestion promptly.

When the proctitis is due to threadworms, injections of lime water or salt water and the administration of santonin internally will be enough. Gonorrheal proctitis, like its counterpart in the urethrae

is especially intractable. Silver nitrate solutions 1-3000 should be used to douche the rectum, but the same conditions must be observed as are mentioned above in speaking of the rectal douche. The strength is to be gradually increased as a tolerance is obtained until a 3-1000 solution is used. Following the douche the whole mucous membrane is swabbed with balsam copaibæ or a suppository containing balsam copaibæ and iodoform each grs. v may be inserted.

The chronic forms of proctitis are somewhat different. Barring the very mild cases, it may be said that unless carefully treated they all become chronic. The douching should be instituted in these just the same as in the acute cases because of its alternative effect. The excessive secretion is controlled with applications of alum, zinc or silver or any of these combined in a suppository with iodoform or one minim of oil of turpentine.

When ulceration, periproctitis or any other complication exists, it requires its own treatment, which for obvious reasons cannot be entered into in this paper. Syphilitic cases are associated usually with strictures which may require surgical treatment, although I have seen astonishing changes occur under general internal medication. Tubercular proctitis is usually secondary to disease higher up and is accompanied with so much ulceration together with the general systemic infection that treatment is unsatisfactory. The treatment of proctitis due to cancer is surgical, and cannot be considered in this paper.

Proctitis in either the acute or chronic form is always a serious matter, deserving the physician's most careful attention because the inflammation itself may debi-

litate, and especially because complications which may invalid the patient are prone to occur. Each case is a law unto itself and this article cannot go into the details that may perplex the attendant, but simply tries to give the reader a clear clinical picture in general and to lay down the main lines of treatment.

Cases and Comments.

Comments on the Pathology and Treatment of Cholera.

THE very severe and widespread epidemic of cholera which Madras experienced within the last few months will be still fresh in the memory of the readers of the *Antiseptic*. A few remarks on the pathology and treatment of cholera, or, rather, of the treatment of cholera based on its pathology, as far as we know it at present, may not be altogether out of place just now. I will not give the details of any case of cholera. All medical men in Madras must have had enough of them. But I will only give a few practical hints on the rational treatment of cholera. In the first place, a word about the bacteriology of cholera. It has come to be generally recognised that cholera is produced by the entrance into the human system of the Cholera Spirillum of Koch. Although this recognition is almost universal, the scientific evidence upon which it is founded is not so conclusive. Cultures of Koch's Spirillum obtained from different places have shown different variations in their characters. Spirilla very closely resembling Koch's Spirilla have been cultivated from sources other than cases of true cholera. Then again, cultures of the Cholera Spirillum from cholera stools have been swallowed

by experimenters without any cholera resulting therefrom. These and several other facts which I need not go into here have thrown some doubt on the Koch's Spirillum being the real cause of cholera. But for all practical purposes let us assume here that it is the cause of cholera. Proceeding on that hypothesis the most reliable diagnosis of cholera will be the discovery of the Spirillum in the evacuations. Most of the methods for the examination of the Cholera Spirillum are very elaborate and are only suitable for laboratory work. But there are simple methods of staining and recognising the Spirillum which are within the reach of every medical practitioner. Proceed as follows: (1) Smear a small quantity of cholera evacuation on a warm slide; allow this to partially dry; drop a few drops of a weak freshly prepared watery solution of methyl violet on the specimen and after fifteen seconds run the staining fluid off. Place a cover glass over the slide pressing it down slightly. Lay a piece of filter paper over the cover glass and slide so that the superfluous fluid is absorbed. Examine with a $\frac{1}{8}$ or $\frac{1}{2}$ in. "oil immersion lens." A beautiful preparation is thus obtained and the Spirilla can be distinctly seen. Now that you have seen the Cholera Spirillum, what are the other evidences of cholera? You have the symptoms of cholera which are usually divided into four stages: (1) the premonitory stage; (2) the evacuation stage; (3) the period of collapse or Algide stage; (4) the stage of reaction. I will not weary my readers with details of the symptoms which characterize these different stages. They are well known to every medical man in India. But what I want to direct their attention to, is the significance of these symptoms. I leave out the premonitory diarrhoea of cholera which is so often described in text-books.

I do not think that it is a part of cholera itself and it has to be treated like any other attack of diarrhoea. But with the onset of cholera what is the explanation of the symptoms that follow? Without going into the various theories that have been advanced from time to time, I may at once say that I believe that all the symptoms of cholera are directly due to the affection of the solar plexus by certain toxins generated by the Cholera Spirillum. When I say that, I am perfectly aware of the arguments advanced by many scientific workers against a cholera toxine. They maintain that there is no separate toxine apart from the Cholera Spirilla and that whatever toxine there may be is intracellular, i.e., within the Spirilla themselves. Seeing that the Spirilla themselves never get into the circulation but are strictly confined to the gastro-intestinal tract, I am inclined to the view that there is a cholera toxine—probably a highly complex and easily decomposed substance and hence the difficulty of its isolation from artificial cultures—and this toxine starts by paralysing the solar plexus. The symptoms indicate an extensive interference with the abdominal sympathetic system of nerves. This affection of the abdominal sympathetic is followed by a paralytic over secretion of the succus entericus which gives rise to the so-called "rice-water stools." The excessive drain of fluids from the system brings on collapse. And the other noteworthy symptom of cholera, namely, suppression of urine, must be attributed to the defective flow of blood through the kidneys. Having briefly indicated the pathology of cholera, let us discuss the treatment.

After an attack of cholera has fully set in and the evacuation stage is well marked, I venture to think that treatment by the internal administration of opium and

lead and catechu and chalk and intestinal antiseptics and the thousand and one drugs which are poured into cholera patients, is absolutely useless, nay more, positively harmful. In the first place, the drugs that are administered have not the slightest influence in arresting the progress of the disease. In the second place—and this is a fact which is generally overlooked—the power of absorption from the stomach and intestine is either entirely paralysed or considerably diminished. And therefore the drugs that are administered remain in the stomach, if they are not vomited out, till reaction sets in and the power of absorption returns. The sole object of my writing this communication is to enter a protest against the very free use of drugs administered through the stomach after cholera has set in. But then, you may ask, what are we to do if we are not to administer any drugs? Well, I will reply to that by asking another question. What do you do in a case of small-pox? What do you do in a case of acute lobar pneumonia? What do you do in scarlet fever? Preserve the strength of the patient till the disease runs its course. Rest in bed, with warmth, with free circulation of air in the room. Don't allow the patient to get up. Give ice to suck. Warm water to drink. A mustard plaster to the pit of the stomach and hypodermic injections of morphia and atropine may be tried to relieve vomiting. When the external temperature of the body goes down and the internal temperature rises as is generally the case in cholera, the best thing is application of heat externally and the injection of ice-cold water into the rectum. And when collapse sets in the patient ought to be carefully watched and repeated hypodermic injections of ether or digitalis or strychnia administered. If even these do

not give encouraging results I would without hesitation have recourse to intravenous injection of saline solutions. (60 grains of common salt and 60 grains of carbonate of soda dissolved in a quart of boiled water at a temperature of 100° to 105° F. is the suitable solution for injection.) In spite of all these treatments the patient may die. I am not recommending "an absolutely reliable treatment for cholera which has never once failed." I leave that to the proprietors of the various cholera drops and specifics. I am only pleading for a more rational treatment of cholera. *Use the hypodermic syringe freely in your treatment of cholera cases and leave the patient's stomach alone.*

One more point. Are you quite sure that all these cases of supposed cholera that you see during an epidemic are really cases of cholera? I have my own doubts on the point. How many mild cases were seen in Madras where there was not the slightest sign of muscular cramps and which made easy and rapid recoveries? I believe those are not real cases of cholera but only cases of diarrhoea.

T. M. N.

Two Cases of Ainhum.

BY

J. MASILAMANI PILLAY,
Hospital Assistant, Palamcottah.

I have been fortunate enough to see and observe two cases of ainhum during the last year and a half.

CASE No. 1—was a male, aged 50 years, a field-cooly from Velalankotai (Tinnevely District). Duration of illness 1½ years.

History.—Patient came into the hospital on 13-3-04 with a history that about 18

months ago a small narrow groove appeared on the inner side of and near the root of left little toe. It gradually deepened and extended round the whole circumference of the toe.

Condition on Admission.—There was a complete groove about the root of the little toe with a certain amount of ulceration. The distal end of the toe was slightly swollen. He complained of slight pain and discomfort while walking. The groove corresponded with the first phalangeal joint.

Treatment.—The toe was amputated at its root, and dressed with iodoform. On 19-3-04 (*i.e.*) 6 days after admission, he was discharged as cured.

CASE No. 2.—was also that of a male about 40 years old. A Hindu, a ryot of Chellakulam (Tinnevely District). Duration of the disease was 13 months. Date of admission 22-5-05.

History.—The patient noticed a narrow slit near the middle of the right little toe on its under surface. This gradually extended and finally involved the whole circumference of the toe. He said it came on without any appreciable cause.

On admission.—The distal portion of the toe was considerably swollen as if constricted by a cord. There was hardly any ulcer about the groove and the patient complained of much pain. The groove was not very deep and corresponded with the middle of the first phalanx.

Treatment.—Amputation of the toe as in the previous case. He was discharged on 26-5-05 practically all right.

Remarks.—Ainhum is a peculiar disease. It affects the toes, particularly the little

ones. It is said to be common amongst the dark-skinned races, especially the Negroes, but it is rare in these parts. If the case is not treated in time the toe drops off in the course of years, the groove deepening more and more all the time.

The disease does not, as a rule, recur. Very rarely are the 3rd or the 2nd or great toes affected. This disease is most common in adult males.

As to the etiology of the disease nothing is known definitely. Manson, however, thinks that "it is provoked, at all events in the first instance, by wounds so easily inflicted on bare feet in walking through grass or jungle. Continued irritation of this sort, produced and kept up by wounds from sharp grasses and so forth, would in time give rise, especially in the dark-skinned races so prone to keloid, to fibrotic changes in the derma, which might very well end in a sort of linear cicatricial contraction and ultimately in slow atrophying strangulation of the affected member."

EDITORIAL NOTICE.

The Editor will always be pleased to receive communications on matters of importance to the profession for publication in the 'Antiseptic.'

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THE ANTISEPTIC.

OCTOBER, 1905.

The Medico-Legal Aspects of the Travancore Planter's Case.



THE main facts connected with what has generally come to be known as "The Travancore Planter's Case" will be fresh in the memory of our Madras readers. But to our readers outside this Presidency and outside India some explanation is necessary before they can understand the chief features of a case with which we in Madras are only too familiar. Right away in the extreme south of India there is a Native State called Travancore. And in one corner of that Native State, there is a hilly tract of country which is inhabited by European planters. The locality called the Cardamom Hills forms part of the Native State of Travancore, but is mostly leased out to European planters. While the planters are all Europeans, the labourers employed in the plantations are all Indian coolies. Trades' Union principles and Socialistic ideas have not yet penetrated into the mountain fastnesses of the Cardamom Hills. The absolute autocracy of the planter capitalist is still unchecked by even the rudiments of the principles of industrial democracy which have, within the last few years, revolutionized the relations between capital and labour in Europe. When the coolie incurs the displeasure of his master, the planter "smacks" him with a cane or whip or fly-

switch or whatever is handy. This summary punishment is said to allay the excited feelings of the irate employer of labour and to help the Christian planter to demonstrate to the Heathen world his interpretation of the commandment "Love thy neighbour as thyself." According to a recent judicial pronouncement when the "smacking" is administered without any intention to hurt it becomes an expression of endearment. It goes without saying that no planter lifts his hand to strike a coolie with any intention to hurt. And so these manifestations of endearment between planter and coolie occur from time to time. But sometimes when the planter is in an excessively affectionate mood and the coolie unusually feeble, the coolie collapses and the planter gets into trouble. Formerly every native who died as the result of an assault by a European was supposed to have an enlarged spleen which ruptured at a most inopportune moment. Of late, in spite of the discovery of piroplasmosis, we have not heard much about the enlarged spleen. Well, whatever the case may be, the fact remains that some of these coolies on the Cardamom Hills who have been "smacked" by their masters die, and the affectionate planter who smacked the coolie has had to stand his trial at the Madras High Court.

On the 26th June last one Mr. Lee, who is the manager of the Chitravadi estate on the Cardamom Hills, "smacked" a coolie named Jacob. According to the prosecution Jacob ran away when Mr. Lee began smacking him and Mr. Lee ran after him and caught hold of him by the neck and belaboured him with his fist on the chest. After the alleged beating Jacob is said to have walked home, but on the way had to sit down in several places and also that he

vomited blood. According to the defence Jacob was none the worse for the smacking and walked home quite happy and well.

Three or four days after this a messenger came to Mr. Lee from Jacob asking for some turpentine which was promptly given. On the 8th July Jacob was seen by one Mr. Ephraim, an unqualified medical man who is employed as an apothecary on the Chitravadi estate. Ephraim whose method of examining patients is rather primitive, finds that his patient is suffering from fever by "the feel of the skin"—clinical thermometers are yet, perhaps, unknown in the Chitravadi estate—and he also comes to the conclusion that Jacob is about to get an attack of pneumonia. Ephraim said that he "used" his stethoscope, and when questioned as to what was the 'type' of breathing, answered that it was "hurried". This answer confirms us in our belief that "smacking" is the only form of 'auscultation' known on the Cardamom Hills. Well, after this diagnosis of fever and prognostication of coming pneumonia Mr. Ephraim prescribed a diaphoretic mixture with iodide of potassium, which drug, by the way, he considers to be the usual remedy in pneumonia, and recommended the removal of the patient to the hospital. Mr. Ephraim's next visit to Jacob was on the 11th July, when he reports that pneumonia was fully established because he heard crepitations all over the lungs. Are crepitations all over the lungs the physical signs of a fully established pneumonia? However, the next day Jacob died and within a few hours after death he was buried. On a complaint being made to the District Magistrate the body was exhumed on the 14th July and a post-mortem examination was held by Mr. D'Lemos of the Travancore Medical Service. The post-mortem

report of Mr. D'Lemos we publish elsewhere. Surprise has been expressed in some quarters that a body which had been under ground for 48 hours in a *tropical climate* was in such an excellent state of preservation as was described by Mr. D'Lemos. We need only mention in that connection that the locality where all these events happened and where the body was buried is about 6,000 feet above the sea level.

Now, coming to the post-mortem report itself, considerations of space prevent us from commenting on all the points raised and all the injuries noted in it. We shall only deal with the more important of the post-mortem appearances mentioned by Mr. D'Lemos. We shall select for discussion three points.

- (1) A forward dislocation of the sternal end of the left clavicle.
- (2) A cavity at the apex of the left lung.
- (3) Grey hepatization of both lungs.

Taking first the forward dislocation of the clavicle at the sternal end—we do not pretend to decide as to whether such a dislocation was present in the body of the deceased Jacob which was examined by Mr. D'Lemos. Mr. D'Lemos says in his report that such a dislocation existed. For the defence it is alleged that such a dislocation did not exist in the present case at all. That is a question of fact which we are not competent to decide. We are only concerned with the question of the significance of such a dislocation, if it did exist, and also as to the probable manner in which it was produced. This was one of the points in the case round which there was a great deal of discussion. Our readers are no doubt aware that dislocations of the sterno-clavi-

cular joints are extremely rare. This is on account of the strong ligaments that are connected with this joint. The strongest ligament of the sterno-clavicular joint is the rhomboid ligament and as its fibres pass upwards, backwards and outwards, and as the anterior-sterno-clavicular ligament is comparatively weak, it happens that the forward dislocation of the clavicle at this joint is comparatively more frequent than the other two varieties, namely, the *backward* and the *upward* dislocations.

The causes that produce dislocations of the sternal end of the clavicle are thus described in Treves' System of Surgery. "These accidents (dislocations of the sternal end of the clavicle) are usually caused by violence applied to the acromial end of the bone. Thus a *severe blow* or heavy fall on the front of the shoulder, by forcing the acromial end of the clavicle backwards, will displace the sternal end forwards. Conversely, if a patient be caught between the buffers of railway carriages, and the shoulder be violently forced inwards and forwards the head of the clavicle may be driven backwards." (The italics are ours.)

That is a quotation from a standard work on Surgery and we, for our part, are prepared to accept that as a correct statement of medical opinion on the point under discussion. Mr. D'Lemos stated in his evidence that he noticed a *forward* dislocation of the left sterno-clavicular joint and that in his opinion it was caused by a blow over the acromial end of that clavicle. Against this it was contended for the defence that a blow with a human fist *could not* produce a forward dislocation of the sternal end of the clavicle. To substantiate this contention two medical experts were put into the witness-box who both expressed it as their opinion

that such an injury could not be produced by a blow with a human fist. They simply gave it as *their* opinion and produced no authority whatever for their statement. One of them went further and stated that backward dislocations of the sternal end of the clavicle were in his experience more common than forward dislocations. And said Lt.-Col. Browning, if any English books make the statement that forward dislocations are commoner than backward dislocations, it must be because of the fact that buffer accidents are more common in England than in India and therefore forward dislocations, which are usually the result of buffer accidents, must also be more common in England. We maintain that buffer accidents more often cause backward dislocations than forward ones. Lt.-Col. Browning's experience must be unique, and both the experience of other surgeons and the firm resistance of the rhomboid ligament are against his theory of the more frequent occurrence of the backward dislocations of the sternal end of the clavicle.

The most interesting point in connection with this dislocation in this case is the theory started by the defence that the dislocation was not really present but was invented by Mr. D'Lemos to account for the injury to the lung which is described in his post-mortem report. But, as a matter of fact, neither in his post-mortem report nor in his oral evidence before the Magistrate's Court or the Sessions Court does D'Lemos say anything about the dislocated clavicle having caused the injury to the lung. When D'Lemos was asked to indicate the position of the apex of the lung he indicated it in the wrong place. And this was the starting point of the defence theory.

It was alleged that D'Lemos had deliberately shifted the apex of the lung in order to bring it within the action of the free end of the dislocated clavicle.

The theory is ingenious but to our mind it is not very convincing. If D'Lemos had such an idea in his mind he would have mentioned it in his examination before the Sessions Court. And then a man who had the ingenuity to shift the apex of the lung may, surely be trusted to convert a forward dislocation into a backward one. How a forward dislocation of the sternal end of the clavicle can cause a cavity in the lung passes our comprehension. But Lt.-Col. Browning said in Court that the impression that he received on reading the report was that the dislocated clavicle had caused the injury to the apex of the lung!!!

The next point we shall deal with is the cavity at the apex of the lung.

Mr. D'Lemos mentions in his post-mortem report the existence of a cavity at the apex of the left lung filled with purulent matter and blood clot. The description is very incomplete and it is absolutely impossible to arrive at a definite conclusion as to the nature of that cavity from that description. But then let us hear what Mr. D'Lemos has to say further about that cavity. He said in his oral evidence that he did not think from the appearance of that cavity that it was a phthisical one. In his opinion it was a rupture of the lung caused by a blow on the chest when the trachea was violently compressed. Such an injury may be produced without leaving any external marks of the violence that caused it. He came to the conclusion that the trachea must have been violently compressed by the signs of subcutaneous extravasation of blood in the neck. Well, that is the theory advanced by Mr. D'Le-

mos. Now, Mr. D'Lemos is the only medical man who has seen that cavity at the apex of Jacob's left lung. And therefore if he comes to the conclusion that it was a rupture of the lung, and explains the manner in which, in his opinion, it was produced, his statement ought to be accepted, unless his statement of facts and his theory based on those facts are highly improbable or absolutely untenable. Now, what are the facts here? It is alleged by the prosecution that Mr. Lee caught hold of Jacob by the neck when he was running away and gave him several blows with his fist on his chest. Those are the exact conditions which favour a rupture of the lung. "This injury is most likely to happen when the lung is full of air and the glottis is firmly closed at the time the injury is received". (Cheyne and Burghard). In severe injuries the lung and pleura may be ruptured but "contusion of the lung without rupture of the pleura is far from rare." (Treves' System of Surgery.) The theory, therefore, of Mr. D'Lemos is not at all an impossible or even an improbable one.

If there is no improbability in the theory, on what grounds can you brush it aside and substitute another in its place? Lt.-Col. Browning made a strong point of the fact that there was a blood clot in the cavity. If the injury was inflicted nearly 18 days before death there could not have been a blood clot present in the cavity. That was Lt.-Col. Browning's argument, which is sound, as far as it goes. But it does not go very far. Mr. D'Lemos has not said that the blood clot that he found in the cavity was there from the time of the infliction of the injury. The blood may have effused into the cavity during the attack of pneumonia which took place subsequent to the formation of the cavity. Both the expert medical witnesses who

were examined for the defence dogmatically maintained that D'Lemos' explanation is an absolutely impossible one. They themselves thought that the cavity was a phthisical one because it existed at the apex of a lung in an emaciated man. If emaciation means the presence of phthisis, what a lot of tuberculosis there must be in India, especially in a famine year. The two medical experts had of course not seen the cavity. They admitted that the description given by Mr. D'Lemos was insufficient to diagnose the exact nature of the cavity. They were thus left with only one other means of diagnosing the nature of the cavity, and that was to guess. Their conclusion was a pure guess and as such there is no scientific value to be attached to it.

So far as to the cavity. As to the grey hepatization of both lungs, there cannot be any difference of opinion as to what it signified. It indicated acute lobar pneumonia of both lungs.

Now we come to the most important of all points, namely, what conclusion is deducible from these post-mortem appearances as to the sequence of events which finally culminated in the death of Jacob? We must point out that it is possible to draw several different conclusions from these facts. There is first of all the conclusion drawn by D'Lemos that the injury to the lung set up a limited traumatic pneumonia which probably ended in crisis on the 7th day or thereabout; and before the lung could recover from that condition an attack of double lobar pneumonia took place and the patient died of that. This theory would imply that Jacob was ill in bed from the 26th June till his death. There, again, is the theory advanced by the defence that Jacob, who was an old phthisical subject, got an attack of pneumonia

and died. According to this theory, which has the valuable support of Mr. Ephraim's great skill in physical diagnosis, the patient only took ill about the 7th or 8th of July. It is also possible to advance other theories. But let us examine these two theories. To deal with the defence theory first. It is quite a simple theory, but the promoters of it have to explain the condition in which Jacob was between the 26th June and, say, the 7th or 8th July when he took ill. Mr. Lee admits that he never saw Jacob on the estate after he 'smacked' him on the 26th June. No other witness has come forward to prove that Jacob was in sound health between the 26th June and 7th July.

On the contrary, the prosecution has proved that Jacob was confined to bed ever since he got home after the 'smacking' administered to him by Mr. Lee. So, if Jacob was bed-ridden from 26th June, what was he suffering from till the 8th July, for on the 8th July he had not developed any of the physical signs of pneumonia, according to Mr. Ephraim? His old phthisis could not have been troubling him, for, a great auscultator like Ephraim would easily have spotted a phthisical cavity when he 'used' his stethoscope on Jacob's chest on the 8th July. So that theory will not answer. Let us see how the theory advanced by Mr. D'Lemos will answer.

Mr. D'Lemos bases his theory on his opinion as to the nature of the cavity in the left lung. He comes to the conclusion that it is a rupture caused by violence. An injury to the lung of that nature almost always sets up traumatic pneumonia. Mr. D'Lemos assumed that such a traumatic pneumonia was set up and that it ended by crisis. It may or may not have ended in crisis, for, in traumatic pneumo-

nias both are possible. But this statement of Mr. D'Lemos that a traumatic pneumonia may end in crisis has been strongly contradicted by both the medical experts who gave evidence for the defence. We should very much like to know where these two medical experts derived their information from, that a traumatic pneumonia *can never end in crisis*. Possibly the cases of traumatic pneumonias that came under their observation may not have ended in crisis. But that would scarcely justify them in stating that there is no crisis in traumatic pneumonia. "An injury such as a severe blow or bruise," says Dr. Hector Mackenzie, "is sometimes quickly followed by pleurisy or acute lobar pneumonia and probably acts by directly preparing the way for the microbes". That is the sort of traumatic pneumonia that will end in crisis. But the sort of traumatic pneumonias that do not end in crisis are the result of gun-shot wounds, stabs and injuries of that kind when the injured part of the lung communicates with the external air by means of a wound. The pneumonias in these cases are generally of a low and septic kind and may terminate in gangrene or abscess. It is impossible to say with certainty which of these courses any case of traumatic pneumonia might take. Probably, the absence of an external wound communicating with the rupture in the lungs made Mr. D'Lemos come to the conclusion that the pneumonia in that case might have ended by crisis. It is impossible to say on scientific grounds that Mr. D'Lemos was wrong in making that statement. Even if it is found that the traumatic pneumonia in this case did not end by crisis, it does not affect Mr. D'Lemos's theory in the least bit. His statement simply amounts to this—that in the case

under discussion there was an attack of traumatic pneumonia, and before the lung had resumed its normal condition an attack of lobar pneumonia followed. What the nature of the termination of the traumatic pneumonia was in that case is not one of the material points.

There was considerable discussion also on the point—given that a man had an attack of traumatic pneumonia and an acute lobar pneumonia superadded to it, to what extent may the traumatic pneumonia be said to be the cause of the lobar pneumonia that followed? Major Giffard, one of the medical experts who gave evidence for the defence, said that a man who was recovering from a traumatic pneumonia was as likely to get an attack of lobar pneumonia "as a man with a broken leg was likely to get an attack of typhoid fever or small-pox". With all due deference to Major Giffard we take the liberty of contesting the scientific accuracy of that statement. "A careful inquiry in the great majority of cases," says Dr. Kingston Fowler, "will show that the individual at the time of exposure to what appears to be the immediate exciting cause of the disease was in a condition of depressed vitality". And what better cause for a depressed vitality can be found than an injury to the lung followed by an attack of traumatic pneumonia. From these considerations we fail to see the absurdity of the theory put forward by Mr. D'Lemos and the justification for his being called a stupendous liar.

There were several other minor points raised in the course of this interesting trial. But as we have already exceeded the usual limits of our leading article, we must leave them to our readers.

The Travantore Planter's Case.

The following is the post-mortem report of Mr. H. J. D'Lemos :—

The body, when first seen, was emaciated, cold, rigor-mortis absent, both eyes closed, lips apart, hands and legs stretched, not decomposed. Post-mortem commenced at 8-30 A. M. on the 15th July. A linear longitudinal wound recently healed, half an inch long, on the outer aspect of the second joint varying from half an inch to $\frac{1}{2}$ inch long and from $\frac{1}{4}$ inch to $\frac{1}{2}$ inch broad on the chest below the right clavicle and above the right nipple. An oval wound two inches long and one inch broad and skin deep on the inner aspect of the middle of left leg. Three abrasions from half to $\frac{1}{2}$ inch long and from one-fourth to $\frac{1}{2}$ inch broad on the back above the right scapula. A swelling one inch in diameter and $\frac{1}{2}$ inch high on the sternal end of left clavicle. The subcutaneous tissues around the left clavicle and behind it as far as the left shoulder-blade filled with extravasated blood. The sternal end of the left clavicle dislocated forwards. The subcutaneous tissues in front of the windpipe and on the two sides and on the left side of the neck filled with extravasated blood; on the left lung just an inch and half from the apex there is a small cavity about $\frac{1}{2}$ inch in diameter filled with purulent matter and coagulated blood and bronchial tubes leading out from the cavity contained coagulated blood in the larynx. But lungs, on section, were of a greyish brown colour with purulent spots all over and non-crepitant. A dirty greyish purulent fluid exuded on pressure. The whole of the lungs were in a stage of grey 'hepatization.' Brain normal. Heart: both cavities were full of coagulated blood clots, valves patent. Liver normal, spleen normal, stomach normal, contained about a pound of semi-digested fluid, intestines normal.

Our Contemporaries. MEDICINE.

Asthma, with Nasal Stenosis— Nasal Treatment—Disappearance of Asthma.

Dr. Smurthwaite shewed a case after operation for deflected septum on a patient who had had marked asthmatical symptoms. This patient was shewn at the first meeting of the Session a few days after operation. Dr. Smurthwaite now brought forward the case again some three months later, to shew that there had not been the slightest signs of the return of the asthma.—(*The N. & D. M. Journal.*)

An Interesting Family History of Epilepsy.

BY

C. A. PETERS, M. D.,
Montreal.

When in camp, at Laprairie, with the militia last week, one of the troopers paraded for treatment was an epileptic. His family history seemed to me so interesting that I jotted down the following notes. The case is also worthy of note from the fact that a fright was the direct cause of his first attack.

Tpr. R. M., aged 22, farmer

Personal History.—Up to the age of 10 had always been healthy, not having even the ordinary diseases of childhood. At this time the family moved from one village to another. Their new home was situated quite near the railway track. At midnight of their first day the "Express" whistled immediately opposite their house and not 20 yards distant. This partially awakened the lad out of sound sleep and immediately he took a convulsion which, from the description given, was one of genuine epilepsy. For several years he had one nearly every night, and sometimes two in

a night. Under treatment they became less frequent, until one in a week or fortnight was the average. During this time, however, if he became very excited during the day he would be sure to have an attack at night. For the year and a half previous to his coming to camp, he had no fits. For the first four nights in camp he had a fit each night then two nights without any, and the following night two attacks. He has never had a fit during the day. He has no aura, but in the morning he can tell that he has had an attack, because his head aches severely for the whole forenoon and he feels dull and heavy. He never wakens during the attack, but goes from the convulsion stage into a heavy sleep. Patient has always slept with a brother some ten years older than himself, so there is not much likelihood of his ever having had an attack previous to the one noted at the age of 10.

Family History.—Does not know anything about grandparents. Father, æt. 63, alive and well; never had any fits. Mother, æt. 62, alive and well; previous to age of 21 had numerous fits; none since. Brothers, five, alive and well; 4 dead; two cause unknown; 1 infant of summer diarrhoea and one accidentally shot. Paternally, uncles and aunts never had any fits. Maternally, uncle, died at age of 35, of epilepsy; had numerous attacks, diurnal and nocturnal; the day he died had status epilepticus. Maternal aunts, two in number, never had any attacks. One maternal aunt's children, a boy and a girl, both suffer from attacks, and one daughter of the other maternal aunt also has epilepsy.

As far as the patient knows there is no insanity or other neurotic taint in family.—*The Montreal Medical Journal.*

Tuberculin Redivivus.

There are indications of a revival of the much abused but also greatly lauded tuberculin. A paper by Dr. Batty Shaw* gives the reasons why the earlier tuberculin introduced with such a flourish of trumpets in 1890 was discarded. A similar fate pursued the second effort in 1897. With the exception of a few investigators like Dr. Heron, who in 1901 gave his results of the continued use both of tuberculin and tuberculin R, few physicians continued to use either one or the other, excepting very occasionally for purposes of diagnosis in obscure cases of possible tuberculosis.

Since the British Congress on Tuberculosis in 1901 there seems to have arisen a more general desire to review the question anew; it has been thought that the original tuberculin was unduly blamed, and that the newer varieties, whilst free from the harmfulness of the former, still retained some of its usefulness. Accordingly reports and results of extended and long-continued inquiries are now accumulating, and a revival of interest in the subject is to be encouraged.

Dr. Shaw endeavours to show "what are the proper indications for tuberculin treatment, and also that with proper management the case cures may be considerably increased in number by the adoption of the tuberculin treatment, combined with the other general methods already so well carried out in the sanatoria of this country," and elsewhere.

It is now becoming the orthodox belief that the cases suitable for tuberculin are the earliest cases, and those in which the disease is limited to one apex; the afebrile, the well-nourished, and those in which the disease shows no indication of active progress—these are the cases which are said to do well with tuberculin; they are also the cases which do well under sanatorium life without tuberculin: hence it appears that tuberculin is to

* Clin J., 1905, XXVI. 38.

be in active competition with non-medicinal hygienic measures, and the more advanced cases are still left outside the pale. Formerly it was thought that even advanced cases would do well under the influence of tuberculin, but now we are told that these cases are not suitable ones for tuberculin, neither are they for the sanatorium. The early cases may do well by either method: it is for the sanatorium authorities to decide the question whether hygienic measures alone will suffice, and whether the tuberculin should be reserved for those cases which do not manifest any or sufficient improvement after trial of sanatorium hygienic routine.—*The Bristol Medical-Chirurgical Journal.*

Abnormal Position of Anus.

BY

C. H. E. LAWES, M. B., Ch. M. (Syd.)

Some few months ago I was called to attend Mrs. D. in her first confinement. On arrival the baby and placenta were born, the labour having been a rapid one. On proceeding to examine the perineum for a possible laceration, I was, to my surprise, unable to see any sign of an anus. On widely separating the labia majora, however, I found the anus situated within the vulva. It was immediately behind the vaginal opening, but separate from it, occupying the position of the *fossa navicularis*. The recto-vaginal septum was perfect, there being no communication between rectum and vagina. The sphincter was normal, except that the anus and surrounding parts were moist and covered with mucous membrane instead of skin. When the labia majora were released they completely covered the anus. The patient had perfect control over the sphincter, and was quite unaware that she was different to other women. The close proximity of anal and vaginal openings caused me some anxiety lest septic trouble might follow, but the patient convalesced without a single rise of temperature. I have not been able to find records of an exactly similar case, though cases of rectum and vagina having a common

opening have been recorded.—*Australasian M. Gazette.*

A Sudden Case of Goitre.

BY

W. MACANSH, M. B.,
Brighton, Victoria.

BEFORE reading the notes on the case of typhoid fever, I will, with your permission, briefly record a case of goitre developing in a few minutes. On April 5th, at 8.25 p.m., I received a message to go quickly to a house, that a young lady had a bone in her throat, and was choking. I hurried to my consulting rooms for the necessary instruments, and reached the house at 8.40. I was then told that there was no bone, but that a swelling had suddenly appeared on the patient's neck. Miss M. G., whom I knew well, and had frequently attended, was lying on the sofa, with pillows under head and shoulders. There was a large goitre present. The skin over the isthmus was white and stretched tense, and bulging out well in front of the sternum; the veins over the tumour were prominent and distended; both lobes were enlarged, tense, and very easily mapped out by the fingers. There was no bruit to be heard over the tumour. She stated that she had felt so nervous during the evening, and that she asked her sister to stay in the room with her, and not to go out to post a letter, as she intended doing. Madge sat writing a letter, when suddenly she had a suffocating feeling, and felt a lump rising in her throat, as though it were coming up from under the sternum. She called to her sister to undo her dress, that she was choking. On the dress being undone, there was the swelling. Another sister was sent to a neighbouring house to telephone to me. The mother and two sisters and the patient herself are positive that there was no noticeable swelling in the neck previous to this sudden attack. Her younger sister, who sleeps in the same room with the patient, said that only that morning she was admiring her sister's neck while she was dressing, and that there

was then no disfigurement. I cross-questioned the members of the family, and they were all confident that previous to the attack there had been no tumour noticeable in Madge's neck, and I certainly had not previously noticed it. From the time that she felt nervous until the tumour was present 15 minutes had not elapsed. There was no exophthalmos. Her pulse was 108, temperature 100°, respirations 22. On the 6th the pulse was 84, temperature 90°, patient feeling quite well, except for a stiff and uncomfortable feeling about the neck; the isthmus was not so prominent, and the whole tumour seemed smaller. 19th.—There is a well-marked goitre; no exophthalmos; the goitre is not the unsightly tumour that it was on April 5th. Pulse 84, temperature 98°.—*Australasian M. Gazette.* (Read before the Victorian Branch of the British Medical Association.)

Exophthalmic Goitre reduced by Radium.

BY
R. ABBE.

The writer reports the first case in which radium has been applied. On account of the different effect of Roentgen rays on ulcerated and unbroken skin surfaces, it occurred to him that while radium outside of goitre would be ineffective, inside it might have striking results. Under cocaine anaesthesia he made a small media incision, dissecting down to the isthmus of the thyroid. Into this he thrust a small bistoury, making a deep enough incision to bury a sterilized tube of radium at right angles to the skin and an inch deep. It was held in place by dressings and straps, the patient keeping her head fairly quiet for twenty four hours. The glass tube was $\frac{1}{8}$ inch in diameter, and contained 10 centigrams of Curie radium. At first the gland seemed a little more swollen. In four months it was only a sixth of the former bulk. All unpleasant symptoms, including a sense of suffocation, severe headaches, inability for exertion, tremor, etc.,

disappeared. Some tachycardia remained. (Archives of the Roentgen Rays, March, 1905).—*Cyclopædia of P. M.*

Gastric Pain, Left-sided.

BY
RIEDEL.

The author points out that gastric pain occurring reflexly from disease of other abdominal viscera is most often referred to the right side, so that left-sided gastric pain, in the great majority of cases, signifies an affection of the stomach itself. The only two exceptions, fat necrosis of the pancreas and splenic abscess, are so rare that they can be disregarded. An ulcer situated at the pylorus is much harder to diagnose than one in the body of the stomach, since the former gives rise to pain on the right side, which often cannot be distinguished from the pain caused by cholecystitis. With ulcers of the antrum pylori, the pain is accurately referred to the median line just like the reflex abdominal pain caused by chronic appendicitis and that of a hernia of the linea alba. Tumefaction is exceedingly common with ulcers, since the muscularis and serosa will thicken and adhesions will readily form with the neighbouring organs, particularly the liver and the pancreas. A mass may thus be felt to the left of the median line, if the ulcer is situated in the middle portions of the stomach. It is very important to diagnose the case sufficiently early, since the end result will be an hour-glass stomach, which can only be treated by means of an operation. The history is rather characteristic. At first there is an attack of left-sided pain directly after eating, lasting several hours. Several months later there may be another attack, the stomach having been perfectly normal in the meantime. In six months or so the pain comes more often and lasts as long as twelve hours, and the irritability of the stomach increases. Finally, vomiting sets in half an hour after a meal. This is purely reflex, since a stenosis has not yet formed.

The pain is now permanent and vomiting occurs daily, but blood is found in only half of the cases. Operation is indicated, if rest in bed for several weeks with hot applications and fluid diet does not result in a cure. (Munchener Medicinische Wochenschrift, April 25, 1905; Medical News, June 17, 1905).—*Cyclopædia of P. M.*

SURGERY.

Gangrene from the use of Stovaine as a Local Anæsthetic.

BY
D. A. SINCLAIR,

(*Jour. of Cutaneous Diseases*, July, p. 307).

Stovaine is a new local anæsthetic which is claimed to be equal to cocaine and to have only half its toxic properties. It differs from the latter in being a vasodilator. The writer has used it in 5 cases with unsatisfactory results; gangrene of the skin occurred in 4.

A man, aged 26, had chronic urethritis and a contracted meatus. On Nov. 11 meatotomy was performed after injecting 10 m. of a 2 per cent. solution. The operation was painless but after it syncope was threatened. On the 23rd a gangrenous area developed at the tip of the glans, corresponding to the site of injection, extending downward towards the frænum about $\frac{1}{2}$ in. and about $\frac{1}{4}$ in. on each side of the incision.

A healthy man, aged 21, was circumcised under stovaine, 8 c.c. of a 2 per cent. solution being used. He complained of pain during the latter half of the stitching process. Four days after the operation the penis was oedematous. When seen again on the 27th there was an extensive gangrenous area extending from the distal end of the skin of the penis backwards for about an inch, only a slight area escaping on the dorsum. The dead tissue, which extended down to the corpus spongiosum, was excised. Recovery was slow.

In two other cases of circumcision oedema and gangrene of the skin followed.

The writer concludes that (1) stovaine has not the lasting anæsthetic properties of co-

caine; (2) like the latter it produces toxic symptoms. (3) it is a dangerous drug, producing chronic oedema and gangrene; (4) it interferes with the healing process.—*The Medical Review.*

Hæmorrhage, Sodium Bicarbonate In.

BY
P. M. DAWSON.

Using dogs for the purpose of his experiments, the writer has investigated the cardiovascular effects of intravenous infusion, after severe hæmorrhages, of solutions containing sodium bicarbonate. He finds that whereas, sodium chloride alone has the immediate effect of raising blood-pressure, with the addition of sodium bicarbonate to the chloride solution the rise in pressure is markedly increased. The author suggests that in some extreme cases of shock due to hæmorrhage the addition of from $\frac{1}{2}$ to 1 per cent. of the bicarbonate to a 0.8 per cent. sodium chloride solution may be of advantage in two respects. In the first place, the rise in all the pressures, but especially in the diastolic pressure, is more pronounced than when the pure chloride is used; and, secondly, the quantity of fluid required is smaller than is the case with the pure chloride; the greater, therefore, is the rapidity with which the solution can be hurried into the circulation—a matter which may be of importance in desperate cases.

There is, however, one possibility which ought not to be overlooked in the employment of bicarbonate—namely, the danger of overworking the heart. From experiments not yet concluded the author finds reason to believe that very strong solutions of sodium carbonate and bicarbonate act very powerfully as cardiac stimulants. Before employing the bicarbonate, therefore, in cases of hæmorrhage the physician ought to decide whether a cardiac stimulant is or is not contraindicated. (Journal of Experimental Medicine, vol. vii, p. 1, 1905).—*Cyclopædia of P. M.*

Case of Thoracic Aneurysm with Referred Pain, for which Laparotomy was performed.

Dr. Drummond shewed a man, aged 45, who was suffering from aneurysm of the transverse portion of the arch. For some months prior to his admission into the Infirmary he complained of pain in the left anterior axillary line about the 4th, 5th, 6th, and 7th interspaces, along with which were certain dyspeptic symptoms, which led a surgeon, at a distance, under whose care the patient was, to conclude that there was some gastric mischief that could be relieved by operation. What was found at the operation could only be surmised, but his (the speaker's) impression was that the pain for which the exploration was performed was caused by the aneurysm in the chest.

He ventured to suggest that whenever a case of difficulty arose in which the diagnosis was not straightforward, and in which there were certain unusual symptoms, the truth might be arrived at by carefully following these unusual symptoms up. In the present case, for example, the pain in the side was obviously an unusual symptom of gastric disease, and a searching enquiry would have revealed the fact that it was a pain that was worse at night, and could be relieved by altering the position of the body—a history that might have suggested aneurysm.—*The N. & D. M. Journal.*

Hydrocele in the Female.

BY

WALTER B. JENNINGS, PH.B., M.D.,

Formerly Assistant in Gynaecology, New York Post-Graduate Medical School; Attending Physician (O. P. D.), St. Mary's Free Hospital for Children.

Drs. Halstead and Clark, of Chicago, report the following case in the May number of *Annals of Surgery*. A colored woman, 42 years old, sought admission to the hospital on account of a mass in her right

inguinal region. Her menstrual history until recently was regular, with some pain. Of late she had had uterine hæmorrhages. The "mass" appeared eighteen years ago, subsequent to the birth of her second child. She said that the "mass" had always been reducible, but would reappear in four or five days. Right days before admission the "mass" would no longer disappear on pressure.

Over the right inguinal region was a soft mass extending from the external abdominal ring into the right labium majus. It was slightly larger than an egg, oblong, being larger below than above, and was irreducible. It was tense, elastic, and very tender. The patient was admitted on a diagnosis of strangulated hernia. That it was not a hernia was recognized after she was anæsthetized. An incision was made parallel to Poupart's ligament. The tumor was found to be separated from the skin by adherent fascia. A cystic tumor was opened and one ounce and a half of pale, straw-colored fluid removed. The sac was freed from the round ligament with which it was intimately connected, ligated and removed. The anatomic diagnosis was hydrocele of the canal of Nuck. The cyst was binocular, being divided by the internal abdominal ring into an upper and lower sac. There was no evidence of inflammation in the cyst proper.

The ease of reduction previous to the last week was due to the fact that fluid could be forced from the lower into the upper sac and also into the peritoneal cavity.

The terms hydrocele in the female, hydrocele of the canal of Nuck, hydrocele muliebri have been applied in a general way to all cysts in the inguinal region in the female.

The classification of these cysts as given by Rignoli seems to most completely describe the various anatomical conditions that may

there exist. He divides all cases of hydrocele muliebri into five groups:

1. Diffuse hydrocele of the cellular tissues about the round ligament.

2. An accumulation of fluid in the canal of Nuck, communicating with the free peritoneal cavity.

3. An accumulation of fluid in the vaginal process without a communication with the general peritoneal cavity, an encysted hydrocele.

4. An encysted hydrocele in the connective tissue about the round ligament.

5. An accumulation of fluid into the remains of an old hernial sac.

The existence of a true hydrocele of the canal of Nuck has been frequently disputed. French writers in general deny the existence of a true vaginal process of the peritoneum. The researches of Zuckerhandl, Niemann, Bergman, establish the existence of a vaginal process of peritoneum in the female. Those who claim that it does not exist base their opinions upon the researches of Velpeau and Duplay, who examined twenty-one female embryos after the fifth month, and were unable to demonstrate a patulous canal in any.

Hydrocele in the female is of clinical importance because of its resemblance to an inguinal hernia. That a hydrocele and a hernia may coexist must be borne in mind. The safest diagnostic procedure is incision.—*Medical Review of Reviews.*

OBSTETRICS AND GYNÆCOLOGY.

Fatal Precipitate Labour.

BY

H. E. RAYNER, F.R.C.S., and
W. L. STUART, M.D.

(*Lancet*, June 17, p. 1644.)

A primipara, aged 26, who was expecting her confinement, was in good health and spirits at 2 p. m. when her husband left for his work. On his returning at 4-30 he found her seated in the water-closet and inanimate. She was carried to another room and restorative measures were tried without success. The whole of the uterine contents had been ejected into the pan of the closet, the child's head having completely passed through the lower opening and the body and shoulders remaining above. The pan had to be smashed before the body could be liberated. The difficulty of withdrawal was probably due to oedema and congestion, the result of the dependent position. The child was a normal female of full size. There had been apparently much hæmorrhage but the amount could not be determined with accuracy. The upper segment of the uterus was intact and fairly well contracted, the lower segment and cervix showed bilateral rupture through the whole thickness of the muscular wall. There were several longitudinal fissures in the vagina involving the mucous membrane and part of the muscle wall. The deeper tissues of the perineum were lacerated but the superficial were intact. Death presumably was due to shock from the ruptured uterus, the sudden diminution of intra-abdominal pressure, and the hæmorrhage.

The majority of books give the causes of precipitate labour as increased propulsive force and diminished resistance. But the auxiliary propulsive force produced by straining at stool is, after all, only physiological, and in this case, the woman being a primipara, the second cause was certainly not present. From a medico-legal point of view this case also is of interest. If it had not been fatal to the mother it might have been

argued that the impossibility of withdrawing the child's head indicated that some means (such as interference on the part of the mother) additional to the forces of expulsion and gravity had been used to get it into the extraordinary position in which it was found.—*The Medical Review*.

Post-Operative Temperature in Anæmic Patients.

BY

DR. J. HENROTAY,

Bulletin de la Soc. Belge d' Obstet. et de Gyn.
Tome xv., No. 1.

The author reports a case in support of his theory that high temperatures may follow operation in anæmic patients as a result of their anæmic state, independent of any local or general reaction.

In this case, that of a married woman suffering from a ruptured ectopic pregnancy, no bad symptoms appeared. The wound healed by first intention, without the slightest indication of pus. Both scar and peritoneum were in a healthy state. Nevertheless, during the first seven days after the operation, there was a thermal curve of from 36.4°C. to 37.5°C., falling to 36.8°C. After this it became normal. The patient was extremely anæmic at the time of operation, and the return to the normal thermal cure took place precisely as her general health improved.

Dr. Henrotay inclines to believe that substances which prove harmless to a person whose blood is in a normal state may poison the circulation in cases where the usual anti-toxic elements are deficient. ROBERT JARDINE.—*J. of O. & G.*

Some Fundamental Problems in Obstetrics and Gynæcology.

BY

J. C. WEBSTER.

American Medicine, December 10th, 1904.
The writer discusses the following subjects:—

1. The determination of sex, and admits that this problem still remains to be solved.
2. The structure of the ovary, including the structure and life-history of the Graafian follicle and the corpus luteum, and the significance of small localised areas of decidua-like cells sometimes found in the ovary in cases of uterine pregnancy.
3. The functions of the ovary, with reference to an internal secretion and its effects on general metabolic processes. Frankel's theory of the functions of the corpus luteum is stated to be worthy of the highest consideration, although it is not yet fully established.
4. The antagonism between the maternal organism and the ovum. Under this heading are discussed the toxæmias of pregnancy, syncytiolysis, and the production of chorionepithelioma.
5. The functions of the placenta, with especial reference to the storage of glycogen and its action as a protective barrier against the invasion of the foetus by various poisons.—*Frank E. Taylor. J. of O. and G.*

THERAPEUTICS.

Two Cases of Hypnotic Treatment.

BY

R. T. MICHELL, M. B., C. M. (EDIN.),
BLAYNEY.

THE average general practitioner, when he does not absolutely relegate hypnotism to

the realms of superstition, usually regards suggestive therapeutics as in too immature a stage to be admitted to general practice. Yet this powerful means of alleviating a wide range of symptoms is more or less within the reach of every medical man, and if it were more commonly used would break down its only objection, namely, the prejudice of the public.

The following records will illustrate the value of hypnotism for two conditions, not uncommon, in which no other remedy could have achieved the same results.

Case 1.—Mrs. H., aged 40, suffered from cancer of the right breast for about five months before seeing a medical man. Operations were performed three times in all, the last being done on October 30th, 1904. The cervical glands were on that occasion cleared out, but an adherent mass was found extending downwards behind the inner end of the clavicle beyond the advisability of removal.

Her condition on January 26th, 1905, was as follows:—(a) Patient is much emaciated and sallow. There is a hard mass to be felt behind the inner end of the clavicle, and portion of a scar just internal to the mammary line is swollen, angry-looking and tense. (b) She complains of occasional severe gripping pain deeply beneath this latter swelling and along the clavicle. Other less severe pain is always present in the chest. (c) There is an almost constant cough of the usual character associated with pressure on the recurrent laryngeal. This, so far, has been unaffected by any of the ordinary remedies, including codeine and morphia. (d) Increasing difficulty has been experienced in taking food, and for the last 24 hours even liquids and jellies have been regurgitated within a minute or two of being swallowed. (e) Patient becomes much exhausted on even ordinary exertion, and any attempt at lifting a weight or walking upstairs is followed by an attack of dyspnoea, with acute præcordial

pain and a rapid irregular pulse. (f) Physical examination reveals extensive consolidation of right lung and slight nodulation of liver, also a reduplicated first sound and some irregularity of heart's action.

This picture of the later stages of a surgically-treated cancer of the breast is common enough, but the symptoms have been detailed in order to show the value as well as the limitations of suggestive treatment.

On January 27th patient was hypnotised, the method of careful prehypnotic explanation and direct gazing, aided by one or two passes, being used. Although she seemed by no means a very favourable temperament for hypnosis, a light sleep was produced in about 60 seconds. On following days this light sleep became gradually deeper, until in five days a fair degree of local anæsthesia could be produced, and memory of events during the sleep was decidedly blurred. She used eventually to go off instantly on the word "sleep."

The results of suggestion may be summarised as follow:—(a and f) The progress of the disease did not seem to be checked in any way, with one exception, i. e., the redness and tenseness of the swelling in the scar was relieved, and only reappeared just before death; otherwise, emaciation and weakness gradually increased, and in a fortnight patient had to be assisted from bed to chair and back. Nodules appeared in various situations, such as the left cervical region, and the liver became rapidly larger and more irregular. (b) The relief of pain was naturally the chief aim, and was accomplished with remarkable success. It was found necessary to detail the symptoms and clinch each suggestion by stroking or touching the areas affected. From time to time pain appeared in new situations, such as the left clavicular region, the liver, the back, etc., evidently corresponding to extensions of the disease; but these were easily abolished at the next sitting. The patient, in short, suffer-

ed only from occasional distress, as will be shown later, and had practically no pain. (c) The cough was hardly, if it all, lessened in frequency, but the paroxysms were much less severe and did not exhaust the patient as previously. She was also able to sleep far more soundly and longer than before, although she continued to cough occasionally in her sleep. About a fortnight before death the character of this cough altered, and she began to spit up small quantities of foetid pus-laden sputum. In order to prevent accumulation the cough was therefore only partially controlled. (d) The regurgitation of food was relieved from the outset, and patient resumed the ingestion of all kinds of puddings and meat with vegetables well cut up until about a week before death. She then went back to liquid food, and eventually had complete obstruction of the oesophagus. (e) The attacks of dyspnoea still continued, especially at night, but they were, curiously, not accompanied by pain, although she was obliged to sit up and lean forward, breathing rapidly. The pulse was invariably rapid and irregular, and there was much mental distress while the attacks lasted.

On February 24th liquids began to be regurgitated. On February 25th only a teaspoonful at a time of plain water could be kept down, and this could be distinctly heard trickling into the stomach on auscultating the epigastrium. All nourishment was discontinued, and moderate doses of morphia given at intervals of six or eight hours until death, which occurred at 4 p.m. on February 26th.

Remarks.—Until 30 hours before death no morphia or other drug was given. One hypnosis per diem was found sufficient, and the patient was so bright mentally, especially in the afternoons, that she was able to direct household matters from her bedroom and receive visitors up to February 23rd.

The total result was so utterly different from and so superior to the usual condition

produced by morphia in the later stages of cancer, in spite of the fact that the patient was not the best of subjects for hypnosis, that the method is worthy of universal trial.

Case 2.—Mrs. S., aged 38; has history of several miscarriages and several attacks of perimetritis. For seven or eight years has scarcely ever been free from dragging pain in the left side, and has suffered severely from dysmenorrhoea and racking headaches. She was curetted and treated in 1902, and again in 1903. Each time she improved temporarily, but relapsed. In 1904 she was admitted to the Sydney Women's Hospital and curetted, the remnants of an early abortion being removed. She was 13 weeks in hospital, and had two severe hæmorrhages. For the last four or five months she has had constant dragging pain in the left side, sleeplessness, frequent dyspepsia, and severe headaches lasting sometimes two days. Her menstruation has occurred about every three weeks, is excessive in quantity, and accompanied by such acute pain that she has always had to remain two days in bed, and sometimes longer. For about one year she has steadily lost flesh and weight, and has become weaker. The above notes were taken on March 16th. She was hypnotised from that date daily until April 2nd, and is now able to hypnotise herself on gazing at a paper of suggestions in my handwriting and duly signed. This is only done at and about the menstrual periods. She proved an easy subject, and became somnambulistic at about the third sitting. All memory of the events of hypnosis is abolished on waking. From the first day pain was entirely relieved. Sound refreshing sleep was established in a few days. Her appetite rapidly improved, and all dyspepsia vanished. She was able to perform her daily household duty, even washing and ironing, within a few days. This had for six or seven years been impossible with out extreme fatigue and pain. She has since commencing treatment, passed through two menstrual periods, interval being nearly four

weeks and the amount of flow normal. During the periods some lassitude was experienced, but no pain and no headache. Appetite and sleep were maintained, a circumstance unknown for many years. Patient's weight remained the same for several weeks, but has now begun to increase. Her appearance has altered very much for the better.

Physical examination shows a retroverted uterus and an enlarged left ovary, with considerable matting round about. Previous to hypnotic treatment the ovary was tender but that has now disappeared.

Cases such as this, in which the woman becomes dominated by pain and reflex symptoms, due to comparatively unimportant disease of the ovary, the "senior partner of the generative firm," are exceedingly common in general practice, and either prove a fat source of income to the medical man or an unmitigated nuisance, according to patient's financial position—generally the latter, unfortunately. They are often good subjects; at any rate they always submit themselves readily, and the intelligent use of hypnosis by practitioners, combined with other treatment would doubtless cut away half the profits of unqualified quackery.—*The Australian M. Gazette.*

The Treatment of Serous Effusions by Injection of Adrenalin Chloride.

BY

H. W. PLANT, M.R.C.S., and P. STEELE, M.B., Ch.B.

(*Brit. Med. Jour.*, July 15, 1905, p. 125.)

This method was first advocated by Barr, of Liverpool, in 1903. The writers report 5 cases of ascites and 2 of pleural effusion thus treated. In 4 of the cases of ascites, cirrhosis of the liver was the cause of the effusion, while in the fifth there was hepatic cirrhosis and cancer of the oesophagus.

METHOD OF INJECTION.—As much as possible of the fluid was withdrawn by a two-

way cannula, after which 1 dr. of adrenalin chloride (1 in 1,000) diluted with $\frac{1}{2}$ oz. of sterilized water was injected through the cannula from an exploring syringe. The cannula was then withdrawn and the one puncture sealed with collodion. In only one case was it necessary to make more than two injections, and usually one was sufficient.

CASE 1.—A man, aged 54, had his abdomen greatly distended with fluid. On July 14, 20 pints of fluid and on Aug. 3, 18 pints were drawn off. After the last tapping adrenalin solution was injected. Ascites did not recur.

CASE 2.—A woman, aged 43, had her abdomen greatly distended with fluid. The liver was felt 3 in. below the costal margin, and was hard, smooth, and tender. She was tapped on July 30 (15 pints), Aug. 11 (14 pints), Aug. 18 (12 pints), and Aug. 31 (13 pints). On Sept. 14, 10 pints of fluid were removed, and the adrenalin solution was injected. On Sept. 24, 2 pints 14 oz. of fluid were withdrawn, and adrenalin was again injected. She was discharged on Oct. 10 with no signs of fluid. She was readmitted with fresh swelling on Nov. 26. On Dec. 3 8 pints 10 oz. of fluid were removed, and the injection was repeated. Since then there had been no recurrence.

CASE 3.—A man, aged 43, was admitted with hepatic cirrhosis and ascites. Paracentesis, Aug. 13 (14 pints). Paracentesis and injection, Aug. 25 (12 pints), Sept. 10 (17 pints), Sept. 30 (12½ pints), Oct. 20 (5½ pints). Ascites has not reappeared.

CASE 4.—A woman, aged 35, had her abdomen distended with fluid. On Sept. 28, 15½ pints were removed. On Oct. 17, 5 pints of fluid were removed, and adrenalin solution was injected. No further recurrence.

CASE 5.—A man, aged 46, had a large right pleural effusion. He was tapped on Dec. 13 and 55 oz. of clear serous fluid were withdrawn. On Mar. 8, 29 oz. of fluid were

withdrawn, and adrenalin was injected. There has been no recurrence.

CASE 6.—A man, aged 46, had cirrhosis of the liver and oesophageal stricture. On Jan. 19, 22 pints of fluid were removed from the abdomen, and adrenalin was injected. He was tapped again on Feb. 26; 9 pints of fluid escaped and the injection was repeated. He died on Mar. 7. At the necropsy no fluid was found in the abdomen. The viscera above the umbilicus were matted together by recent adhesions. The peritoneum was thickened and in most cases congested; the omentum was rolled up and adherent to liver, stomach, and diaphragm.

In each case the injection caused sharp abdominal pain and a rise of temperature of from $\frac{1}{4}$ — 2° within half-an-hour. The beneficial results are probably due to the formation of adhesions between the parietal and visceral layers of the serous membrane, as a result of irritation caused by the adrenalin.
—*The Medical Review.*

OPHTHALMOLOGY.

New attempts to cure Cataract without Operation.*

BY

PROF. L. DE WECKER,
PARIS, FRANCE.

(Translated by A. Alt, M. D.)

Thanks to the possibility of letting strong remedies act directly upon the tissues of the eye by means of injections, attempts to prevent or to cure cataract in its incipency have of late been resumed. In my opinion, that is all that can be attempted with our present knowledge of the anatomical lesions of the eye which lead to dimness of the lens. We know that in the beginning there is simply a separation of the lens fibres with an unequal distribution of the nutritive fluid between the separated fibres. This displace-

* Annales d'Oculistique, March, 2905.

ment, due to the disassociation of the constituent parts of the lens, is sufficient to produce very pronounced opacities and to occasion quite a degree of obscuration of vision, but it is not unreasonable to admit that, without such lesion and without destruction of the constituting elements of the lens, it might be possible in some measure to put things to right again and thus to cure a beginning cataract, or at least to arrest the further progress of opacification.

The question is quite a different one when the cataract has progressed to such a degree that we have to deal with the destruction and softening of the fibres or with their shrinkage and an advanced sclerosis, that is, if we try to get rid of a cataract which has become complete. It is true that nature with her spontaneous curative resources shows us in this affection how she can put two distinct processes into operation to restore the lost vision. In one (applying to the first mentioned form, the cortical cataract) such a liquefaction of the cortical substance takes place that it may be totally absorbed and that the small nucleus sinks to the lowest parts of the capsule, thus rendering the pupillary area free, which then is occupied only by the two agglutinated walls of the capsule. The second mode of spontaneous cure lies in the shrinking of the subcapsular cellular elements and the sclerosis of the lens fibres which, by thus gradually reducing in size the capsule as well as the volume of the cataract, produce a traction on the zonula and detach it. Under the influence of the weight of the cataract the latter first becomes dislocated and spontaneously sinks lower, so as to free the pupillary area from all opacity. I have observed both of these modes of cure produced by nature and have described them in my treatise (Vol. III, 702 to 929.)

In the communication which I now propose to make I shall abstain from mentioning the attempts made to arrive therapeutically at these results of spontaneous cure. I shall restrict myself to describing the attempts

made with the object: 1. To prevent the formation of cataract. 2. To arrest the progress of this affection, when it has commenced, and, 3, to reduce or even disperse beginning crystalline opacities.

1. In a recent book by an experienced confrere, Mr. Dransart,* we find the following passage:

"I am very positive that it is possible to prevent the formation of a cataract in a great many cases. In fact, I believe that in many cases the cataract formation depends on a state of malnutrition, especially characterized by the imperfect elimination of urea. I have actually seen this in a great many cases. Most of the individuals suffering from cataract are rheumatics with an imperfect nutrition." Mr. Dransart concludes: "With a good general hygiene, combined with anti-arthritic treatment, and a perfect hygiene of the eye by means of proper glasses, we may succeed in almost half of the cases in preventing a cataract."

Undoubtedly most cases of cataract are formed in arthritics with arterio-sclerosis, but it is going very far to say that we can prevent the formation of almost one-half of the cataracts. Nobody can deny the progress made in the treatment of arthritis, and, more especially, the perfection we have arrived at in the correction of errors of refraction, but I do not know that even in those countries which are best supplied with prominent physicians and oculists the number of cataracts has decidedly diminished.

In spite of this, it is useful to more and more draw the attention of patients threatened with cataract to the analysis of the urine, especially for urea, the chlorides, and, above all, for sugar. It may very well be that an arthritic with arterio-sclerosis suffers from an intermittent diabetes and presents visual affections which show themselves as a change

*De la cataract dans ses rapports avec la cécité dans le Nord de France. By Dr. Dransart, Somain

in the refraction and slight defects in transparency in the lens which may be effectively modified by an appropriate treatment. I am convinced that the repeated analysis of the urine is the best guide in the prevention and arrest of the formation of a cataract, on account of the indications for a rational treatment of the arthritic with arterio-sclerosis which is furnished by these analyses.

Here we must remember the observations which were made in the watering places intended for diabetics. The observations of Seegen and Gerhardt at Karlsbad have scarcely been credited. They found that vision improved *pari passu* with the diminution of the glycosuria, but they did not substantiate their observations by ophthalmoscopic examinations and an accurate determination of the visual acuity. This objection can, however, not be urged against the observation reported by Koenig,* which concerned a patient who, having gone through a cure at Vichy, had recovered her vision and "the absolute integrity of her crystalline lenses."

2. The second question we want to study is the following one: *Is it possible, by proper treatment, to arrest the progress of a beginning cataract?* The greatest difficulty in the way of solving this question is the fact that the evolution of a cataract does not follow any regular course, and that there may be a standstill for months and years. In my own family I hesitated to tell some of its members that they had beginning cataracts and later on congratulated myself on this, since after a period which even reached 20 years I have been able to see that the opacities had remained stationary. I have, also, always instructed my pupils to abstain from prognosticating the time of ripeness of a beginning cataract, since I have only too often heard patients deride colleagues who had predicted a fixed date for the abolition of their vision, while the opacities remained stationary, as they

*Bulletin et memoires de la Societe Francaise d'Ophthalmologie, 1902, p. 431.

had been at the time of their consultation. It is undisputed that crystalline opacities may become stationary at any stage and that, if treatment had been instituted, we are not in the least authorized to apply the dictum: *post hoc, ergo propter hoc*.

The treatment which in this sense has most aroused attention is the one which Prof. Badal, in 1902, has communicated to the Congress at Paris (Compte rendu, p. 442). As our confrere says: "he has never spoken of the cure of cataract * * *, but only of arresting the evolution of this affection." Moreover, the 3 observations which are added to this communication refer only to the arrest of the progress of the cataract, and, astonishing as it is, the period of such control is no more than 9 months, 10 months and 1 year, respectively. It would be very easy for us to gather from our books a large number of cases in which, when we re-examined them after 2, 3 or more years, we found the identical visual acuity which we found at their first visit, although we had never instituted any treatment with this end in view. However, we must agree that the treatment to which our colleague at Bordeaux subjects his patients can hardly inconvenience them. It consists in the main of simple baths by means of an eyecup, morning and night, using a solution of iodide of potassium of 1 in 40, or, simpler yet, of the instillation of a collyrium of the same strength.

Badal prefers this easy treatment to the subconjunctival injections; yet, he does not prefer it only on account of the easy application of such baths and instillations, but, also, because he maintains that preparations of iodine penetrate more easily into the aqueous humor when they are applied in the manner mentioned. We might ask, of what importance the penetration of a little more or less iodine could be, since our colleague says: "The intact lens capsule seems to oppose an obstacle to the passage of the salts of iodine, and that, in order to be able

to note their presence in the lens substance itself, it is necessary to plunge the extracted lens into a saturated solution of potassium iodide; and this penetration goes on very slowly from layer to layer."

It is, therefore, not the direct action of the iodine salts upon the lens itself with which we have to reckon, and Mr. Badal asks quite justly: "In order to act on a sick organ, is it necessary for the remedy to reach this very organ? Is it not sufficient to produce a modification which may act from a distance by means of the liquids which bring the nutrition to the tissues?"

This is the very reason why we give preference to the injections, when we want to arrive at the following desideratum:

3. The third attempt and the most recent one is to bring about *a regression and the disappearance of the opacities of the lens as soon as the cataract begins to form*.

Ever since opotherapy has come into use, I had, after the method of d'Arsonval, an extract made from the internal tissues and refractive media of the eye. This liquid, which Lagrange has later on used for injections to cure detachment of the retina (using only the extract of the ciliary body), we have employed in but a limited number of cases, which, moreover, did not stay long enough for us to form definite conclusions. We were guided by the idea that we might thus improve the nutrition of the lens by bringing to it elements lodged in the membranes and contents of the eye.

Students should again take up injections with such a fluid, or solutions of a remedy like potassium iodide, because we have the means to control their effect, not only in the ophthalmoscope and the text-letters, but because we are able to put the patient himself in a position to follow the progress or regression of their affection, either by means of a card perforated by a pin, or of Darier's

advice, * who lets the patient gaze at a candle flame at 5 metres, holding 1 centimetre from the eye a biconcave lens of 30 or 40 dioptries. Thus he sees a light disc of a diameter which corresponds to the width of his pupil on which the smallest opacities which interfere with the transparency of the lens are visible.

Dr. Verderau,† at Barcelona, has related an observation, unfortunately the only one, in which the visual acuity rose from 1/10 to 2/3 in a comparatively short time, after he had made 18 injections of potassium iodide in a little more than two months. Although this is only one observation, it merits our attention and should prompt us to try about 20 injections in patients who desire to submit to a proper treatment in order to remedy their loss of vision, informing them that the experiment should not last more than 2 or 3 months, during which an injection should be made every 3 or 4 days.

The solution used may be that of our colleague of Barcelona, containing 5 per cent. potassium iodide, with the addition of 1 per cent. acoine or 2 per cent. cocaine. This solution, well sterilized, is put up in little tubes containing a cubic centimetre of the solution, the ends of which are not broken until the very moment of using it. It is best to use only half a cubic centimetre (half a Pravaz syringeful) at each injection, since even this dose is quite painful; when but 4 to 6 drops are injected the patients feel no pain.

There is another precaution to be taken, that is, the injection must not be made under the conjunctiva, since such a quantity of fluid causes a chemosis, which is disagreeable to the patient, but deeper, in order to make it intracapsular, like the one for retinal detachment, because then only a small

*De la possibilite de voir son propre cristallin. *Bullet. de la Soc. Franc. d'Ophth.*, Paris, 1895, p. 515.

† Clinique Ophthalmolog., Nov. 1904, p. 368.

quantity of the fluid raises the pericorneal conjunctiva.

The trials made with such iodine solutions are still too new for my judgment of their value, but I think I can advise that they be employed, and that the patients who come to the physician asking whether nothing can be done to remove the cataract threatening their vision, are not systematically given a negative answer—*The American Journal of Ophthalmology*.

Chronic Glaucoma of the Right Eye.

By

H. P. BENNETT.

W. R., a youth, aged 18, was seen by me at the Eye Infirmary, on May 25th, 1904, suffering from chronic glaucoma of the right eye (the left eye has been quite blind for some years—phthisis bulbi).

The right eye was treated at first by myotics, but as these had no effect in diminishing the tension of the eye, I did an iridectomy on June 17th. In two or three weeks the tension again became raised, and on October 17th I performed a second iridectomy by widening the first coloboma. Since then the tension has remained normal all the time, and the patient as a consequence sees much better.

There are unusual features about the case, and on this account it has been brought before the meeting. The age of the patient is against glaucoma, it being a disease of advanced life. It is not common for glaucoma to attack myopes, and this patient has 20 D. of Myopia.

This case is a good example of the advisability of operative treatment in chronic glaucoma, even when the first iridectomy is not successful. We all know the success that attends an iridectomy in acute or sub-acute glaucoma. The patient will be brought before the Society next session.—(*The Northumberland and Durham M. Journal*.)

The Eye and the Digestive System.

Mark D. Stevenson (*American Medicine*) points out that an improperly fitting pair of spectacles produces dizziness, nausea, vomiting, headache, and even faintness; so may abnormal strengths of the eye or its muscles. He thinks that not only the above-named symptoms, but other functional digestive disturbances and even constipation, may be due to the inadequate perve supply to the digestive organs in these conditions, because an undue amount of energy is consumed in overcoming the muscular or refractive errors. Likewise, he considers that the nausea and vomiting of seasickness are chiefly due to reflexes of the eyes and semi-circular canals rather than from anything in the stomach itself. He describes the anatomic nerve relationship between the digestive organs and the eyes. Disorders of the digestive system affect vision, as often witnessed after a too hearty meal, for example, disturbances of accommodation, diplopia, etc. Hæmorrhages into the stomach or intestines are sometimes followed by blindness. Jaundice sometimes causes yellow vision.—(*The Medical Review of Reviews*.)

DERMATOLOGY.

A New Method of Treating Ringworm.

In a broad general sense it may be remarked that multiplicity of remedies advocated for any given disease form a fair measure of its rebelliousness to treatment. The greater the number of "certain cures" for a particular complaint the less likelihood of cure. That proposition may sound cynical, but it will probably be accepted without further demur by most medical men who have outlived the days of faith in the omnipotence of the Pharmacopoeia. Tested in the crucible of practice, many of the legends of therapeutic lore dissipate into

thin air. In other words, medicine has not yet arrived at the position of an exact science. Meanwhile medical observers all over the world are waiting, and watching, and working with now and then a real result of value amongst many false prophecies and unfounded claims.

Now, among the host of maladies which medical men are called upon to treat there is hardly one that can claim a longer list of remedies vaunted as "cures" than ringworm. In this instance multiplicity means to all intents and purposes a confession of failure. There is no royal road to the cure of ringworm.

The lack of any really solid advances in the treatment of ringworm affords a marked contrast to the rapid strides of our knowledge of the natural history of the disease that have been made during the past half-century. There has been no more brilliant page in the history of medicine than that which has gradually evolved the plurality of the ringworm fungi from the original *Microsporon audouinii*. A great impulse was given to the investigation by the discovery of the methods of culture of microscopic fungi on nutrient media. It is possible that further advances in this direction may one day furnish us with some antitoxin or other specific means for destroying the ringworm fungus that has effected a lodgment upon the human scalp. In spite of the large amount of knowledge that has been acquired there can be little doubt that a large field remains yet to be explored. No satisfactory explanation, for instance, has hitherto been forthcoming as to why ringworm should die out almost universally at about fifteen years of age.

Treatment, it is hardly needful to remark, may be divided roughly into direct and indirect methods. The direct aims at destroying the fungus by immediate contact with antiseptic drugs, while the indirect trusts rather to setting up of an inflammatory reaction of the neighbouring tissues, whereby a similar

end may be attained by processes that are in this particular instance not altogether easy to understand in their entirety. The great obstacle to ready cure is undoubtedly the mechanical difficulty of reaching the fungus after it has penetrated the follicle or the bulb, or both of those structures. Bearing in mind the division of remedies that has been given above, there is little need in detailing the many remedies that have been advocated from time to time by various authorities, some of them of great experience and eminence. Yet the dermatologists may ring the changes over the whole gamut, and at the end of three or four years be compelled to admit his failure to cure his patient. Good results have been obtained of recent years with formalin, but, like all other remedies used for the same purpose, it has its failures as well as its successes. Perhaps the most powerful modern therapeutic agent used against ringworm has been the X-rays. The remedy is sometimes brilliant but at other times it is useless, and unless used with great caution and by expert hands, it is liable to be attended with extremely grave accidents.

Another aspect of ringworm is the interruption it causes to education. If we are to follow the universal canons of responsible medical authority, no child suffering from ringworm can be permitted to attend school. That was how the matter stood until Dr. David Walsh announced a new departure in the isolation of ringworm at the recent London Congress of Public Health. His method may be briefly described as isolating the scalp of affected children instead of isolating the children themselves. This process he achieves by encasing the shaved scalp in a cap-film of collodion or other impervious substance. Thus protected, it is absolutely impossible to spread ringworm, and the child may attend school. The film is peeled off every week or ten days, and effects a wholesale depilation of hair. In this way cure is materially hastened and prevention without interfering with education. It could readily be carried out by the education authorities of

London and elsewhere founding central institutes whither affected children could be sent once a week or so to be treated. It goes without saying that such institutions would have to be under the charge of medical experts in ringworm. The adoption of this new method, together with rigid medical supervision of all public education schools, would soon bring us within reach of the prevention of one of the most disastrous of school diseases.—(*The British Journal of Children's Diseases*.)

OTOLOGY.

Stricture of the Eustachian Tube.*

BY

WENDELL C. PHILLIPS, M.D.

I have had a very remarkable experience within the last two or three days with an ear case which I would be glad to report. A young woman 29 years of age when four years old had an attack of scarlet fever with the usual double suppurative inflammation in the ears. The discharge was allowed to go on for a year or more and she has never had good hearing since. Many sounds she cannot hear at all. Being unusually bright she has retained her perfect speech, which no one becoming deaf at four years of age could do unless very bright. She has never had any ear treatment to speak of during all these years. I saw her first a week ago last Monday, when a careful test was made in every way possible.

When the tuning fork was placed upon the bone she heard it best in the left ear. She heard the ticking of a watch at four inches in that ear and at about the same distance in the other. She heard the acoumeter at four feet in left and six feet in right.

There was a good deal of thickening and sclerosis of what was left of the drum

* New York Post-Graduate Clinical Society.

[Oct.,

membranes, and they plainly showed the result of the suppurative process of years ago. The damaged drums were very much retracted, more I think, than any I ever saw. In making the first catheterization and using the otoscope I found that there was a rough high-pitched note and after inflation several times I could not bring up her hearing. On Friday morning, after using the catheter, I introduced a fine bone bougie through the catheter and at about the junction of the membranous with the bony portion of the Eustachian tube I encountered an obstruction. I succeeded in getting through this and passed the bougie on into the tympanic cavity. I inflated and heard the air go in with a bound. There was some pain on drawing out the bougie. When I asked her if it hurt she said, "What is the matter with your voice? There is something the matter with your voice." She said she heard things she never heard before.

I tested her after that and she heard the same watch tick at 30 inches and heard the acoumeter at 20 feet, which is the limit of distance available in my office; from my office she went to the shopping district, and when she went into the shops she could hear the women in passing talk, which she had never heard before. She heard that day the hissing of the water boiling in the kitchen. After she went to bed she had to get up and have the clock taken out of the room. This had been there many years without being heard by her.

I told her her hearing would probably go back a good deal by the next morning, but strange to say she was all right yesterday and to-day. This young woman had a stricture of the Eustachian tube which was overcome. It may close up after awhile and may need bougieing again, but with occasional treatment she will no doubt retain good hearing.

I want to say that I am an advocate of the intelligent use of the Eustachian

bougie. There have been some bad results from the use of the electric bougie, and it should not be used except in the hands of an expert. The ordinary bone bougie, however, does just as well, without the bad results.

We do not often get such results as have been obtained in this case. The fact that she has gone three days without any change indicates that I will be able to keep this young woman in fair condition so far as this stricture is concerned,—*The Post Graduate*.

CORRESPONDENCE.

[The Editor does not hold himself responsible for the views of his correspondents.]

To

The Editor,

"THE ANTISEPTIC."

Transfer of Hospital Assistants.

SIR,

The grievances of Civil Hospital Assistants in the matter of frequent transfers is an old chronic and callous sore, which, if it ought to be healed, should be probed to the very bottom, laid bare, and constantly stimulated to healthy action by frequent counter-irritation, and cauterization. Many a Surgeon has off and on attempted at healing this for a long time, but not having diagnosed its chronicity has not applied the drastic remedies needed. It was thought that this sort of treatment was at last applied by the *Madras Mail* for a pretty long long period, from October '04 to March '05, and when signs of healing were about to manifest themselves the process was retarded by an amateur Surgeon in the person of the Hon'ble Mr. K. Venkata Row whose timid application of a weak caustic in the shape of his one or two short

1905.]

451

questions at one of the Legislative Council meetings gave a convenient handle for this departmental head to furnish reply to Government justifying his action. Another reason why the sore is so difficult to heal is, because it is in this unhealing atmosphere of the *Hindu* which, however congenial to the healing of many other like sores, has a contrary effect on this specific sore, which requires a specific treatment. Besides, the sore appears to have some bad infection about it and that is why many fear to approach it. While the *Madras Mail* approached it fearlessly undertaking to cure it, the *Hindu* opined that the same was incurable. This is how the latter expressed itself supporting the official reply to the question of the Hon'ble Mr. K. Venkata Row. "It is next to impossible to regulate by rules the transfer of officials, who are frequently wanted in different places according to unforeseen emergencies and there are also, as the Government said, necessities of health and discipline which cannot be met by fixed rules. We have neither the space nor the time to try to controvert in detail the arguments of the *Hindu* on the matter, about the seriousness of which there cannot be two different opinions." Either it is ignorant of the subject in all its bearings, or is studiously indifferent to peruse the whole correspondence on this vexed question, which have appeared from time to time in professional and other journals and which we would willingly place at its disposal." If, according to one organ of public opinion, such frequent transfers are inevitable, why, we ask, "are the 66 Hospital Assistants" who according to a correspondent of the *Mail* have been having a 'perpetual settlement with fixity of tenure' at pleasure exempt from these exigencies? and why could not a large number of hands be recruited yearly to

meet the growing demand? Why should certain men placed on special duties be called away in the middle of such a duty in the twinkling of an eye and substituted by others? What need is there for disturbing men on independent charges and posting them to other such charges before they have stopped even a few months in their new stations, and why should they be brought back to their old stations? It is evident that the *Hindu* has not gone fully into the matter. One more word in this suggestion of the *Hindu* is regarding the increase of pay of the Hospital Assistants as a panacea for their ills. After years of agitation the Government of India has adopted a so-called scheme of increased pay by creating a senior grade on Rs. 70 to be given to 10 per cent. of the total strength by seniority and merit and it is absolutely unlikely that anything more will be granted in this direction.

If these poor subordinates are left undisturbed for reasonable periods in certain stations, that is more than granting an increased rate of pay to them.

Since the recent controversy in the *Mail* we have perused the civil medical lists for signs of awakening in vain. We hope we have said the last thing on the subject and as any more of the old state of things cannot continue without bringing the responsible officers and the Government into disrepute, it is fervently hoped that no time will be lost in effecting the necessary reforms, and if those at the helm of affairs cannot do it an officer of the Indian Civil Service of the stamp of Mr. Cardew or Mr. Hammick will have to be deputed by Government to do it for them, as our Bel-lary correspondent rightly opines in his note to the *Hindu* of the 19th ultimo.

'A Sufferer.'

SIR,

In the September number of your journal, Mr. Chinnasami, Hospital Assistant at Sivakasi, has drawn the attention of the profession to a marasmatic condition known as 'Kanai' to the Tamilians. The condition is very largely prevalent out here and is, perhaps, more common among boys than in girls. Neither western medicines, nor the usual administration of the indigenous kanai oil has much effect on the disorder which generally disappears with adolescence and sometimes continues even in later life. In my experience, the complaint is mostly confined to children and boys and girls of the neurotic type; in fact, I have seldom met with it in persons of a phlegmatic temperament. In a large majority of cases, the temperature hardly rises even to 99°, but there is a feeling of uncomfortable warmth on the part of the patient and to the touch of the practitioner the body heat is above the normal. Professor Patrick Manson drew attention to the large prevalence of the condition in the tropics some years ago (I think it was about the time when the last edition of the Nomenclature of Diseases was being prepared) and was of opinion that it should be classed as a separate disease in the nomenclature and proposed the name of 'Low Fever' for the condition.

TINNEVELLY, } A. Y. NARAYANIAH,
11-9-05. } Assistant Surgeon.

The Travancore Planter's Case.

SIR,

The sequelæ to the Travancore Planter's Case is sure to have created considerable consternation among medical men, especially among my class of Hospital Assistants who are more often called than any other

class of medical men to make post-mortem examinations and give evidence in courts of law, at times, in cases involving intricate medico-legal questions. Whether Mr. D'Lemos' conduct in the case was all that could be desired or not, is not the point for discussion here; but his prosecution for alleged perjury without a departmental investigation cannot fail to draw the serious attention of all medical men who have, as a matter of duty, to make post-mortem examinations and give opinions regarding causes of death.

No one can deny the fact that the duty of making a post-mortem examination, besides being unpleasant, is a most difficult task and requires a thorough and skilled knowledge of almost every branch of medical science to enable one to arrive at a correct opinion regarding the true cause of death. Even officers of the I. M. S. do at times blink and wink in law courts when subjected to moderate cross-examination by competent counsel. The difficulty of making a firm stand must therefore be greater with a medical subordinate, especially when he has to face the unrestrained cross-examination of a pleader of the stamp of the "Lion" of the Madras Bar.

For aught, Mr. D'Lemos could not be guilty of anything more than the want of a good knowledge of his profession and if, for this reason, he should be prosecuted and treated as a criminal, it is time that post-mortem examinations are entrusted to none but medical officers of a very high order instead of entrusting such a difficult and responsible work to a low-paid subordinate and sending him to jail for any mistake or error of judgment that he may unwittingly commit.

A MEDICO.

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* ACUTE ANTERIOR POLIOMYELITIS.

BY

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The views previously held as to the causation and pathology of this affection have of late years undergone great modification, so that it will be necessary to review these changes before dealing with the clinical side of the disease.

Ætiological Facts.

More than a half of the cases occur in the first two years of life; of these very few occur before the age of six months. This latter fact makes it unlikely that the disease is ever of intra-uterine origin, and of this there is besides no positive evidence. Above the age of ten the disease is rare. The sexes are equally affected, and heredity plays no share in the production of the complaint. The occasional instan-

ces of two or more children in one family being affected are to be explained by regarding the disease as an infection, and should not be taken, as was formerly done, to indicate any family predisposition. Exposure to cold, over exertion and trauma, local or general, bear no relation to the disease beyond that of occasional coincidence; they are in no way concerned with its production. The onset of the disease is usually during perfect health; it is rare for it to take place either during or immediately after a specific fever. Cases that have been thought to be due to specific fevers are often cases of multiple neuritis; or, more frequently, the febrile disturbance so characteristic of the onset of the disease has been mistaken for some specific fever, especially for rheumatic fever. The disease is undoubtedly, as first pointed out by Sinkler, commoner during the summer months, four-fifths of the cases occurring then. The heat of the summer seems to bear a direct relation to the frequency of the complaint as it does to that of summer diarrhoea. The summer of 1904 was particularly hot in London and there was a striking outbreak of cases, especially in the East End, where it almost assumed the proportions of an epidemic. I saw last year more acute cases than in the preceding three years taken together; this year, so far, has not yielded any unusual number.

* Specially contributed to "The Antiseptic."

Pathology.

Comparatively few examinations of the cord have been made in the acute stage of the disease and thus may be accounted the late date to which antiquated views as to its pathology survived. When such an examination is possible the anatomical picture seen is unmistakable. The most striking changes are the vascular ones. The anterior median artery is thrombosed as are its branches. The area of its distribution is the anterior horn of grey matter as far as, and including, the column of Lockhart Clarke, but not including the posterior horn or any of the white matter. In this area is seen softening of the nervous structures, degeneration of the cells, but, more prominently than either, a hæmorrhagic extravasation. Small patches of hæmorrhage are scattered here and there, and throughout the whole area there is leucocytic infiltration. The affected portion of the section is sharply cut off from the healthy portion. In the healthy area the vessels may be a little dilated, but there are no inflammatory or thrombotic signs and the nerve cells are healthy. In later cases the vascular changes are not obvious, as absorption of the extravasated products has taken place. It is now that we see the marked lesions of the nervous elements. The nerve cells, instead of being swollen and granular, as in the acute stage, are atrophied either partially or totally. The disintegration of nervous structure, with the overgrowth of connective tissue consequent on the initial inflammatory lesion, result in the conversion of parts of the anterior horn into a patch of fibrous tissue. This usually extends vertically for not more than one or two segments and at its margins we find reappearance of the nerve cells. These are at first few in number and often shrunken, but

as one proceeds further the structures look healthier until at quite a short distance we see again the normal look of the cord. The lumbar region is by far the most frequently affected, and this fact was at one time adduced in support of a mechanical vascular view of the disease, for the blood-supply in this portion of the cord is comparatively poor.

As regards the *pathogeny* of the affection, it is not now necessary to discuss the older notions held on the subject. Suffice it to say that all the evidence we have points to only one conclusion, namely, that the disease is of microbic origin and that the initial lesion is an inflammatory thrombosis of the anterior median artery. The constitutional symptoms are an expression of the absorption of toxins. A discussion of the basis of this view would lead us too far at present, but one may sum up by saying that it is in harmony with all we know of modern medicine, while all other views propounded contradict the principles of this knowledge. The causative micro-organisms have not been isolated up to the present. Cocci and bacilli grown from such a cord by Batten were evidently due to contamination of his culture tubes, as he himself considers. Amongst the interesting problems yet to be solved is the question as to whether the infection is a specific one or not; in other words, may the disease be caused by any one of many different organisms or only by one special one. This cannot as yet be decided definitely, but certain evidences militate in favour of the latter view. These are the occasional epidemic occurrences of the disease, its complete absence of relation to other diseases or infections, the selective nature of the resulting lesion, and the special and characteristic course run by the malady. The source of entry of the or-

ganism is again only to be guessed at, though the mode of occurrence of the disease suggests a respiratory infection.

Semeiology.

Two of the most striking features of the disease are the severity of the constitutional symptoms at the onset, and the extent to which the paralysis spontaneously recovers. The general symptoms are rarely absent, at all events in young children, and frequently lead to a mistaken diagnosis. The temperature rapidly rises to between 101°F. and 102°F. and falls only gradually; headache, prostration, rapid pulse and vomiting are all common; convulsions are less common but it is important to bear in mind their occasional occurrence. In older patients pain, referred to the affected limb, may be a prominent feature. The paralysis rapidly develops but may not be obvious for a day or so. Its initial range is very variable both in site and extent. It is important to remember that its existence is often overlooked, especially in a young infant, by a careless examination, and may not be noticed unless specially looked for. The paralysis reaches its maximum very rapidly, usually in one or two days, but frequently in a few hours only. The legs are more often affected than the arms; incomplete paralysis of a limb is commoner than complete paralysis, and it is common for more than one limb to be affected. The limbs may be affected in an irregular manner, even one arm with the opposite leg being by no means a rare combination. Besides the limbs other parts may be implicated; thus the neck may be weak, causing the head to drop forwards, the abdominal, respiratory or back muscles may be paralysed, resulting in corresponding deformities. Sphincter involve-

ment, when it occurs, is always temporary, lasting for a few days only; it is commoner with lesions in the lumbar cord. Similarly affection of sensation, a much rarer phenomenon, is also quite temporary. The deep reflexes in the paralysed limbs are soon lost, but the superficial reflexes remain much longer. After a variable period, usually about a couple of weeks, improvement begins to take place. This continues for a couple of months, after which further progress is slight or non-existent. The explanation of this course of events is as follows. As already stated, the constitutional symptoms are due to the effect on the system of toxins which are probably elaborated at the sight of the lesion. The widespread initial paralysis is due only in part to its local effects of the inflammation; probably an important part in its production is played by the pressure of the inflammatory exudate. This abolishes the function of neighbouring structures just as abolition of function elsewhere occurs in the vicinity of acute inflammation. Probably the greater the amount of exudate, the more extensive is the initial paralysis and in some cases this reaches such a high grade and occurs so rapidly as to suggest a hæmorrhage into the substance of the cord. The subsequent improvement is due to the absorption of the exudate, and the part of the cord directly affected by the inflammation remains unaltered so far as function is concerned. Hence the extent of the improvement will vary with the degree to which the initial paralysis was dependent on the secondary pressure effect of the exudation, in other words to its amount. This being quite an unknown factor, it follows that it is impossible to predict which muscles will recover and which will remain paralysed.

If we see the case a year later, an entirely different clinical picture presents itself. The paralysed part, which is most frequently the leg below the knee, has undergone atrophy in all its component structures, muscles, bones, etc. The skin is blue and cold. The leg is shorter than its fellow and is withered and helpless. The joints are flaccid, though at the ankle this may be masked by the contraction of the tendons, especially the tendo Achillis. The deep and superficial reflexes have been abolished. The muscles show the electrical reaction of degeneration in some cases, but more often no reaction is present to either galvanic or faradic excitation; sometimes a slight amount of faradic excitability returns. We cannot deal here with the manifold deformities that may be produced as a result of the atrophy and subsequent fibrotic contraction. In the leg by far the commonest is talipes equinus or equinovarus, but any talipes may occur. A very interesting deformity is the unilateral scoliosis, first pointed out by Sir Thomas Barlow, due to disease of the anterior cornua in the mid-thoracic region.

Diagnosis.

The problems of diagnosis are quite different according as the case is seen in the acute stage or at some distant period. In the acute stage the mistakes in diagnosis may be of two kinds; first, the fact that paralysis exists may be entirely overlooked, and secondly the paralysis may be detected, but it may be attributed to some other cause. The first mistake, which is the one more commonly made, can be avoided by making a systematic examination of the child, as of course should be done in every case of acute illness. If no paralysis has yet appeared, then, from the nature of things,

there is not enough evidence obtainable to permit of any diagnosis whatever being made, and so it should be impossible for a careful clinician to commit himself to an incorrect diagnosis. After weakness of a limb has been observed the only remaining question to settle is whether this weakness is due to a true paralysis or to a pseudo-paralysis caused by the syphilitic epiphysitis, infantile scurvy, trauma or prostration. A careful local examination should be able to answer this question. Once assured of the existence of a true paralysis the problem becomes simpler, for paralysis of acute onset with constitutional symptoms in a child can only be due to poliomyelitis, encephalitis, meningitis or neuritis. The flaccidity of the paralysis with the abolition of the deep reflexes and retention of sensation at once tells us that we are dealing with the first of these conditions. In a week this is confirmed by the diminution of faradic excitability and this is followed by the voltaic changes.

When the case is seen some time after, the conditions that sometimes simulate poliomyelitis are congenital talipes, local disease and cerebral lesions. The first is at once separated by the absence of cutaneous and thermal changes and by the preservation of the deep reflexes; muscular atrophy also is never great nor does it show electrical changes. Local disease never accurately mimics the features described above and can be detected by a careful examination. Pure cerebral monoplegia is rare in children, as one can usually detect evidences of its once having been a hemiplegia; it may resemble poliomyelitis in causing a considerable degree of wasting, both of the muscles and bones. The limb, however, is not so blue or cold; the deep reflexes are increas-

ed and one always finds some one of the different modifications of Babinski's superficial reflexes. The preservation of faradic excitability and the presence of some form of mobile spasm are also important points of distinction.

Prognosis.

The following rules will be found useful although they do not carry us so far as we would wish. The danger to life is almost nil unless the cervical region be implicated and a respiratory infection supervene. The ultimate paralysis will nearly always be decidedly less than the early paralysis, but probably every case will have some residual paralysis. When the paralysis has once ceased to spread there is no danger of its again relapsing and causing a further extension. The extent of the improvement is most variable and cannot be even guessed at in the acute stage; the surest feature is the certainty of any such guess being wrong. After six months no further recovery is to be expected. No muscle, within this time, is beyond hope so long as galvanic response remains, but that in itself gives no ground for assurance unless faradic excitability be present also.

Treatment.

No drug is ever indicated. The acute illness should be treated by rest and a lighter diet than usual. The pain, if present, will be relieved by resting the limb in cotton wool.

During recovery nothing within our control can influence the morbid process, but we can do a little to keep the degenerating muscle fibres in activity pending the time that their nerve cell and fibre will again innervate them. Massage and faradism are the methods to be relied on

for this purpose. In the last stage when there is no hope of further recovery in the muscles a great deal can be done by surgical measures to ensure that what muscular power remains is being employed in the most efficient and economical manner.

*PATHOLOGY OF TUBERCULOSIS.

Arguments drawn therefrom for its cure with subcutaneous injections of oil.

BY

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Of the many important pathological conditions of the body in the disease tuberculosis, we will pass over those which are apparent even to the most casual observer, such as wasting of the tissues of the body, first being an absorption of the fat tissue leaving only an atrophied adipose, then of the ill-nourished muscular tissue, and changes as of the functions of digestion, etc., and we will speak but briefly of the changes in the blood and then take up the pathology of diseased lungs.

The blood, previous to the infection of the lung by tuberculosis, while it may

* Specially contributed to "The Antiseptic."

present normal findings under the microscope, will be found lessened in quantity, wanting in activity of its cell functions, and lacking in the normal percentage of nutriment or fat which it should contain, too poor in quality, too inactive from starvation to prevent the disease and to win against its invasion, and to furnish material and connective tissue to the diseased lung.

Oils injected into the tissues furnish nutrition for the impoverished blood, promoting at once an increase in all of its constituents, furnishing elements necessary for the formation of connective tissue, and nutrition and force for the cells of the blood to fight and win their battle against consumption; in fine, subcutaneous injections of oil furnish the material and the conditions which are directly antagonistic, opposite and opposed to consumption.

In the early stages of consumption, before the system has become emaciated, the blood undergoes little or no change; later, there is a loss of watery constituents which makes its examination often appear normal. In the final stage there is an increase of its white cells. In the first stage, the fat tissue of the body yields itself to keep up the normal constituents of the blood so far as possible, while those who are emaciated and have no fat tissue and in the second stage as the disease progresses, there is no adipose tissue to supply the blood with nutriment, and, as a consequence, it diminishes in quantity; and while nature endeavours to force her limited powers into armies of leucocytes with which to destroy the enemy, the disease, she has nothing to feed these defenders upon. The system is completely bankrupt, the adipose has been used, and all nutriment of the body has yielded in its endeavours to supply the blood with nutrition with which to overcome the disease. The patient is emaci-

ated and wasted. He cannot digest the food required, and nothing more is to be derived from the body.

Subcutaneous injections of oil enabled through the bodies own complete method to destroy the disease, and nature's method of destroying diseased germs is the only means which we have for any disease. True, proper care, hygienic rules and indications must be met for all diseases, but the germ and pathological condition must be met by the system. In the oils injected into the tissues, we aid the system to every indication drawn from the pathology of the disease which the impoverished system has been unable to supply. Subcutaneous injections of oil into the tissues furnish to the system its supply of fats upon which the blood may draw to feed his armies in their fight against the disease.

Connective Tissue which heals and fills Lung Cavities derived from the fat of the Blood.

Following the usual description that when an infection of the lungs takes place that the powers of the body, the blood hurry an increase number of cells, principally leucocytes, to the part; there is also with the cells a connective tissue formed, derived from the nutriment of the blood in the endeavour of the body to heal itself, it will be seen that subcutaneous injections of oil meet these conditions in a remarkable way, inasmuch as they increase cell growth, particularly of the leucocytes, both in number and size, and this follows almost immediately after an injection. The second condition, that of aiding in the formation of connective tissue, is also met, and, as we have shown in an early lecture, fats are consumed for the repair of tissue more than any other food, i. e., they are converted into the various tissues as the old tissues are worn out. They are, according to this, more

essential to the healing of the lung tissue, to the replacing of old, worn-out tissue than any other material.

If we will stop for a moment and consider the development of fat tissue, we will see its relation to other closely allied tissue, and particularly to connective tissue, the tissue which fills and heals tubercular lung cavities. In the early stage of the growth of fat tissue most fat cells have the same appearance as the ordinary connective tissue cells, and I think that you will bear me out in saying that it is not too far-fetched to believe that the blood, loaded with increased nourishment in the form of increased cell growth and fats, has a better chance to deposit these over-abundant cells and over-abundant fats in the formation of connective tissue in the diseased lung, thus healing the diseased area, the place where they would be more likely to be deposited, since Nature always seeks to cure herself, and since adipose tissue yields to the demands of other tissues in all diseases, the adipose tissue being rapidly exhausted used in Nature's effort to cure; and this she would do and does do, even in cases of tuberculosis in those who are well nourished and who live well upon fats; but, on the other hand, those who are not well nourished and do not eat fats in sufficient quantities, and the habit of non-digestion of fats has so weakened and impoverished the blood that Nature cannot repair the lung. By injections of oil we thus aid Nature to the material for healing the lung for which she is wanting.

We are now ready to go on briefly as to the general pathology of a tubercular lung and from what has been said already regarding subcutaneous nourishment with oil, you will be able to follow their physiological action in the healing of these pathological conditions.

Tuberculosis may manifest itself as a tubercular inflammation of acute or chronic type, the former condition being rare as compared to the latter. It may be of a catarrhal form affecting only the larger bronchi, sometimes with hypercemia and inflamed lung tissue filling the air cells with resultant products and under these pathological conditions has been classified as either acute or chronic pulmonary phthisis according to the severity of the inflammation and length of period of disease.

Again, the disease assumes another form; there is a deposit of the tubercle germ and the formation of the tubercle from which this disease took its name of tuberculosis long before the discovery of the bacilli, and in this form, too, we find that the tubercle is of various forms, and in varying conditions.

There is no limit to the number of tubercles; they vary in size, some being so small as to be scarcely seen, others large, and they may be of various shapes and single or multiple, and may be located in any part of the lung tissue.

The tubercle found in so great a variety of condition, as to size, numbers, and formation, corresponds to the resisting powers of the body and the amount of reparative material which the body has at its disposal, which comes largely from the manner of diet of our patient and his capability of digestion. In the more chronic forms of the disease, where the body has made good resistance, we often find the tubercle to have undergone complete connective tissue transformation, while in those in whom the disease has advanced more rapidly we find the tubercle undergoing a caseous degeneration and the rapidity with which these tubercles degene-

rate and affect surrounding lung tissue, corresponds to the lack of the protective elements (which comes from the nutrition of the blood) and this varies the structure of the tubercle in different individuals, as well as varying the diseased conditions of the surrounding lung tissue, as to inflammatory products, granulation tissue, connective tissue, and tubercle ulceration, and extent of tissue involved.

The histological structure of the tubercle, while not constant, corresponds to its age of development, and the resistance and reparative powers which in the well nourished individual, are ever trying to overcome it, and will be found to be principally composed of cells varying in size and which have a tendency to undergo necrosis, more rapid in the under nourished. The cells, which are derived from the blood, are in general classified under three heads. We have the small round white cell, the epitheloid fatty cells, and the giant cell. The tendency of the tubercle in the average case of consumption is to undergo central necrosis, but where there is a tendency to recover a variable amount of connective tissue is formed.

The source of this connective tissue must necessarily be from the nutrition of the blood, and upon this greatly depends as to whether the tubercle shall undergo connective tissue change, and thus be cured. Cavities of the lung are formed in chronic phthisis by the weakening and dilation of inflamed bronchi, and by the necrosis of inflamed lung tissue. The tubercle forms cavities from its own necrosis and the necrosis of surrounding inflamed tissue.

Let us now mention more particularly the pathology of the lung which comes

from Nature's efforts to surround the disease and to repair and replace the damaged lung. Tissue changes take place wherever the bacilli grow which consists principally in cellular increase and the formation of epitheloid and giant cells held by fibres of connective tissue, or there may be an inflammatory small cell infiltration, or an exudation of serum, fibrin, and red and white blood corpuscles, which change may occur singly or in combination. Sometimes, the entire tubercle undergoes connective tissue changes, or if the patient is not so fortunate, his resisting power being good though somewhat inferior, the formation of a connective tissue capsule offers great resistance to the caseation and breaking down of lung tissues. The resistance built up by the body around a tubercle and around a cavity are similar in construction and formation, and there is a unity of resemblance in the healing processes presented in the various forms of phthisis and tuberculosis which seems to correspond in its completeness to the amount of nutrition of the system. In the weakened under-nourished patient the advances of the disease are more rapid and the resistance and reparative processes lessen; on the other hand, in the partially well nourished patient who is living out of doors and with a good appetite the resisting powers and reparative forces take place to a greater extent and often overcome the disease.

From where do these cells and connective tissue come? Various opinions have been held and where there are so many opinions there is uncertainty, but they can come only from one place, the blood, and if the blood is poor in nutrition, poor in cell activity, poor in fat and other constituents, then tuberculosis advances rapidly, for Nature has not the means at her disposal to overcome the disease; on the other hand.

If we furnish this nutrition through subcutaneous injections of oil (since the patient will rarely eat sufficient fats and if he does they may not be absorbed, until his digestion is trained), together with a proper diet, we have the material for the cure of the disease, since oil injected subcutaneously increases the growth of all the cellular constituents of the blood and furnishes material for the formation of connective tissue, and for the nutrition of the lung. We can now see how subcutaneous injections of oil meet every pathological condition of tuberculosis in a physiological manner and according to Nature's immutable laws. The proof of their value is found in the fact that they cure and thus proves all that we have said in theory.

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* MALINGERING

BY

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Introduction.

The subject I propose to discuss this evening may not prove equally interesting to every one present here, and I may at once confess that I chose it in the interests of my military colleagues as well as my own, as I have no doubt that every one of us has at one time or another, in the course of our regimental duties, been confronted with the delicate question of whether a trooper was malingering or not, and has found it difficult to solve it unaided by an authoritative guide in the shape of a consultation or a book. There must be medical officers here whose work amongst sepoys has helped them to accumulate valuable illustrations of malingering and the ingenious methods of malingerers, and I hope at the end of this paper they will give us the benefit of their experience. But for the hope that the poor-ness of this paper would be made up by the volume of information forthcoming during the after-discussion, I should not have ventured before you with so little that is original and interesting.

The civil surgeons, especially those who have been or are connected with jails, lunatic asylums and schools must have

* A paper read before the Hyderabad Medical Association and sent to the *Antiseptic* for publication.

come across variegated cases of malingering in their practice and their knowledge also would form a valuable and welcome record for the Association. The department presided over by the lady doctors, particularly by those whose work lay amongst the women of the Zenana, should afford illustrative cases of exceptional interest in the domain of malingering.

Definition.

What is malingering? Derived from the two Latin words *malus* and *ager*, it literally means a bad or base form of disease. Practically it means a wilful simulation of disease or injury through malice or for the purpose of attaining a desired end. It implies a purely voluntary feigning of illness which may be exhibited either as a mere pretence or an exaggeration of some already existing ailment, or as a morbid state or wound entirely produced by artificial means.

I am aware that exception may be taken to such a limited definition, and I would myself include under malingering, cases in which patients with genuine illness, pretend to be free from their ailments for the sake of some benefit to be derived from such pretence. Take, for instance, a diabetic who, wishing to insure for a large sum, produces the urine of a healthy friend for examination. Young men failing to enter as recruits in one regiment offer themselves as candidates for military service before the doctor of another regiment and having discovered their weak points often learn to successfully hide them. In our system of examining recruits for physical fitness, I believe we do not take sufficient account of the family history and previous personal history, and we may with advantage adopt the plan of examination laid down by Insurance Com-

panies. A recruit in my regiment developed symptoms of insanity after a fall in the Riding School. It then transpired that his father was mad and that his brother was half-witted. We have often heard the story that a Railway passenger with fever has been able to hoodwink the Plague Inspector by washing his hands in cold water. I may quote many more instances of attempts to hide real illness from the physician, but I think I have said enough to show that this also is a form of malingering.

Two forms of malingering are usually recognised—the *fictitious*, in which there is a mere pretence of disease that does not exist, and *factitious*, in which a disease or injury is artificially produced.

I do not suppose that malingering is the monopoly of any particular race, or class of individuals. It is practised about equally by both sexes and at every period of life. Simulation of disease of mind or body is a favourite method with all classes of people, of avoiding duty, escaping punishment, or simply gaining attention and sympathy. The soldier who gets a headache on a field day, the convict who makes an ulcer to get into hospital, and the lady who faints at a convenient time and place are all malingerers in the same degree.

I may here mention a few of the commoner types of malingerers that we come across in Hyderabad, people with whom any of us may be called upon to deal with and of whose antics we have to beware.

1. The school boy or school girl who wants 'French Leave'. School boys are proverbial schemers. A boy thinks nothing of feigning diarrhoea when there is a football match on at which, his presence

either as a player or as a spectator, he considers as more beneficial to his body and mind than sitting down to his class work, and the ingenuity displayed by these boys in simulating disease to gain their ends is truly remarkable and worthy of a better cause. The headmaster of a certain school to which I belonged was equally notorious for his harshness and his tenderness. He had a special caning day in the week, I think Friday. Fiendish as was his delight in inflicting corporeal punishment, he never touched a boy, however mischievous he may be, who was ill. One of the worst behaved boys in the school had a chronic dermatitis of the palms and thus escaped the penalty of his many misdemeanours. It was an open secret to his class but one that the irate old pedagogue never suspected—that the wily boy periodically rubbed his hands on a rough stone to keep up the inflammation. I know of a school girl who very often got what she called a "severe stomach-ache," at 9 a.m. *i.e.*, about school time, but made a good breakfast two hours later.

When a fit of malingering possesses a medical student on an examination day, detection and treatment are rendered infinitely difficult on account of the facility with which he can manufacture symptoms.

2. The military man malingers for various reasons. Oftenest it is to get off some irksome duty. The trooper, whoever sleeps himself after a night of debauch or drunkenness straightaway goes to his hospital and says he had fever last night or a scorpion stung him that morning. These men, who I am happy to say are few in any given regiment and can with some care be picked out and blacklisted, are yet a source of great annoyance to the regimental medical officer. Even officers in the local regiments are, I am sorry to

say, not above feigning illness when in their opinion the occasion demands it. I know one or two who invariably go on the sick list during Mohurram. I have heard it whispered that medical officers themselves are not free from such failings, but I hope this is an undeserved calumny. I must however, quote the instance of an Hospital Assistant I had in my Regiment, who spat up so much blood in the morning that pale and ill he could barely sit up in bed, and yet bowled at a cricket match the same evening without asking to be relieved. This man, however, overreached himself once. He went on the sick list for acute dysentery and during his supposed illness was taken by the Sarfikhos Police for shooting a black buck in the Saroonagar preserves.

We are told that on active service soldiers are often caught malingering—preferring the doctor's pills to the enemy's bullets. Even in sham fights—and I saw several cases in the Delhi Camp of Exercise of 1902—they trot out imaginary ailments to escape the fatigues and discomforts of a long march and a camp life. Yet another and a more dangerous class exists. Sometimes a man tired of service will pretend to be ill in the hope of obtaining his discharge. He has pain in the left shoulder, or his left arm is powerless to pull in his horse. This serious state of affairs is put down to a fall off a horse while on Government duty. He is pronounced unfit by a Medical Board, which if it exercises more generosity than judgment, may even recommend him for a wound pension of the 4th degree. He goes straightaway and becomes a trainer in a Nawab's stud. I have known some of these humbugs enlist themselves in other regiments to speak disparagingly of the professional knowledge and even the personal integrity of their medical officers.

3. District officials of the Public Works, Forest, Customs, Police and other departments often come into head-quarters on a short sick leave supported by a certificate from the District Medical Officer; and when they find that the business which brought them here which usually concerns their promotion or transfer requires a longer stay, they go to the local practitioners with a cock and bull story of dyspepsia or palpitation and by offering a tempting fee attempt to obtain a medical certificate which would extend their leave. As against such would-be deceivers, I may remind my colleagues in the service that there is an old circular from the Home Secretariat which warns all local medical men against giving certificates to district officials with a view to prolonging their sick leave, except under certain conditions.

4. Large sums are sometimes offered to a medical man to extract a certificate from him which will exempt a defendant or witness from appearing before a court of law. In such cases there is generally very little attempt made to hide the real motive of the deception from the medical man concerned. If so, the case no longer falls under malingering. Any imaginable disease is faked up for the nonce, and the doctor is called upon to aid and abet the imposture.

5. The fifth class consists of women who when tears and supplications fail them, resort to threats in the form of terrible diseases, usually of the nervous system. Pregnancy has been feigned by some with remarkable success. The fact that these women are often neurotic makes the diagnosis of pure malingering difficult and risky.

6. Compensation is sometimes claimed or injuries in Railway accidents or in

fight, and claims are sometimes preferred against accident Insurance Companies on false or exaggerated grounds. These cases are naturally few in this country of few railways and fewer accident Insurance offices, and the ordinary Indian labourer has no idea of the Employers Liability Act.

7. Idle beggars and vagrants are glad to find excuses which will procure them board and lodging and no work in the wards of a hospital. In the large Presidency hospitals there is a class of loafers who can be seen in the wards more than six months in the year. By dint of constant practice of their tricks, and an unlimited aid from books and medical students, these 'hospital birds,' as they are called, become such adepts at malingering that it is difficult to get rid of them.

It would not be out of place here—and I hope you will not grudge the time—to discuss briefly the psychological side of malingering. Those who like Lambroso regard all crime as a disease or a symptom of disease, who would put down common robbery to 'ambulatory automatism' are entitled to include malingering in the nomenclature of diseases. To them it would appear to be nothing more or less than a form of mental or moral aberration, the inevitable result of some obscure pathological condition of the higher centres dependent on heredity or imperfect development—a condition therefore which demands discriminate sympathy and careful treatment rather than rash condemnation and summary punishment.

Hysteria and neurasthenia play tricks which would not fall under true malingering. It is of course difficult to draw a strait line between the purely nervous and the voluntary phenomena, but there

seems to be a tendency at present to attribute too much to the so-called neuroses. At any rate the neuroses associated with hysteria and neurasthenia—the diseases that produce nervous mimicry are responsible for some at least of the most misleading instances of simulated disease, in which some of the symptoms are due to a weakened condition of the nervous system while others are deliberately assumed. The task of separating the manifestations of neuroses from complaints made with oblique motives is fraught with great difficulty—often with grave responsibility.

Of the actual neuro-cachectic conditions we meet with examples of simulated morbid states which present the subjective symptoms of almost every conceivable disease, and which run such chronic courses as to induce real organic disease as the outcome of the exhausting effects of the accompanying circumstances.

We sometimes get symptoms so various and signs so obscure, derangements of the psychic, vasomotor, motor, and sensory functions with perversion of the moral sense thrown in, all in the same case; and when factitious wounds and semi-voluntary deceit are superadded, we are confronted with a condition that fairly baffles our attempts at a correct diagnosis. I can recall one instance of a zenana lady, who had ceased to be a favourite of her husband, and who for two long years worried herself over her loss and employed all the arts she was capable of to regain his favour. Malingering was her stock in trade, and when I saw her, she had not a single organ whole. Her appetite was gone, she could not sleep, she could not move hand or foot because, forsooth, her limbs were paralyzed. She had frequent attacks of palpitation and dyspnoea, suffered from violent diarrhoea, and passed

bucketfuls of urine. A nurse employed in the earlier stages discovered that this dying lady ate more and slept more than an average lady of her quality, that when she lost her temper which was none too sweet, she hit her slave girls as hard as the best of them, that she took medicines on the sly to produce purgation, and added water to her urine. But this lady did really get ill ultimately, very ill indeed. She refused food, worked herself into fits of melancholia alternating with violent mania, developed an eruption about the external genitals (how I cannot say), which for want of care developed into terrible sloughing ulcers. She grew weaker and weaker and died eventually of the organic diseases which I am convinced were originally self-induced.

The simulation seen in neurasthenia is often associated with accidents which through shock and fright frequently produce this neurosis. Thus we have the tender spinal spots; the lethargic conditions, the emotional states, rigid backs, pains in joints and so forth so frequently seen in troopers who have had bad falls off their horses. These patients sometimes recover so remarkably and so rapidly after they are discharged as 'unfit for further service', that we may for a moment be led to consider their past condition as purely malingering, when nervous tension or exhaustion and the memory of the consequences of horse-riding have actually been the real and powerful factors in the case. Well-meaning but injudicious friends and even medical advisers may add new subjective symptoms towards highly susceptible patients, the former by their ill-advised gossip and the latter by their leading questions.

In all doubtful and difficult cases, where a mixture of neurosis and malingering

has to be winnowed out, I should follow the advice of Victor Horsely (Albut's System of Medicine, Vol. III) and obtain a consultation of one or more colleagues. We may thus avoid the discredit to our profession due to glaring discrepancies in the opinions of the various doctors that see these cases at various times.

I will not trouble you with the ethical side of malingering except to suggest a case and a question, which may be to some of you, as it is to me, very real, and to others hypothetical. An honest, hard-working man in a regiment with a wife who is very dear to him and no friends besides, comes to you and says he is not well. He tells you that his wife is seriously ill after a confinement. Being a Gosha woman and poor she is in the hands of a dai and not under your treatment. The Regimental authorities—the Commanding officer is perhaps a bachelor and a martinet—whether from lack of sympathy or from the exigencies of the service refuses to give him privilege leave. What is the medical officer to do with him? Is he to deny the privilege of owning a headache or sleeplessness to a man who is worried with anxiety and has to sit up all night nursing a sick—perhaps a dying—wife, even though he may not be physically afflicted with these maladies? In other words, can we on purely ethical grounds and apart from all sentiment accuse this man of malingering and send him to the guard room? Gentlemen, this is not an imaginary picture nor is it overdrawn. I am sure some of my colleagues here can testify to the frequency of such and similar situations. I dare say, analogous cases will be found in civil practice. The position of the medical man when confronted with such pictures as these is as difficult as it is delicate. Duty and

sentiment struggle for supremacy and the ethical principle is bound to be determined by personal equation.

Detection.

You have to catch your malingeringer before you can deal with him or her, and detection of malingering is not always so simple a process as it may seem. In this country it is true that, fortunately or unfortunately, the native has not reduced malingering to an art, to the same extent that his more highly educated and sensitive brother of the West has. For one thing, the temptation offered is less, *i.e.*, the prospect of gain is not so high. Also, the knowledge of disease requisite for a successful simulation of a complex malady is wanting. Thus it happens that for the most part, our Indian malingeringer is a clumsy bungler. Still, cases sometimes crop up that tax the practitioner's wits to the utmost. At all events malingering is not always so easy of detection or attended with so much humour as is illustrated by the story of the Irish soldier who went to his medical officer and said "Doctor, I want my discharge, because, you see, I can't see." "Yes", said the doctor, "how do you know you are blind." "Of course I am blind," said Pat "and what is more, I can prove it. You see that nail on the wall opposite?" The doctor saw it. "Well," said the triumphant malingeringer, "I can't see it."

To begin with, we must bear in mind that the consequences of an apparently grave injury with subsequent apparently hopeless disablement may be completely recovered from while an apparently almost insignificant strain of a ligament, say of the spinal column, may really entail consequences which lead to prolonged if not permanent disablement. It behoves us

therefore, to approach any obscure case with a perfectly unbiassed mind either in the patient's favour or against his supposed interests.

The faculty of detecting imposture will depend to a large extent on the personality of the practitioner. Mere science and erudition will not avail. It is true that an accurate knowledge of Medicine, Surgery, Physiology and Psychology forms the basis of all correct detection, but these must be backed up by a certain amount of the detective faculty, by a power of making shrewd observation and drawing rapid conclusions from very slender premises, if success is to be assured. Slight suspicions may have to be followed up by appropriate action and ready resource if the impostor is to be outwitted. An accomplished malingeringer has a subtle mind and a sensitive temperament. He knows at once whether the doctor is handling his reigns properly or not and is even ready to take the bit between his teeth and get out of control. The observant practitioner may pull him up in a second with a timely cough or a pinch while a less acute and perhaps more scholastic observer will be wasting his time and energies over some useless scientific investigations, which only serve to suggest new items of feigned symptoms to the would-be patient. We have to study and adopt the methods of Sherlock Holmes more in dealing with malingering than with disease. Malingering forms the detective department of medicine.

It is obviously impossible to convey any idea of how any particular case of malingering should be dealt with. Every case presents its own weak points which the weary practitioner must pounce upon and develop as best he may. Sometimes you have to let your man go on with

his story with a nod here and a leading or misleading question there, until he of his own accord stumbles into the pit you have carefully prepared for him. Sometimes you have to contradict his statements to his face and confound him at once. Again your man by appealing to his sense of honour or honesty gain valuable admissions of his guilt. I have known a man leave my surgery with a long face, after making out an elaborate case for some serious disease and assured of any sympathy and co-operation; and I have caught him give a significant nod or smile to his comrades outside, which may be translated into "I have caught the doctor napping this time." It is not until the hospital duffadar announces to the man that he is to be placed before his Commanding Officer for malingering that he is undeceived of his success. The ways of the malingeringer are manifold and manifold must be the ways of dealing with him. The occasion will create the antidote.

Much responsibility has at times to be assumed by the medical officer and it may be his whole reputation risked in making out a given case as one of malingering. A man may be an undoubted malingeringer and yet suffer from some serious organic disease, which from the gross character of the symptoms of malingering may be entirely overlooked. A military surgeon of vast experience related to me the case of a soldier on active service in the Soudan who came to the hospital over and over again with all sorts of indefinite aches and pains and was always returned to duty. Suddenly one day he fell back and died; and, at post-mortem, an abdominal aneurysm was found to have burst. Nor must we forget that small ailments exist which are a very rea

cause of suffering to the patient and yet be overlooked by the inattentive or over suspicious physician. Beale, in his book on small ailments has given a masterly survey of these minor complaints.

The following is a brief summary of the general methods which may be employed to render impostors weary of their ways. Additions may be made to them *adlibitum* at the discretion of the practitioner and according to the opportunities he has of exercising it.

Judicious irony, obviously exaggerated sympathy, appeals honour and proper pride, discomfort in the shape of cold shower baths, very hot baths, enemata, hypodermic injections, unpalatable diet or even starvation, emetics, strict confinement to bed or even the solitary cell, blisters, and painful irritation of them by night sabinæ and electrical stimulation carried if necessary to the point of producing pain.

Not only finesse, and diplomacy, but great courage is sometimes needed to apply some of the above remedial measures. "Most cases of unchecked malingering are so, merely because a critical stage is reached in the plan of detection or upsetting, where the doctor becomes unduly timid. Cowardice comes into play when only extreme caution should be added to the same firm demeanour which has gone before.

To the above mentioned general method we may add, with caution the X-rays, chloroform, ethyl-chloride and such other new tricks of the trade, which may come in handy in defeating the cleverly laid plans of the expert malingerer.

(To be continued)

Cases and Comments.

The Treatment of Asiatic Cholera.

BY

A. Y. NARAYANIAH L., M. S.
Asst. Surgeon, Tinnevely.

"Cholera in Madras" is the subject of the leading article in the September number of your valuable journal. In it, you have mentioned what you consider to be the most probable causes of the present severe epidemic in the metropolis of this Presidency, and the preventive measures that should be adopted to check its spread.

I think the present is also a fitting time to discuss the curative treatment of the disease and to lay down some definite rules for the general guidance of the ordinary medical practitioner who is not in a position to investigate for himself.

Considerable as is the progress that has been made in recent years as regards the etiology and pathology of diseases, but little advance has been made with regard to the treatment of a large number of diseases, and it is to be regretted that we are in *status quo* with respect to our knowledge of the treatment of cholera, which is described in the 9th edition of *Encyclopædia Britannica* as "probably the most severe and fatal of all diseases".

It is stated in that authoritative work that "there is a want of agreement as to fundamental principles of treatment, for while astringents have been regarded by some as their sheet anchor, others have condemned them as worse than useless and rely on the elimination of the *materia morbi* by means of laxatives".

The question naturally presents itself to the modern physician, 'Is our position better to-day than when the 9th edition of the *Encyclopædia* was published 15 years ago? i.e. Have we come to a better understanding as regards the treatment of cholera cases?' An answer to this question is best given by summarising the latest opinions of some of the leading medical practitioners of to-day.

By the way, it is sadly amusing to contemplate the directions given by the Royal College of Physicians of England in 1892 for the treatment of cholera. It directs the administration of a mixture containing some mild astringents and aromatic stimulants every 3 or 4 hours, and then with perfect coolness gives the further direction, "should it disagree or in 24 hours, fail to give relief, the following mixture should be substituted". (Vide extract from the *Lancet* in the Extra Pharmacopæia by Martindale and Westcott). Leaving alone the greater efficacy of the 'following mixture', what are we to say to the direction, "should it fail to give relief in 24 hours". 24 hours indeed! Any Indian practitioner will only be led to believe that not a single member of that august body had ever seen a genuine case of what is known as Asiatic or Indian cholera such as is so ably, realistically and graphically described by Dr. Prall of Sindh (Text-book of Medicine by Fagge and Pye-Smith, 4th edition, vol. I, page 277). The anticholeraic mixture of the 'Board of Health' also contains some carminatives and astringents. Doctor Patrick Manson, while saying that "experience seems to encourage the belief that the use of sedative and astringent remedies might abort incipient cholera," cautiously adds that "whether true cholera can be cut short in this way or not, it is certainly in the highest degree advisable at such a time to neglect no case

of diarrhoea." This eminent authority on tropical diseases mentions the many plans of treatment that have been advocated on theoretical considerations and concludes that practically the only treatment of any proved value in cholera is the purely symptomatic and expectant one. (Tropical Diseases by Patrick Manson, 1898 edition, page 285). Most writers are in favour of opium in considerable doses in the initial diarrhoea of cholera (Fagge and Pye-Smith) and Osler, while considering opium as the most efficient remedy during 'this stage, prefers to give it hypodermically as morphia. But with regard to the pronounced stages of the disease, especially when collapse has set in, all are agreed that opium is useless or worse than useless, and, as Frederick Taylor says, "excessive medication in any form may do harm, since whatever is introduced into the stomach will either be vomited or will lie unabsorbed from the inactive condition of the circulation". It is, however, more than doubtful whether this predilection for opium on the part of most writers is not due to mere force of custom and addiction to the "general practice." Burney Yeo whose experience of cholera seems to have been very large, says that when cases of cholera are seen in the first stage, when Nature is making an effort to throw off the poison by the bowels, we must aid the natural effort by an unirritating purgative combined with an intestinal antiseptic (page 696, vol. II, 5th edition, A Manual of Medical Treatment by Burney Yeo), and he strongly recommends the use of a castor-oil mixture or calomel for this purpose. Sir George Johnson was one of the earliest advocates of this antiseptic, eliminative or purgative plan of treatment, and later he has been ably supported by such eminent practitioners as Burney Yeo and Mitchell Bruce. Indeed

the latter writer takes it as an axiom that cholera should be treated with a purgative at the outset, for he says "in respect of treatment in diseases removal of the specific cause is the principle on which we give a purge to encourage diarrhoea in enteric catarrh or cholera". (Pages 15, 16. The Principles of Treatment by Mitchell Bruce).

On the other hand, authorities are agreed as to the treatment in the later stages of the disease, which, however, has to be purely symptomatic—small quantities of ice or iced lemonade for thirst. Morphia hypodermically or chloroform inhalation for severe cramps, hypodermic injections of ether and intravenous or subcutaneous injections of saline fluid with external applications of heat to prevent collapse, &c. It will therefore be noted that as regards the treatment of the disease at its very commencement, there is no safety in a multitude of counsel. At least, there is none so far as the patient is concerned. As regards the practitioner, he is perfectly safe; he may give purgatives or astringents as he pleases, for he can cite eminent authorities in favour of either plan of treatment. It is unnecessary to add that the state of things is not very satisfactory and that it is unsafe to leave the inexperienced practitioner to do as he likes. Whatever may be the theories and practices of experienced and learned doctors, there ought to be some clear, simple and definite rules framed for the guidance of the average practitioner who has to deal with cholera epidemics in this country. Some attempt should be made to collect the experience of practitioners who have had ample opportunities of treating cholera cases, carefully tabulate the results of their treatment, and deduce some reliable conclusion therefrom.

Finally, kindly permit me to briefly record my experience of the disease which,

has extended to 5 or 6 epidemics and amounting in all to nearly 1,500 cases.

1. The majority of cases come under treatment at a pretty advanced stage of the disease.

2. Whatever the treatment, the mortality is about 50 or 60 per cent. or more in the beginning of an epidemic, and 20 to 30 per cent or less towards its close.

3. I have tried opium and calomel, separately and combined as advised by various authorities with indifferent results. Chlorodyne (coloured or not) and camphorodyne have nothing specially in their favour, in preference to pure opium or its pharmacopoeial preparations. The vaunted specifics are no good.

4. I thought I had some good results with small doses of calomel and with a mixture empirically given containing acid acetic $\frac{1}{2}$ a drachm and spts. æth. nitrosi m. 10 in one ounce of water. But considering the various circumstances that have to be taken into account, I cannot be positive. I have one objection to this latter mixture as it is said that water should not be allowed to be drunk when that mixture was given, and I never had the heart to restrict the drinking of water to my cholera patients. I have great faith in small drinks of iced lemonade.

5. Morphia hypodermically repeated if necessary is the best for cramps. Strychnine injections pushed till the physiological effects are produced, sometimes relieve cramps when morphia fails for some cause or other.

6. There is nothing equal to subcutaneous saline injections as recommended by Osler in tiding over the collapse. They are to be preferred to intravenous injections. Even lavage with saline fluid gives considerable relief. The avidity with which the system absorbs fluid at this stage is really marvellous.

7. Careful nursing, which unfortunately is rarely available, is however the most important part of the treatment. A cholera patient should never be allowed to sit up until he is fairly strong.

THE ANTISEPTIC.

NOVEMBER, 1905.

The Emigration Depots and the Cholera Epidemic in Madras.

IN the March number of the *Antiseptic* we pointed out the grave danger to the public health of Madras constituted by the presence of several Emigration de-

pots and sub-depots within the Municipal limits. We again drew attention to the same danger in our September number. We are compelled to revert to the subject once more under the following circumstances. Some time about March last, the President of the Municipal Corporation wrote to the Madras Government and pointed out the dangers of locating the Emigration depots within the Municipal limits and requested the Government to have the depots removed outside those limits. In April last one of the Commissioners brought forward a resolution at a Meeting of the Corporation requesting the Government to remove the depots outside the Municipal limits. The proposition was lost. The subject was again brought before the Corporation last month when a similar proposition to the one that was defeated

in April was carried. But before the request of the Commissioners was conveyed to the Madras Government the President thought it proper to draw the attention of the Commissioners to the reply he had received from the Government to his letter in March last. In that reply the Government declined to order the removal of the depots on two grounds:—

- (1) That sufficient cause was not shown for the necessity for removing the depots.
- (2) That the depots could not be removed without amending the Indian Emigration Act.

Now we propose in this article to prove that there are sufficient and valid reasons for the removal of the depots outside Municipal limits and that the Government could do so without amending the Indian Emigration Act.

We held the opinion in March last that the Emigration depot in Cassimode was the starting point of the Kuppam plague. We held the opinion in September last that the same Emigration depot was again the starting point of the late cholera epidemic. We adhere to these opinions still. The Medical Inspector of Emigration has contradicted us on these points. The public may think that this is only a case of doctors differing. But we have a few facts to place before them, after studying which they may be in a position to come to a conclusion as to which of the doctors is right.

Every one who knows Madras, will be familiar with the fact that cholera is endemic in Madras. We have almost always, with very rare exceptions, stray cases of cholera occurring here and there within the Madras Municipality. These sporadic cases ought to be distinguished from the epidemic outbreaks of cholera like what we had in 1901 and again within the last few months. In June last there were 8 cases of cholera within the Municipal limits of Madras. They were scattered over 6 Municipal divisions. Two of these cases occurred in the 16th Municipal division and two others in the 11th and the remaining 4 cases occurred one in each of the following divisions:—7th, 3rd, 10th and 15th. So it is apparent that there was no epidemic of cholera in Madras in June last. In July from the 1st to the 17th there were only 4 cases of cholera, and they occurred one each in the 9th, 10th, 11th and 12th divisions of the Municipality. That again does not point to an epidemic outbreak. But from the 17th to the 22nd July (both days inclusive) there were 98 cases of cholera. Out of these 98 cases as many as 79 occurred in the Natal Emigration depot and the majority of the remaining 19 cases occurred in the 1st Municipal division in the immediate vicinity of the Natal Emigration depots. These figures are taken from the official Cholera Register kept in the Municipal Office and they prove conclusively that the recent epidemic of cholera started on the 17th July

last at the Natal Emigration depot. After having proved that the cholera epidemic started at the Natal depot on 17th July we shall now show how it spread from the depot to the city. The following letter addressed to the Health Officer of the Corporation by Messrs. Parry & Co., the Agents for Natal Emigration in Madras will speak for itself.

Natal Govt. Emigration Agency,
Madras, 18th July 1905, 8 p. m.

Capt. T. S. ROSS,
Health Officer,
Madras Corporation.

DEAR SIR,

Under the instructions of the Medical Inspector we to-day moved about 300 of the Emigrants in our main depot to the new Quarantine depot now in course of erection closeby. In moving them the remainder of the coolies in the main depot took advantage of the opening of the gate to rush it and abscond in all directions. Under these circumstances we thought you ought to be informed. As you are aware there is cholera in the depot and now great danger of it spreading, we have informed the Deputy Commissioner of Police and Medical Inspector as well.

Yours faithfully,
for Parry & Co.,
Signed (*Signature not legible*).

Now mark the date of the letter 18th July 1905. Cholera broke out in the depot on the 17th July and this escape

of coolies took place on the 18th July. And the prediction of Messrs. Parry & Co., that now there is great danger of cholera spreading has unfortunately come too true. When we mentioned the fact of the escape of some coolies from the cholera infected Natal depot at the meeting of the Corporation in September Lt. Col. Reeves, I. M. S. flatly contradicted us—and Lt. Col. Reeves is an officer and a gentleman! There were over 4000 cases of cholera in Madras during the last epidemic with a mortality of nearly 50 per cent. So that in one epidemic alone two thousand human lives have been the price we have had to pay for the pleasure of keeping these depots within the Municipal limits. In August last, some of the inhabitants of Tondiarpett memorialized the Madras Government to have one of the depots removed from its present location. Mr. D. D. Murdoch, I.C.S., the protector of emigrants thereon wrote to the Chief Secretary to the Government of Madras dated 21 August 1905, No. 924, in which he said (Para 2) "The Emigration depot referred to in the petition is the one that is now the main depot for Trinidad emigrants." And in Para 5 of that letter Mr. Murdoch says: "*I may add that in the present epidemic of cholera this depot has so far been free from infection.*" (The italics are ours). But in the Municipal Cholera Register we find twelve entries of cases of cholera which occurred in the Trinidad Emigration depot. Considerations of space prevent us from giving

all the twelve names but as a specimen we will give two names. Under date 5th August 1905, the Cholera Register shows that Narasu and Parvathi, two Hindu coolies aged 18 and 22 respectively, both belonging to the Trinidad Emigration depot were attacked by cholera on the 4th August and both died on the same day. These cases occurred on 4th August and the date of Mr. Murdoch's letter is 21st August, 1905. These contradictory statements cannot both be true. We leave it to the Madras Government to find out as to which of these statements is correct.

Now we will take the legal aspect of the question. The Madras Government in its reply to the President of the Corporation says that the depots cannot be removed outside the Municipal limits without fresh legislation. We beg to differ from that view. In the Indian Emigration Act, the Governor-General in Council as well as the Local Governments have been allowed plenty of discretion to modify the provisions of the act by mere notification without any amending legislation. We shall prove our statement by quotations from the act itself. One of the chief legal obstacles to the removal of the depots outside Madras is supposed to be Section 7 (1) Chapter II of the Indian Emigration act which says that "Emigration shall not be lawful except from the ports of Calcutta, Bombay and Madras." That is the only part of the section that is usually quoted by people who raise the

legal difficulties. But here is the full Sub-section Chapter II. Section 7, "Emigration shall not be lawful except from the ports of Calcutta, Madras and Bombay and from such other ports as the Governor-General in Council, from time to time, by notification in the *Gazette of India* declares to be ports from which emigration is lawful."

Now if the Madras Government requests the Government of India to declare Cuddalore or Negapatam or Tuticorin or any other port in the Madras Presidency a port from which emigration is lawful in a notification in the *Gazette of India*, the change can be effected without any fresh legislation. This is in case another port of embarkation is to be selected. But if Madras is to be retained as the port of embarkation and the emigration depots are to be removed outside the Municipal limits, then the legal difficulty is supposed to be Section 41 Chapter VII of the act which says "Every Emigration Agent shall establish at the port for which he is appointed, a suitable depot for the reception and lodging of emigrants before embarkation for the country for which he is Emigration Agent, and shall provide all necessary food and clothing for all emigrants during their stay at the depot."

But we may point out that nowhere is it said that the port of Madras is co-extensive with the Municipality of Madras. On the other hand Section 7 (3)

Chapter II says "The Local Government may, from time to time, by notification in the official gazette, fix, for the purposes of this act the limits of any port from which emigration is lawful." There again the Madras Government can remove the Emigration depots outside the Municipal limits, say to Avadi, and then by notification include Avadi within the limits of the port of Madras for the purposes of the Indian Emigration Act. So, fresh legislation is not necessary. The Governor-General in Council or the local Government may bring about the required alteration by a simple notification. We must also point out the fact that these depots are established under licenses granted by the protector of emigrants under Section 42 (2) Chapter VII of the act which says that "A license under this section shall not be granted for a longer period than one year from the day on which it comes into force."

We have now proved that these emigration depots are a source of danger to the public health of Madras and as such ought to be removed outside the municipal limits. And secondly that the Madras Government can effect this removal without any fresh legislation to amend the provisions of the Indian Emigration act. In this connection we cannot but ask the question why should India supply labourers to the British colonies at so much risk for herself. The relief that India is likely to derive from

the effects of over population by the emigration of indentured coolies will be infinitesimal. And what is the feeling in the colonies about Indians? In one of the articles in the *Times* on Indian affairs dealing with the subject of 'Coolie Emigrant' the writer thus sums up the attitude of the colonies towards Indians. "In the self-governing colonies of the Empire the Indian Immigrant, unless he is wanted as an indentured labourer, receives no encouragement and very scant courtesy and justice. Australasia looks askance on him; Natal hampers him with restrictions and insults which are a scandal. In the Transvaal and Orange River Colonies he is actually worse off than he was in the days of Kruger and Steyn. He asks nothing but a fair field and no favour; unlike the Uitlanders of the end of last century he has no political aspirations." That is the opinion of the *London Times* which is not usually over sympathetic towards the natives of India. To supply labourers to such colonies we run the risk of epidemics at home and of insults and hardships abroad. And yet one of the European Commissioners, a gentleman connected with the Natal Emigration Agents, waxed eloquent over the advantages of Coolie Emigration to Natal. As well might the German Jew Millionaires boast of the great good that they are doing to China by importing the Chinese labourers to work in the Rand Mines. The tyranny of capital over labour is infamous even where labour is well

organized and in a condition to offer resistance. But in the case of the Indian coolies, so docile and so defenceless, their ill-treatment in some of the British colonies must for ever remain one of the blackest chapters in human history. If the Government of India will not put a stop to the coolie emigration as it threatened to do at one time, it is the duty of the educated Indian public to enlighten their less fortunate fellow subjects to the risks they run by being deluded by the smooth words, and large promises of the Emigration canvassers. We sincerely hope that the Indian National Congress will take up this subject and make some arrangements for opening the eyes of the unfortunate coolie emigrant.

We draw the attention of our readers to a case of "Traumatic Pneumonia ending in crisis" under the heading of "Medicine" as this might interest them in connection with the recent Travancore Planter's case.

MEDICO-LEGAL ASPECTS OF TRAVANCORE • PLANTER'S CASE.

[In our October issue we discussed some of the medico-legal aspects of the Travancore planter's case. Considerations of space prevented us from touching upon all the medico-legal questions that concerned the case. We have now been favoured with the following communication from Dr. Peter Lakshmanan, M. B. and C. M. (Mad.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), Medical Officer of Quilon. Dr. Lakshmanan deals with some of the points which we did not touch. [Ed. A.]

I. It was argued by the defence Counsel and held by the court that the District Magistrate in directing Apothecary D'Lemos

to perform a post-mortem examination on the body of the deceased Jacob stated the alleged cause of death in his letter which must poison the mind of any man who was even free from all venom. For it was argued the Magistrate should have been careful not to make the faintest reference to the injury as it was the duty of an honest man holding a post-mortem examination to find out what the injuries were and how they might have been probably caused. Now this argument may appear logical and reasonable to laymen, but every medical man who has any experience of post-mortem examination in medico-legal cases knows how all important it is that he should know the alleged cause of death not that his mind may be poisoned by such information, but for a purpose just the reverse—to enable him to adopt the safer procedure in his examination of the body, to better elucidate facts and instead of as the defence counsel argued defeating the object for which the post mortem examination is made materially guides the pathologist to so conduct the examination as to arrive at the most approximate conclusion. To illustrate the point, it is not an arbitrary order of examination you follow in the course of the necropsy, but you alter it according to the requirements of each particular case. If the cause of death is doubtful or it is due to head injury or death has occurred by coma you make an examination of the head, dissect and examine its contents, and note the conditions and then proceed to examine the thorax and its contents and then the abdomen and then the pelvic organs and finally the spine and spinal cord. If for example it was a case of head injury and instead of beginning with the examination of the head and its contents you began with the thorax and abdomen as is usually done, what will be the result? After you have opened the great vessels of the thorax or abdomen you would miss the most important signs and facts in the brain, that would help you towards a correct solution for many of the appearances will have altered by

such a procedure. So also if the alleged cause of death was due to injury to the chest or asphyxia you would begin with the examination of the thorax first and then proceed with the other parts in order.

In the requisition from the Police or Magistrate to the medical man asking him to do a post-mortem, examination, there is always I believe a column set apart for stating the alleged cause of death, a wise provision made, I am sure with a knowledge of its necessity to the medical man doing the post-mortem examination.

Lieut.-Col. Tull Walsh writing from Norwich to the *Lancet* of 17th June says "a man is not necessarily making a post-mortem examination because he is cutting up a body. I will not go into details but will give one instance to explain what I mean. In cases of injury to the head it is better to examine the skull and brain before the thorax has been opened and the large veins severed."

Unless therefore he knew the alleged cause of death particularly if violence or poisoning were suspected his post-mortem examination results may often be quite valueless from a truly scientific standpoint. The question now arises as to whether the information given by the Police or Magistrate to the Medical Officer as to the alleged cause of death is calculated to bias his mind in the method of his examination and deductions. The medical man is no partisan, he is not interested in any particular party but goes to his work with an impartial eye. He does not care to know which particular individual or individuals caused violence, or in what particular spot it was committed; all that he ought to know is in what part of the body and probably how the violence was alleged to have been caused.

II. In the expression of medical opinion, objection was taken to the use of such terms as "may be caused by" and probably caused by "for it was argued it went to show that

the dishonestly inclined medical man intentionally makes use of such expressions" to adopt himself in his own personal interest to the turn that diplomatic negotiations may take. This is a most serious allegation to be made against any medical man appearing as a witness. One most important advice that any book on Medical Jurisprudence would give to its readers in its opening pages is to be guarded and cautious in the expression of opinion. The medical man doing the post-mortem examination has to base his opinion only on the facts he has seen and noted in his examination and on nothing more and unless the signs he discovers are absolutely pathognomonic which is rarely the case, his opinion cannot be dogmatic but can at most be only approximate and therefore the use of such terms as "may be caused by" or probably caused by are necessary.

III. Apothecary D'Lemos' account of the existence of a dislocated clavicle and a swelling caused by it was discredited because (1) no one else noted it not even Mr. Connor standing close by who had sworn positively that he had not seen it and swore also he could not remain long at the post-mortem examination as he "must have been completely overcome as most people are at such a sight." Not even Inspector Ninan observed the dislocation or swelling though he had most carefully recorded the smallest abrasions and interested, though he was in strengthening the case for the prosecution. In the first place the dislocation described was a simple one and not compound. It was a partial one and not a complete one and finally the condition was seen not when the patient was alive when by the action of the muscles acting on the part bring the abnormality into greater relief, but it was seen fully three days after the death of the individual when all contractability of muscle tissue was completely and totally lost. Is not the medical man's faculty of observation specially cultivated to see and interpret signs and conditions which

most laymen can never see or know? Is not this a common place experience in the life of every medical man? Does it follow that a medical man doing a post-mortem examination should be led by the nose by a layman? Is he not to make a thorough and independent examination himself and note down all abnormal conditions whether all such conditions were seen or not by the Police or other lay-people or for that matter by other medical men?

I do not know whether the dislocation of the clavicle described by D'Lemos was considered by others as one that occurred ante-mortem or post-mortem. If it was ante-mortem it had to be accounted for and if it was thought post-mortem, no reasons have been assigned for the presumption. Or was this point merely set aside because one of the experts said he thought D'Lemos did not know what he was talking about when he spoke of the dislocated clavicle? Is this how a point, a medical man alleges to have seen and noted to be treated? A medical man appearing as a medical witness or expert is expected to speak in plain and simple language so as to be easily understood (not misunderstood) by non-medical persons. May I know what lay-people would understand by such a statement as the following:—"I would expect healing to have begun in a clavicle which became dislocated 16 days before death"? I put this same question to some highly educated people, one of them a judge and the answer I got was that the injury was getting cured the displacement having been set right and corrected. Is this what medical men understand by such a statement? All that it means, we, as medical men know is, that the term "healing" in this case is of very restricted and special application meaning that the displacement continued and was getting fixed in its new situation by organisation of lymph and adhesion of the lacerated ligamentous and other structures. But 90 per cent. of non-medical people who heard the statement from the expert must have understood it to mean that

the dislocation had got alright, the prominence due to displacement must have therefore disappeared and the swelling in front of the clavicle described by Mr. D'Lemos could not have existed and that therefore Mr. D'Lemos was guilty of falsehood or at least described a something which actually did not exist. And what actually was the result of expert opinion of this kind, we all know. The question before us as medical men therefore is—Are we justified in speaking half truths, (e. g. the dislocation of clavicle can only be caused by enormous force), are we to speak in language that may mean one thing to medical men and another to non-medical people (e. g. regarding the healing in the dislocated part above referred to)? Equivocation or ambiguity in language even in the ordinary intercourse between man and man we all know to say the least is objectionable. However bullied and brow-beaten by the Counsel the expert in the witness box may be his first and foremost duty to speak in the plainest language possible so as to convey his ideas intelligibly to his lay-hearers, to speak no half truths or make no statements which from want of a clearer exposition may mislead the judge, the jury, and those around. If the Counsel should bully the expert witness to confining himself to answering yes or no or extorting only such answers as would favour one particular side or theory, the expert witness should feel it his bounden duty to appeal to the Court to be permitted to explain himself clearly. Then only can he help the cause of justice.

Mr. D'Lemos had described in the certificate that there had been sub-cutaneous extravasation around the front of the neck rather deep in the tissues. The significance of this indication was not discussed nor was it definitely decided whether it had been caused ante-mortem or post-mortem. But it was elicited from one of the expert witnesses in the course of his examination that the

veins of the neck in a case of acute lobar pneumonia are turgid and wonderfully easily they are liable to be nicked during the course of dissection of that region in the post-mortem examination. Perhaps the expert witness did not mean to explain the extravasation described in the certificate by this statement, perhaps, he merely and directly answered the question put to him, but by so doing what was the result? Most of those who read and heard the statements must have been led to presume that the extravasation described was a post-mortem result (a fact that had not been proved by a discussion of the appearances found) and that such result must have been very likely caused by nicking of the turgid veins of the neck during the course of dissection. Those who have experience of having done or seen cases of post-mortem examination after death from pneumonia know that the right heart specially is full and distended with blood, not fluid blood but tenacious coagula, which may with care be removed in dentritic moulds stretching far into the great vessels and forming a pattern of them. The tendency to form firm and tenacious coagula in the heart and great vessels in cases of death from pneumonia is a commonplace post-mortem sign. And yet the impression made upon those who heard or read the manner in which statements were made by the expert witness was that the extravasation of blood in the neck was due to the pouring of blood into the surrounding tissues by injury to the veins of the neck during the course of dissection 3 days after death.

There were a few more important points which the Counsel for the prosecution omitted to sift and deduce inferences by a careful cross examination.

Mr. D'Lemos when doing the post-mortem examination dissected the skin off the shoulder and noticed the parts around the joint congested and pointed out the same to Mr. Ephraim. Could this appearance of "congestion" on the shoulder have been the

result of a cause brought into operation ante-mortem or post-mortem? If it was caused ante-mortem could it signify contusion of the shoulder and if it did so, could this same cause that brought about the contusion of the shoulder have produced the partial dislocation of the sternal end of the clavicle forwards in the weakly Jacob?

We do not know whether this congestion of the shoulder was disposed off on the presumption that also might have been caused by nicking of the veins of the part? But to any one with any decent medical education and training the value and importance of this particular point cannot but make itself strikingly apparent throwing some light upon the probable etiology of the condition found at the sterno-clavicular joint of the same side. Perhaps this question was not gone into fully about the "congestion" of the shoulder because Mr. Ephraim had already explained its cause to Mr. D'Lemos when he said that the congestion was due to the mustard plaster on the chest! It is a pity this ridiculous explanation was allowed to pass unchallenged, mustard on the chest to cause congestion on the shoulder! A revelation in the therapeutics of a mustard plaster! We have gipsy-like people sometimes going about in the villages and occasionally also in the streets of Madras vending oil extracted from the fat of pea-fowls and other medicated oils and nostrums and proving to credulous folk the efficacy of their oil in the cure of 101 diseases by applying a drop on their palm and pointing to the presence of the oil the next minute on the dorsum of the same hand. Anybody cautiously watching the gipsy might have seen how dextrously he manages by a slight of hand trick as it were to simultaneously touch the dorsum of the hand as well with his oil tipped finger and takes in his gullible customers. Mr. Ephraim by his suggested and implied explanation of the selective, penetrating and travelling power of his mustard plaster takes us to be more green in our horns than the gipsy's customers.

Mr. Ephraim saw his patient for the first time on the 8th and diagnosed the case as acute lobar pneumonia. He saw him next on the 11th fully 3 days afterwards and found him in a bad condition. While in that condition he examined him thoroughly going through the different methods of physical examination in order, inspection, palpation, percussion and auscultation and his coolly assistant Vedanayagam deposed that Mr. Ephraim conducted this examination after having got the patient to go to Hospital.

A series of questions arise from the foregoing facts, the answers to which will throw some further light on the merits of the theory of the defence. Mr. Ephraim pronounced the patient to have been in a bad condition with acute lobar pneumonia and that he complained of soreness on the chest. What is the exact translation of the feeling complained of by the patient on the chest. Was it a feeling of distress, of pain, or of soreness?

While in such a bad condition with pneumonia and a day before his death could the patient have been able to stand up for the flupical examination, and if he was able to stand, was the medical attendant justified in making his patient, and in percussing his chest, and auscultating while standing knowing the patient to be suffering from pneumonia and in a bad condition? A medical man whose sheet anchor is Potassium Iodide in the treatment of pneumonia can perhaps be expected to do no better.

The patient was directed to go to the Hospital for treatment. And the distance between the cooly lines and the treatment of in-patients is, I am told, not less than 25 miles. If this is true about (the distance how was a cooly patient suffering from pneumonia and pronounced to be in a bad condition be transported without almost certain risks in such a) hill country?

Mr. Ephraim examined the patient coolly Jacob in the cooly lines. What was the

kind of house the patient lived in and was there sufficient light in the place to enable Mr. Ephraim to notice any external abnormal condition on the different parts of his patient's body?

All these questions would suggest themselves to any professional mind and may have helped to elicit many facts of interest bearing on the case.

Finally as regards Mr. Ephraim himself. Is he a medical man? Has he had anything like a course of systematic training and study in any medical school and does he possess any diploma recognised by any State or Government for the practice of the profession? It would appear that he was a compounder for several years in a Mission Hospital in Madras and suddenly afterwards became transferred into an 'Apothecary' in the cardamom hills. If this is true, is he to be reckoned a member of the medical profession and does he himself know or understand what he spoke in the court about disease, treatment and pathological conditions? And if he is no recognised medical man were his statements as a medical witness of any value whatsoever?

Our Contemporaries.

MEDICINE.

Traumatic Pneumonia.

BY

CHARLES MARSH BEADNELL,
Fleet Surgeon, Royal Navy.

Acute inflammation of the lungs bearing a definite relation to the application of physical violence is, I think, of sufficient rarity to warrant publication. The following are the notes of such a case recently under my care.

History.—Arthur M., an A.B. in H.M. navy, age 20, while on duty in a steamboat

at 7 p.m., May 28th, tripped and fell, shrinking his left arm and left side of chest violently against the gunwale. When he returned on board the depot ship he made no complaint, and "turned in" without assistance.

Admission to Sick Bay.—At 7 a.m. the following day, feeling very faint and stiff, he lay down in the galley until 7.30 a.m., when he was brought to the sick bay. He then complained of headache, inability to move his left arm, vague pains over the left side of the chest, and a desire to pass water. His skin was hot and dry, his cheeks flushed, and his bladder distended. Temperature was 104° F., pulse 120, respiration 28. He was put to bed, 30 oz. of clear nonalbuminous urine were drawn off by catheter, an enema was administered, and a diaphoretic prescribed thrice daily. No physical signs were observed in the heart or lungs.

At noon, dry, crepitating rales could be heard over the left base; there was also impaired resonance and considerable tenderness to percussion over this region. By 9 p.m. the skin was acting moderately.

Progress.—May 30th. Percussion of the left base showed marked dullness with increased V.F. and T.V.F. Short, painful cough with rusty sputum was also, present. At 8 p.m. he had an attack of shivering fits and vomited.

May 31st. He passed a restless night. At 4 a.m. he again vomited.

June 1st. Slept well. Cough is not so painful and expectoration is less tenacious, but still contains altered blood. Tubular breathing is marked over the left base, the right lung remains normal. He can now move his left arm freely. There has been no more vomiting.

June 2nd. Temperature fell by crisis.

Result.—June 15th. He was allowed up, and from this date onwards made an uninterrupted recovery. Treatment throughout was diaphoretic and stimulant, and diet consisted of broths, milk, and eggs.

REMARKS.

The interest of this case centres in the fact that a severe blow over the left lung of a robust and temperate young man was followed, some few hours later, by the onset of a definite left sided pneumonia. It is possible, of course, that at the time of the accident the victim was already in the incubation stage of the disease, but against this possibility it may be urged that there was no history of chill from exposure to wet or cold, or of any previous attack of the malady; the weather had for long been perfect, and pneumonia was not prevalent in the port (Portland), in a word, no predisposing influence other than traumatism was known to be present. The fact that the left lung was the seat of disease is also in favour of the view of a traumatic origin, in ordinary acute pneumonia the right lung is the more often attacked in the proportion of five to three (Fagge).

In cases of this nature I incline to the assumption that an involution form of the specific pneumococcus finding itself, if I may be allowed the expression in a favourable environment, to wit, damaged lung tissue, undergoes a rapid evolution into the higher and more virulent variety associated with acute pneumonia. This latter variety subsequently either refers to the lower and more primitive saprophytic type, as, for instance, when the host dies owing to the disease, or succumbs to phagocytosis during the recovery of the patient.

I am indebted to surgeons Elystan O'Leary and Norman Jacob for some of these notes and for much of the care and attention bestowed upon this case. The pneumococcus has been discovered in the saliva of some 5 or 10 per cent. of normal individuals. See Mr. J. Eyre on the bacteriology of pneumonia in *Quain's Dictionary of Medicine* 1902—*The British Medical Journal*.

The Dietetics of Dilatation of the Stomach.

Robert Hutchinson, M. D. states that when the dilatation is slight and of the atonic type, without true pyloric obstruction, the meals should be small, dry and mainly of animal constituents. The atonic stomach deals only with difficulty with a mixture of liquids and solids, consequently the patient must not drink with his meals. The necessary amount of liquid may be made up by taking sips of hot water between times. All saccharine articles should be avoided, and the starchy constituents restricted to rusks, torrefied toast, or pulled bread; thus the production of flatulence is reduced to a minimum.

Should there be actual obstruction at the pylorus, with stagnation of the contents, one must begin by cleansing the stomach by thorough lavage, which may be repeated daily, and the diet should consist largely of milk, peptonized if necessary, and administered frequently and in small amounts. The milk may sometimes be enriched by one of the concentrated proteid foods, and a limited quantity of starchy food in the form of biscuits or rusks may usually be allowed with safety.

Patients with pyloric obstruction and copious vomiting, or in whom lavage is being carried out, are very apt to suffer from a deficient supply of fluid to the tissues, and much of the cachexia and wasting, which they exhibit, is due to this cause. In such cases the supply of fluid should be supplemented by the administration of water by the bowel, a pint of normal saline being injected night and morning. If this be omitted, the excretion of waste products by the kidneys is apt to become interfered with and uræmic symptoms may supervene.—*Medical Review of Reviews.*—*The Practitioner*, May, 1905.

Urine After anaesthesia.

Goodurn found albumin or casts, or both, in 40 per cent. of his patients after chloroform. With nitrous oxide, followed by ether, the percentage was 12, while ether alone gave 39. Sugar was found in about $1\frac{1}{2}$ per cent. of cases, by all methods of administering the anæsthetic, ether having a slight proportion more. In all cases the albumin and casts disappeared in a few days (rarely more than ten), while sugar was absent after the first day.—*Therap. Gazet.*

Oedema of the Legs due to Excessive Ingestion of Sodium Chloride.

BY

J. H. BRYANT, M.D., F.R.C.P.
(*The Practitioner*, Aug., p. 168.)

French writers have shown that chloride ingestion and retention have an important influence on the production of anasarca. In health excessive ingestion of chlorides may lead to an increase in the weight of the body, as a result of tissues retaining an abnormal amount of fluid. The following case goes a step further and shows that the taking of an excessive amount of chloride by a healthy person may lead not only to retention of fluid in the tissues and consequent increase in weight, but to oedema of the lower limbs.

A medical practitioner, aged 40, consulted the writer for oedema of the legs. He had always led a healthy active life, but for many years had been troubled with varicose veins in the legs, and recently he noticed swelling and oedema of the feet and legs. The writer could not find any signs of organic disease to account for the trouble. The superficial veins of the legs were enlarged and somewhat varicose. There was no evidence of thrombosis of the femoral or iliac veins. The inguinal glands were not enlarged. He took an enormous quantity of salt with his meals, and often emptied the salt

cellar at luncheon and at dinner. He even took salt with bacon and salt fish. The writer calculated that he took from 300 to 600 grs. of salt daily instead of the average 150 grs. The urine contained 1.86 per cent. of chlorides, *i.e.*, nearly thrice the normal amount. He was advised to take less sodium chloride. When seen again a week later he said he was so accustomed to taking large quantities of salt that he was no longer able to enjoy his food, and that, in consequence, he had been obliged to alter his diet by substituting sweets and pastry for meat and fish. The salt was so necessary for the enjoyment of food that he said he would willingly give up tobacco, sugar and alcohol, but that salt he must have. He, however, agreed to cut it down as much as possible. At the end of a week there was an appreciable decrease in the amount of oedema, and after 3 weeks it had almost disappeared. The sodium chloride in the urine dropped to 0.98 per cent.

Widal and Javal found that in interstitial nephritis doses of sodium chloride up to 150 grs. did not give rise to oedema, but that in parenchymatous nephritis oedema was produced. They found that the chlorides were not excreted entirely, and that, as a result of their retention, the fluid in the tissues was increased. They further showed that, by increasing the amount of chlorides in the diet, the oedema increased, but, on the other hand, if the ingestion of chlorides was diminished, the tissues were drawn upon for their reserve chlorides, and, as they were used up, the oedema disappeared. They also demonstrated a definite relation between the hydration of the body and chloride retention, by changing suddenly from a diet rich in chlorides to one almost devoid of chlorides. The body weight fell by 4 or 5 lb.—*The Medical Review*.

A Case of Tetanus treated with Hypodermic of Eserine.

A horseshoer, nineteen years old, was attacked with tetanus three days after getting a small sore on one of his feet. Repeated subcutaneous injections of antitetanus serum had no appreciable effect. The patient grew worse, and recourse was had to subcutaneous injections of eserine salicylate, half a milligram, (about grs. 1-134) repeated four, five and six times in twenty-four hours. It resulted in a progressive amelioration, and in the end of three weeks recovery was complete. This method, though not used, deserves attention. It is possible that the contraction of muscles being overcome, there is a spontaneous cure of the subacute tetanus.

It is to be noted that there was no eserine intoxication, the ordinary limit of six milligrams not having been reached.—*Gazette des Hopitaux*, No. 25 1905, p. 298.

Sea Water for Disinfecting.

Once again the question of utilising sea water for sanitary purposes has been brought forward. Amongst those urging its adoption is Mr. F. W. Alexander, Medical Officer for Poplar. He suggests that electrolysed sea water should be used for public disinfecting purposes. An electric current passed through water containing common salt and chloride of magnesium produces a compound of chlorine of high oxidising power, which is a strong disinfectant. Mr. Alexander proposes to employ this agent in the place of carbolic powder and antiseptic fluids, and he asserts that its cost will be not more than as many shillings as the present disinfectant costs pounds. He claims for it that "it destroys the organic substances resulting from putrefaction, with the germs and microbes, and acts with extreme rapidity," and observes that "to free our drains from all septic matter would be to destroy some of the deadliest diseases afflicting us." The claim is a

strong one, and we presume its author has some data at the back to sustain it. At the same time, we think more substantial reason must be found before a change can be made. We know the value of the present means of disinfection, and it is too great a risk to adopt others without the clearest evidence that they will prove equally or more effective.—*The Sanitary Record*.

Cases of Joint Swellings Simulating Gout and Rheumatism.

BY

R. LLEWELYN JONES, M. B. LOND.,
Late Resident Medical Officer, Mineral Water Hospital, Bath.

It has been wisely stated that the man who never makes mistakes never makes anything, and most of us will agree that the knowledge we gain from the appreciation of our errors is—though painful to our self-esteem—much more likely to stick than if it had been acquired in a more pleasant manner. The following cases are examples of some of my own mistakes and those of other people.

Some two years ago I was consulted by a middle-aged man who had been invalided from Africa, supposed to be suffering from tuberculosis of the left apex. Bacilli had never been detected in his sputum, notwithstanding frequent examinations. His temperature for weeks was constantly raised at night. He had consulted in all some nine medical men, and during the attendance of the last he developed swelling of the right knee and ankle joints, which was deemed to be rheumatic in nature and for which he was sent to Bath. On examination I could detect no physical signs of phthisis. The joints referred to were swollen, and during my examination of them I happened to run my hand along the crest of his tibia, whereupon he complained of great tenderness, which I found to be due to a periosteal swelling, resembling a syphilitic node. I then ascertained that his wife had not accom-

panied him on his travels, that he had exposed himself to infection from a native woman, and had contracted a sore on his penis, which, however, was thought to be a soft chancre. On further examination I discovered some secondary syphilides. He had a well-marked corona veneris. I came to the conclusion that the joint swellings, the eruptions, and the pyrexia were specific in origin. I gave him iodides and mercurials, and his temperature rapidly dropped to normal; his joint and skin symptoms disappeared, and a year afterwards he was in good health. About the same time I had a similar case, but in this case the roseolous eruption and the joint swellings were ascribed to a gouty condition. In this case also a penile sore had been contracted a few months previously. Under antisyphilitic treatment he mended rapidly.

These cases seem to me to justify Osler's comment, namely, that we are not sufficiently alive to the fact that secondary syphilis may be attended by pyrexia of an intermittent or remittent type which may persist for months, and they also bear out the statement of Dr. Janeway, namely, that such cases may be mistaken for tuberculosis.—*The Bristol M. C. Journal.*

Case of Exophthalmic Goitre in a Child, aged 3½ years.*

BY

CHARLES BATCHLOR, M.R.C.S., L.R.C.P.

The patient was the only child of healthy parents, in a good position of life. There was no family history of insanity or neuroses. She was perfectly healthy until she had whooping-cough in the early months of 1901.

In June of that year, at the age of 3 years and 1 month, it was noticed that her eyes were prominent, and she had attacks of passion, which had never been pronounced before.

* Communicated to the Society for the Study of Disease in Children, April the 11th, 1905.

On her return from the seaside in September, I found that she had very definite exophthalmos, with decided enlargement of the thyroid, the right lobe being larger than the left. There were no tremors, but the heart's action was rapid, and the attacks of passion, with loud screaming, were much more frequent.

In March she had an attack of influenza and pneumonia, and was in a most critical condition for several days.

During the summer the exophthalmos became even more pronounced. The child was generally breathless on exertion, and the heart's action always rapid (120—140 beats per minute), with marked pulsation of the carotids, but there were no murmurs, and never albuminuria. The prominence of the eyes varied slightly from time to time, but the eyelids always closed during sleep. Von Graefe's sign was present. I was never able to discover any tremors.

In 1904 she had two or three attacks of sickness, which produced great prostration, and on September the 24th she was attacked with diarrhoea, followed by uncontrollable vomiting, and she died from exhaustion on September the 26th at the age of 6 years and 4 months.—*The British Journal of Disease of Children.*

Preservation of the Urine.

UNDER THE CHARGE OF THE STAFF OF
The Laboratory of Clinical Observation and
Assistance:

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In the *Boston Medical and Surgical Journal* of June 22, 1905, J. Bergen Ogden, of New York, presents a very able article on the subject of "The Preservation of the Urine". The subject-matter of his paper is based upon 140 experiments with various preservatives in urines of varying composi-

tion: (1) Those with a normal, a high, and a low specific gravity; (2) those with albumen and without albumen; (3) those with sugar and free from sugar; (4) those with a variety of casts and without casts; (5) those containing pus and blood; and (6) those containing crystalline elements. Each experiment was accompanied by a control of the same urine. The control and preserved specimen were allowed to stand in stoppered bottles at room temperature, which averaged about 70 degrees F., until they had either undergone ammoniacal decomposition or become so changed by the presence of bacteria or deposits that chemical tests could not be satisfactorily applied or the elements in the sediment detected. Of boric acid, he says it is undoubtedly the best and safest urinary preservative we possess. It does not interfere with any of the ordinary tests, or the microscopic examination of the sediment. He finds, that five grains of boric acid dissolved in four ounces of urine will preserve it from three days to nearly three weeks, depending, of course, on the character of the urine, and the temperature at which it is kept. With this preservative an albuminous urine keeps about as well as one that is in all respects normal. A urine which has been preserved in this way, but which contains sugar, will not, as a rule, keep longer than three days without losing a part of the sugar by fermentation and depositing an abundance of spores and crystals of uric acid. The addition of 5 grains of boric acid to 4 ounces of urine will raise the specific gravity about two points higher than in the original, and when three grains are used in four ounces of urine, the reading is one point higher. This preservative can be used either in the crystalline or powdered form. Some of the tablets contain starch or lactose.

In collecting 24-hour specimens place 15 grains of boric acid in the vessel when the collection is started; this amount of acid will gradually dissolve as additions are made, and will usually preserve the urine for at least

24 hours after the total quantity has been collected.

Formaldehyde is a valuable preservative, but the chief danger is in using too much. Formalin (40 per cent. solution of formaldehyde) can be safely used in proportion of one drop to four ounces of urine. In collecting larger specimens the proportion should be one drop to the pint. Large amounts interfere with some of the sugar and albumen tests. Urotropin has absolutely no preserving action on the urine. So far as Ogden knows there is no tablet made which contains available formaldehyde when dissolved in either water or urine.

Salicylic acid is a very good preservative in proportion of 2 grains to 4 ounces. However, it is always used with much risk, and is inferior to boric acid or formaldehyde.

Benzoic acid may be used in the proportion of 1 grain to 4 ounces, but like salicylic acid it is apt to modify the urine so that it cannot be satisfactorily examined.

Corrosive sublimate, chloroform, chloral, camphor and thymol are mentioned, but they are inferior to boric acid or formalin.

CONCLUSIONS.

(1) Boric acid is the most practical urinary preservative that we possess when used in the proportion of five grains to four ounces (2½ grains to 2 ounces) of urine.

(2) Formaldehyde solution should be used only by the physician or a responsible person. It should be remembered that one drop of the solution will preserve a pint of urine for about a week, and that one drop can be used in four ounces of urine without harm.

(3) Other substances than boric acid and formaldehyde should not be used.

(4) The name of the preservative and the quantity that has been used should always accompany the specimen to be examined.—*Medical Review of Reviews.*

SURGERY.

Hæmorrhage from the Internal Jugular Vein.

A possible danger when scraping Tubercular Glands in the Cervical Region.

BY

W. E. PLUMMER, M. D., WENCHOW.

This patient, whose photo was taken the day before the operation, was a man of fifty years of age; he had extensive tubercular ulceration of the neck. The disease began, according to the patient's statement, one year before admission to the hospital.

Operation.

At the operation one of my students had scraped away most of the caseous material, and only one sinus on the left side of the neck remained to be dealt with. While scraping this sinus, which was about on the level of the upper border of the thyroid cartilage, blood began to flow from the opening in such a volume as to show that a big vessel had been opened. The flow was easily arrested by pressure, and I prepared to try and expose the injured vessel and ligature it. As the opening was enlarged the external jugular vein was encountered and ligatured, but without in any way lessening the flow from the wound. Deeper down the wounded vessel was found to be surrounded with caseous material, and every attempt to isolate the vein only led to a more profuse flow.

It was then thought that the patient could not sustain the loss of blood which any further attempt to dissect out the vessel would necessitate, and that as the parts were embedded in caseous material, there were probably other weak spots which would give way when handled; so the wound was plugged with iodoform gauze and firmly bandaged.

After Treatment.

The plug of gauze was removed piece by piece as it became loose, until at the end of

three weeks after the operation all had come away. After a month in hospital the patient went home, feeling better, but returned three months later with a swelling about the size of a pigeon's egg, situated at the spot where the hæmorrhage had occurred, and where on that account the caseous material had not been all removed.

Note.—I do not remember being warned of this danger by my teachers, nor can I find any reference to it in my books; so I imagine it is only in advanced cases that the vessel walls are invaded. Hitherto I have always scraped these cases with vigour, but shall be more cautious in future.—(*The China M. M. Journal.*)

Ichthyol Collodion in Erysipelas.

On page 611 of the June *Clinic* you refer to ichthyol as a local application in cases of erysipelas, adding that ichthyol-collodion should be an ideal application. In this relation I wish to record some eighteen cases of erysipelas treated in the last three years with ichthyol-collodion without a single failure.

The method.—Paint the preparation over the diseased area, beginning well out on the healthy tissue: apply frequently, one coat on top of another (without washing) until the layers begin to peel when it may be removed with warm water and soap. The tissues underneath will be found in a healthy condition. The only objection I find to this treatment is its black color when applied to exposed surfaces; but the patient is generally willing to isolate himself if assured that belief will be quicker than by ordinary methods.—*The Alkaloidal Clinic.*

Non-operative Treatment of Nævus.

BY

NEUMANN, OF BERLIN.

(D. med. Woch. No. 20/05).

Neumann, of Berlin, uses an emulsion of pure and dried chloride of zinc (5 to 10 per cent.) in elastic collodion. This is painted with a camel's hair brush over the nævus, the surrounding skin being protected by strapping. When the collodion is dry, a bandage is applied, which remains on for eight days. The scab is then found to be shed. Any remains of the nævus are covered with gauze, on which has been spread the following ointment:—

R. Acidi Arsenici	..	} aa dr. i
Sulphur depur	..	
Ung. Cereæ	..	oz. i

This is kept on for two or three days, and the necrosed tissues scraped away with a sharp spoon. This is repeated until the nævus has disappeared.—*The Practitioner.*

OBSTETRICS AND GYNÆCOLOGY.**The Diagnostic Importance of the X-Rays in Pregnancy.**

BY

GORGIBOWSKI.

(Russian Obstetrical and Gynæcological Society.)

Monats. fur Geburts. und Gynakol., Bd. xxi., Heft 6.

The author first undertook a series of experiments to see whether the X-rays exerted any evil influence upon the pregnant animal, the embryos or the progress of pregnancy itself; and, secondly, what use could be made of the rays as a diagnostic help. Ten guinea-pigs and four rabbits were subjected to the influence of the X-rays on many occasions, the most harmful form of tube being used, and the exposures being 12 to 60 times

longer than is usually necessary to take a photograph. By these experiments it was found that no evil effect was produced on the animals. Their appetites remained good, they gained weight, there was no local skin disturbance, the embryos were all born alive except two, and the weights of the young were approximately higher than those of control animals. Later 130 radiograph pictures were taken of pregnant guinea-pigs and rabbits; and at all events in guinea-pigs very precise pictures of the foetal skeletons were obtained two to two and a half weeks before the end of pregnancy. The active movements of the embryos, and the movements communicated by the rapid breathing of the animals, all helped to make the negatives blurred in outline, especially in rabbits. The experiments showed that the X-rays could be safely made use of in pregnancy, and that the position and number of the embryos could easily be made out. Twenty radiograph pictures were then taken of eight pregnant women, with the following results:

To obtain a good picture of the foetal head the respiration movements must be as curtailed as possible; firm bandaging of the abdomen helps in this respect.

A picture of foetal head could only be obtained in the primiparæ. The kind of tube used has to be carefully chosen, as in some the rays are too powerful and pass through the substance of the bones, while in others they are too weak, and are arrested in the connective tissues of the mother and foetus.

No evil effects whatever followed the taking of these pictures, either to the mothers or discernible in the foetuses when born. One of the latter had an ulcer on the neck, which healed very quickly under anti-syphilitic treatment, and did not remain chronic as is so common in X-ray burns. It was decided that the ulcer really was syphilitic, and was not in any way caused by the rays.

In a discussion which followed the paper the author explained that in his opinion photographs of the foetal head could only be obtained in primiparae because in them the foetus was not so movable owing to the tonicity of the uterus, to the fact that the head is often in them fixed in the pelvis, and is therefore not so subject to passive movements caused by respiration.—THOS. G. STEVENS.—*J. of Ob. and Gy.*

Insufflation of Oxygen Gas into the Abdomen in Septic Peritonitis.

BY

COSTA (R).

Annali di Ostet. e Ginecol., July, 1905.

The author relates two cases; in the first of these, in the practice of Prof. Mangiagalli, the patient, after an operation for extra-uterine pregnancy, in which many close adhesions to the bowel were broken through, was found to be suffering from marked general sepsis. The abdomen was re-opened, and washed out with salt solution—a procedure which Mangiagalli has never found to ward off a fatal termination in septic peritonitis—and was then distended several times with oxygen. This patient ultimately recovered. There is no mention made of cultures from the discharges, but it is assumed that the infection was from *bacillus coli*. In the second case the patient succumbed to septic peritonitis after an abdominal section performed on a rupture of the uterus in a neglected shoulder presentation. In her case the author injected oxygen into the abdomen, but without any perceptible benefit. Experiments on guinea-pigs and rabbits showed that after injections of *bacillus coli* into the abdomen insufflations of oxygen were sometimes curative, but that after injections of pyococci the oxygen merely delayed the lethal termination. Dr. Costa refers to the favourable results obtained by Javaux in Belgium by continuous irrigation with oxygen gas. The author claims that this

method will at least do no harm.—E. H. L. OLIPHANT.—*J. of Ob. and Gy.*

On the Secondary Operation for Complete Rupture of the Perineum.

BY

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Hospital for Women.*

In his Presidential Address, delivered on 21st June, 1905, before the Fellows of the Glasgow and Edinburgh Obstetrical Societies, Dr. Cullingworth gave a singularly lucid and able description of the mode of performing this operation, which he himself had adopted. The paper, together with six diagrams, was published in the July number of this journal. In the course of his remarks, Dr. Cullingworth expressed the opinion that discussion on such a familiar topic ought to be helpful, as he did not think that the last word had yet been spoken on the subject. I quite agree with him in this opinion, and as the time allotted for discussion was too limited to permit a free exchange of views, I desire to adopt this method of giving the results of my experience.

For several years I tried several modes of incision and of suture, including that advocated by Dr. Cullingworth, but was not completely satisfied with any of them until two or three years ago I came to adopt the method described below. The main feature of difference between it and Dr. Cullingworth's lies in the mode of application of the sutures. If we study Plate III. in Dr. Cullingworth's paper, we see that when the sutures marked "D" are tied, the result is necessarily the formation of a spur, though it may not always be so prominent as shown in Fig. 6.

It is evident that this is not normal, and runs counter to the condition, rightly emphasised by the writer himself, that the perineum should be restored "as nearly as possible to its original size and shape." In one case in which I operated by this method the resulting spur became subsequently hypertrophied and caused such annoyance to the patient that she requested a second operation for its removal. I trust, I shall be able to show that the vaginal flap may be retained in such a way that no spur will result, but that, on the contrary, it will form part of a firm perineal body of as nearly as possible the normal size and shape.

The Incision and Dissection.—After having the parts thoroughly scrubbed, a narrow strip of iodoform gauze, 15 inches long, with a piece of silk thread attached to one end, is introduced into the rectum. The sides of the perineum are caught with bullet-forceps and drawn by the assistants directly towards the operator so as to stretch the recto-vaginal septum. The operator's left index finger, protected with a thin rubber finger-stall, is then inserted, palmar surface forwards, into the rectum, and a knife, held in the right hand is introduced slowly and carefully into the centre of the septum as far as may be necessary. This will vary according to the depth of the perineal laceration, but in all cases it must be sufficiently deep to ensure (1) a good perineal body, and (2) a sufficiency of raw surface to prevent the occurrence of a recto-vaginal fistula. When the knife has been introduced to the proper depth, it is quickly carried outwards, and then in a curve forwards to the posterior margin of the labium minus. One of the assistants then catches the vaginal flap with bullet-forceps, and the knife is re-introduced in the middle line and a similar incision made on the other side. The assistants now depress the sides of the perineum with the two lateral forceps and raise the vaginal flap with the third pair, and the operator quickly completes the dis-

section. The whole process should not take more than about a minute.*

After withdrawing the finger from the rectum and stripping off the finger-stall with a piece of sterilised gauze, two short cuts are made backwards from the extremities of the transverse portion of the incision to the outer edge of the two dimples which mark the divided ends of the sphincter ani, and the portions of skin between the two incisions and the edge of the rectal mucous membrane are dissected off. In this way the ends of the sphincter are exposed. Like Dr. Cullingworth, I have never found it necessary to dissect out the ends of the muscle. The volsellum forceps are then removed.

The advantages of this method of incision and dissection are:—(1) the rapidity with which it is effected; (2) the freedom from risk of perforating the rectum or vagina; (3) the protection of the finger by the rubber finger-stall: this is important in view of the subsequent manipulations; (4) the certainty of securing a sufficiently large area of raw surface and thus ensuring union of the whole area and the formation of a good perineal body.

Suturing the resulting raw surface.—The first suture to be inserted is one in the centre of the edge of the vaginal flap. This closes the gap caused by the original tear, and it serves as a tractor by means of which one of the assistants keeps the vaginal flap raised forward during the application of the other sutures. Rectal catgut sutures are then inserted in the manner described by Dr. Cullingworth, and finally the perineal sutures are passed. It is best to each rectal suture before inserting the next, but the perineal sutures should be left untied until all have been passed.

*For the last nine or ten years I have adopted the same method of incision and dissection in the performance of the operation of the posterior colporrhaphy, except that, of course, knife is not inserted midway between the rectum and the vagina, but immediately beneath the vaginal mucous membrane, and the vaginal flap is completely removed.

As a rule, four or five perineal sutures are sufficient, though sometimes one or two superficial ones may be required between the deep ones.

1. A short, stout, curved needle, armed with silkworm gut, and held in a needle-holder, is inserted on the patient's left side at a point in Fig. 5 indicated by the lowest of the four sutures marked "D," and, curving it first outwards and then inwards, so as to get a good hold of the levator and, it is brought out on the raw surface at a point in front of the fifth or sixth dot of the dotted line representing Dr. Cullingworth's buried suture. It is then made to traverse horizontally the middle of the raw portion of the vaginal flap at a level corresponding with the second of the sutures marked "D," and finally it is passed through the right side of the perineum in the same way as on the left side, but, of course, in the reverse direction.

2. The next suture is passed in the same fashion through the sides of the perineum at the level marked by the uppermost of the four sutures marked "C," and including the raw surface of the vaginal flap at the level of the third of the "D" sutures.

3. The third suture, introduced at the point marked by the second "C" suture, after emerging well down the side of the wound, is passed through the tissues at the bottom of the wound and then inserted and brought out at corresponding points on the right side.

4. Finally, a suture is passed from behind forwards through the left extremity of the divided sphincter ani, and in the reverse direction through the right extremity in the manner shown by the lowest suture in Fig. 4.

5. If necessary, a fifth suture is passed between the last two.

These sutures should now be tied, lowest first and uppermost last. The surface should

be mopped out immediately before tying each suture, and then the vagina should be thoroughly douched, the rectal tampon removed and the sutures brought together and tied in a bunch.

After-treatment. No dressings should be used; they are unnecessary, and should they become soaked with discharges, they may prove a source of mischief. Like Dr. Cullingworth, I never order vaginal douching unless it is indicated by the presence of a septic discharge, which is practically never the case. As fresh urine is sterile, I forbid the use of a catheter unless absolutely necessary. In this way the risk of setting up cystitis is obviated. The nurse is simply instructed to run some antiseptic solution over the parts immediately after micturition and defæcation. The bowels are moved on the third morning (48 hours) after the operation by means of a dose castor oil, and there after every day or every second day. I agree with Dr. Cullingworth in protesting against the system of keeping the bowels unopened for eight or ten days, a method still practised by some operators. The sutures are removed, as a rule on the twelfth day.—*Journal of Obstetrics and Gynaecology.*

Rectal Saline injection in the Persistent Vomiting of Pregnancy.

BY

DR. HARAPROSANNA DOSS GUPTA L.M.&S.
Dr. Haraprosanna Doss Gupta L. M. & S, reports in the 'Practical medicine' a case of pregnancy which resisted all sorts of remedies, but which yielded to rectal injection of one pint saline solution three times a day (4 grs. to one pint). He seems to think that the saline injection washed away the Ptomain which caused the persistent vomiting.

THERAPEUTICS.

A Note on Viburnum Prunifolium

BY

ARTHUR ANDREWS, M.R.C.S., ALBURY
N.S.W.

The following short paper is in no way meant to be an exhaustive statement of the properties and uses of viburnum. I have merely made a few notes of my experiences of the drug with a view to discussion, and, doubtless, a much longer list of cases in which it may be useful will occur to those present.

Viburnum prunifolium is a native of the United States of America, and is there very largely depended on for the relief of all congestive and spasmodic affections of the female generative system. The part of the plant which is used is the root bark, and various extracts and decoctions are obtainable. I have chiefly used the solid extract, or the preparation made by Parke, Davis and Co., in which it is combined with Golden Seal and Dogwood. In this the unpleasant flavour is covered by the use of various aromatics. The odour is strong, but does not appear to be objectionable, even to delicate stomachs.

We often see it claimed that this or that drug will cure everything, and scoff accordingly. In the case of viburnum, I will not say that it will cure all uterine troubles, but can safely affirm that there are few congestive or spasmodic affections of the female reproductive organs or irregularities of pregnancy which will not be materially relieved by its proper administration. To obtain the full benefit of the drug it is often necessary to continue its administration for periods of three or four months. Marked relief is often manifest in a few days, but an occasional case may require fully that time for complete cure. I have used it in many cases and have not found tolerance established, nor any necessity to increase the dose with prolonged administration. No habit is acquired, as

with opium, and I have never had to stop its use on account of unpleasant symptoms.

The dose I have generally used is three grains of the extract or one drachm of the liquor sedans, the equivalent of $7\frac{1}{2}$ grains of the bark. This dose may be administered at intervals of half an hour in an urgent case, but for prolonged administration three to four times a day. The following are a few of the cases in which its value is most marked:—

The dysmenorrhoea, which commences with the establishment of the flow, and tends to increase with each period. A typical example, which was under my care last year, will illustrate this. The patient was a strong and otherwise healthy girl of 16. The menses were established at 13, and for the first three periods very little pain was experienced. After this it became more intense with each return, till it compelled her to go to bed for at least the first two days. There was often vomiting, and a generally uneasy feeling was present in the interval about the pelvis. Vaginal examination, being inexpedient, was not urged till treatment had been tried. The usual household remedies of hot baths, hot drinks, and even chlorodyne had been resorted to. The bowels were regular and the general health good, but she was much depressed at the regular recurrence of such severe pain. I put her on drachm doses of lig. sedans three times a day, to be continued throughout the month. The next period occurred a fortnight later and the pain only lasted half a day. I had instructed her to take the medicine at hourly intervals, if the pain was severe, and she took three doses accordingly. The treatment was continued through the next month, when the period was quite painless. She went on with the medicine twice a day for another month, and has remained quite well since.

In menorrhagia from subinvolution, or in general congestion of uterus, when curetting is objected to, from fear of an anæsthetic or

other cause, a prolonged course of this drug is most useful. The treatment must be assisted, by due local and general means, to improve the general health. Judicious rest, especially at the monthly periods, is important and essential. When the congestion has been due to, or accompanied by, displacement, such as retroversion, one can with this drug often avoid operative measures, the displacement being rectified and the organ supported by a suitable pessary.

I have also often obtained marked relief in ovarian pain, whether at the monthly period or in the interval. In the tendency to nervous storms at and after the climacteric, artificial or otherwise, especially when accompanied by a feeling of weight about the pelvis, I know of no medicine more efficient.

The most important and marked use of drug is in connection with the irregularities of pregnancy, leading to threatened abortion. Where the habit of aborting has been acquired, and there is no specific history, whether it be due to fissure of the os or other cause, if taken early and the treatment pushed, a favourable result may be expected.

In all these cases it has displaced other drugs in my practice, and I feel confident that if the patient wishes and will give it a fair trial, a favourable issue will result in almost every case where the foetus is still living at the commencement of treatment.

Such a case as the following will illustrate this. Mrs. —, aged 36. Married seven years. First child stillborn after a very tedious labour six years ago. Two miscarriages at short intervals. Emmet's operation for extensive fissures in os. Delivery at term somewhat tedious two years ago. Recurrence of fissure unilaterally. Again pregnant five months ago. Much pelvic uneasiness, followed about the sixth week by free hæmorrhage, relieved by a few days' rest, but on resuming household duties the loss returned. Viburnum was given

every three hours, and she was kept in bed four days. Three weeks later more severe loss occurred while on a journey by train. After some trouble she was induced to again take to her bed, and viburnum was given regularly every four hours. The loss gradually ceased, and she was kept in bed ten days, or six days from the cessation of flow. Instructions were given to avoid quick movements and strains, and she is now performing her household duties with comfort, being a little over the fifth month.

Many other such cases could be related; but I have no doubt that those present have had similar experiences. For myself, I may say that I have almost entirely given up the use of morphia and other drugs, and rely on viburnum alone. I have seldom found it fail if commenced early, and where it does fail you will generally find that either the foetus is dead, or the patient is not desirous of carrying it to term. I have commenced its administration, in cases of habitual abortion, as soon as the patient knew she was pregnant without waiting for hæmorrhage and with good effect. In cases of scanty menstruation, especially when accompanied by pain, I have found it most useful in restoring the regularity and quantity of the flow. I have used it in cases of menorrhagia from the presence of fibroids, frequently with most beneficial effect.

In conclusion, I would again refer to its harmless nature, experience showing no ill effects, but only increasing one's satisfaction with it. To those who have not used it, I would say give it a thorough trial, and you will never give it up.—*The Australasian M. G.*

Rest as a remedy.

The therapeutic value of rest in the medical management of acute inflammatory and infectious processes is not fully appreciated. Its effect on the circulation is significant. The average daily output of energy by the

heart is 400,000 foot pounds; by simple rest in bed it is possible to save the heart a daily expenditure of 50,000 foot pounds of energy. The faster the heart beats the less time it has for rest—that is, the sum total of the periods of rest or diastole is much greater when the pulse is, say, 70 per minute than when it is 120 per minute; so that decreasing the pulse-rate saves the heart. Again, in the recumbent position this organ is saved the labor of elevating that part of the blood which goes to parts above its own level. Rest of the voluntary muscles is still more important. An immense amount of energy evolved in muscle movement is conserved by rest in bed. Muscle rest also secures rest for the motor neurones. The larger part of the nervous system is relieved of its work when the muscles are dormant. Decreasing the output of energy relieves the digestive, assimilative and eliminative organs of a corresponding amount of work.—G. WEHRLE, *Therapeutic Gazette*.

Formic acid in the Treatment of Tremor.

M. E. Clement deals with the action of formic acid in the treatment of tremor in a note which was read before the Académie des Sciences of Paris and which was published in the *Comptes Rendus*, 1905, No. 18, p. 1198. The drug was administered with success in two severe cases of tremor, one a woman, aged 65 years, and the other a man, aged 72 years. The patients had suffered from tremor for ten and 18 years respectively. In each case the tremors were not due to senility as the chin, lips, and head were unaffected. The tremors disappeared during rest or at least were very faint. Formic acid was administered in doses of four grammes of the normal solution, with results which were both rapid and surprising. In two days the tremors were modified to such an extent that the patients were able to drink from a glass with one hand without spilling the liquid, whereas previously they had with difficulty drunk from a glass supported by both hands.

Each day improvement was made though the tremors did not entirely disappear, which was not a matter for surprise seeing that in each case they were of long standing. M. Clement considers that no other drug has such a rapid and definite action for the purpose as formic acid. Hyoscyamine, hitherto considered the best remedy, does not, he states, compare with formic acid, and here is reason to hope that the remedy may also prove useful in certain forms of chorea.—*The Lancet*.

Thymus and Thyroid in Dysmenorrhœa.

Many of the nervous disturbances that occur in young girls before the establishment of menstruation are, according to O. T. Osborne, due to increased secretion of the thyroid before such an increase is functionally needed, and this exaggeration of the thyroid function is probably one cause of the profuse menstruation that often occurs in neurotic girls. Such cases may well be treated with thymus or mammary extract. Dysmenorrhœa caused by spasmodic contractions of the uterus or cervix, and the variety that manifests itself by slow and painful establishment of each menstrual flow, can often be avoided by administering thyroid substance for several days before the expected flow. In other words, thyroid extract is one of the best emmenagogues that we possess. Whether it can produce abortion has not yet been decided.—*The Therapist*.

OPHTHALMOLOGY.

Soluble Sulphate of Quinine in Ophthalmic Practice.

BY

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Fourteen years' experience of the use of bisulphate of quinine in ophthalmic practice has made me anxious to record a very

favourable impression of its value, especially in two very serious affections of the eyes—purulent conjunctivitis, and hypopion keratitis. Quinine solution was adopted in the first instance by me, owing to favourable reports by others. I believe, however, that few, if any, have placed so much reliance upon it as I have, and I am satisfied that its more general employment would be of advantage. The report in the last "Transactions of the Ophthalmological Society of the United Kingdom" of a paper on gonorrhoeal ophthalmia, by Dr. Adolph Bronner, induces me to send this note. Neither in the paper nor in the discussion which followed it is any mention made of quinine solutions. Another incentive is a note read by Dr. Arnold Lawson at the January, 1905, meeting of the same society on the treatment of corneal ulcers by quinine.

For the past ten years at the Brisbane Hospital for Sick Children I have treated all cases of purulent conjunctivitis, whether caused by gonococci or other cocci, with the following solution:—Bisulphate (—soluble sulphate) of quinine, 3 grains; boracic acid; 12 grains; and water, one ounce. The quinine is the essential part of the lotion, the patient to be laid on the back with no pillow, the lids to be separated, and the lotion poured freely in every three hours, night and day. No nitrate of silver has been used for these cases, because I had become dissatisfied with it.

I believe that I am correct in stating that in no case has ulceration of the cornea occurred when the eye came under treatment with a certainly clear cornea. Some eyes with corneæ already in a state of serious ulceration have had useful sight preserved. Where, indeed, ulceration has already occurred, I have formed the opinion that quinine is more likely to lead to healing than any other treatment. For babies in arms this treatment has to be carried out by the mother, and occasionally not too perfectly. Older children, when the cases are severe, are

admitted for treatment. The number of young girls below 12, generally from three to eight years, brought with purulent conjunctivitis, caused by typical gonococci, and often accompanied by vaginal discharge, is distressing. It is generally impossible to trace the source of infection. My experience of purulent ophthalmia in adults, at least in its early stages, is much more limited, though very favourable.

Important confirmation of its usefulness was obtained in 1903, when an epidemic of infective conjunctivitis, with purulent discharge, attended by swelling of the lids and great pain, occurred at the Queensland Asylums for the Insane at Goodna and Ipswich. Some 721 patients were affected. The treatment, prior to my being kindly allowed by the Medical Superintendent (Dr. J. B. Hogg) to advise, had been cocain, with the object of relieving pain, and painting with nitrate of silver solution. During the first fortnight of the epidemic about 200 cases were treated in this way, and in 20 of them ulceration of the cornea occurred. In four of these 20 considerable opacity of the cornea resulted, with much impaired sight. I strongly advised discontinuance of all treatment but the above solution of quinine and boracic poured into the eyes every three hours, night and day. After commencement of this as routine treatment, the epidemic lasted five weeks, and 520 cases occurred. There was not a single case of ulceration of the cornea, and recovery was much more rapid than under the former treatment. Dr. Hogg informs me that in addition to the benefit obtained from the bisulphate of quinine, it was found much more simple of application to refractory patients than the treatment at first carried out. The fact that in so widespread an epidemic no eye was actually lost yields gratifying evidence of the indefatigable efforts made by Dr. Hogg and his colleagues and warders to fight it. It is a record of which any staff might well be proud. It was noted by Dr. L. E. Row,

Senior Assistant Medical Officer, to whom I am indebted for the record of facts, that after the purulent discharge ceased, quinine caused further improvement only very slowly, and that sulphate of zinc solution got rapidly rid of the remaining velvety state of the lids. This is an observation which I can myself confirm. The cases were examples of severe infective conjunctivitis with purulent discharge. It was the purulent character of the secretion, and the tendency to corneal ulceration, which led me to believe that quinine would suit. In the more usual form of catarrhal conjunctivitis with mucopurulent secretion and adhesion of the lids in the mornings I have not found it nearly so helpful as sulphate of zinc. Where pus is present, however, it is almost a specific, especially with regard to safeguarding the cornea.

The not infrequent use of cocain as an addition to lotions for conjunctivitis as my strong disapproval. A drug which, if even only occasionally, denudes the cornea of parts of its epithelium, must increase the risk of its ulceration when being bathed by an infective or purulent secretion.

For hypopion keratitis I have employed bisulphate of quinine for 14 years, and it was in many cases disinfected the ulcer and caused the hypopion to clear up in a remarkable manner. Occasionally the three-hourly use of the solution, combined with atropin or duboisin has caused within 24 hours the disappearance of a hypopion, followed by a more gradual healing of the ulcer. In only a few cases, where the hypopion was still small when coming under treatment, has quinine failed me, and more radical interference been necessary.—*The Australasian M. G.*

Coffee Amblyopia.

It is a well-known fact that tobacco will cause varying degrees of amblyopia (loss of vision), but it is not so generally known that the use of coffee will do the same. An ex-

cellent article by A. E. Bulson (read at the meeting of the American Academy of Ophthalmology), in the *American Journal of Ophthalmology* on "Coffee Amblyopia," with the discussions in connection therewith, brings out this truth. He says that among the substances which may, though toxic action, produce amblyopic symptoms, unaccompanied by demonstrable retinal or optic nerve lesions, coffee may be included though ophthalmological literature contains but few and brief references to the subject.

The manner in which the visual disturbance is produced is somewhat in doubt, though the theory advanced by Casey Wood? that it is occasioned by a ptomain poisoning generated as a direct result of the injurious influence of excessive quantities of coffee taken into the system, seems worthy of acceptance.

Two cases are detailed, in the first of which the vision was not of normal (20-50) and no cause for this defect was ascertainable except that the patient was in the habit of taking large quantities of strong coffee. No lenses were of any benefit.

The patient was directed totally abstain from the use of coffee, and was given pilocarpine sweats, and daily hypodermic injection of strychnine in increasing doses, beginning with 1.20 grain. At the end of one week the vision had increased to 20.30 plus, and the fields had decidedly widened. At this time the pilocarpine treatment was discontinued, but the strychnine was continued in doses of 1.10 grain in tablet form, after each meal. At the end of four weeks the fields of vision were approximately normal, and vision 20.20 each eye. The digestion and condition of the bowels had also improved. Patient then disappeared from observation and was not again seen until four weeks ago when she returned by request for report as to condition. There has been no return of the trouble. The use of coffee has not been resumed.

A more definite proof of the fact that coffee may be responsible for visual disturbance was found in the history of the following case, in which a relapse occurred as a direct result of the resumption of the use of coffee: This patient, a lady, aged 41, had noticed impaired vision for several months, but became much worse during the later weeks. Patient reported that for two or three years she had been accustomed to drinking large quantities of strong coffee, which she took at varying intervals during the day from the coffee pot, which was constantly kept filled and on the stove. She said she depended upon coffee to sustain her.

On examination both eyes were found fairly normal in appearance, with the exception that the pupil reacted a little slowly to light and accommodation. Vision 20/70 each eye, and not improved with lenses. Media clear. Fundus of each eye presented a slight pallor of the temporal half of the disc, and haziness of the edges, but otherwise normal.

The patient was directed to abstain from the use of coffee, and pirocarpine sweats and strychnine were prescribed. Under the treatment the vision steadily improved and fields of vision widened until on August 13th, when the patient was discharged, the conditions were essentially normal.

The patient was not seen again until July 9th, 1904, when she returned complaining that her vision had within two or three weeks become affected, much as it was at the time of the first consultation over one year before. She reluctantly admitted that for two months she had been drinking coffee again.

The patient was again forbidden to use coffee and placed on the same treatment; but improvement was much slower than on the first occasion.

These two cases led the author of the paper to experiment upon himself, and he succeeded in inducing a mild coffee amblyo-

pia which, however, soon disappeared when he ceased taking the coffee.—*The Canadian Practitioner and Review.*

The use of Quinine for Corneal Ulcers.

Mr. Arnold Lawson (*Journal of Ophthalmology*) read a paper on the treatment of corneal ulcers by quinine. He said that up to the present time the use of quinine in ophthalmology had been restricted to a very limited class of conjunctival and corneal affections, but his observations, which had extended over four years, showed that it was a very powerful curative agent in a large variety of corneal ulcers not amenable to ordinary routine treatment, to which much more drastic measures were commonly applied. The sulphate of quinine, dissolved carefully in just sufficient sulphuric acid to hold the salt in solution, was preferable to either the hydrochloride or the acid sulphate, both of which were soluble in water; and it was recommended to be used in a one per cent. solution. The eyes should be soaked in the solution for five minutes four or five times a day, and in addition a thorough irrigation daily by an undine filled with the solution was advised. It caused very little discomfort, and patients used it readily, but stronger solutions gave rise to pain and had no advantage. When the treatment was going to be successful, improvement showed itself within a few days, and if no manifest benefit was obtained within a week it might be discontinued. The rapidity of healing under this treatment was at times remarkable and author has seen many formidable-looking ulcers heal by this treatment alone within a week. A list of several cases of corneal ulceration treated by this method within the last three years was appended to the paper.—*The Canadian Practitioner and Review.*

RHINOLOGY AND OTOLOGY.

Tobacco Deafness

BY

DR. DELIE.

Dr. Delie, *Rev. Hebdomadaire de Laryngologie, Otologie, et de Rhinologie*, says tobacco has a direct and selective action on the auditory nerves. Persons with a tendency to ear troubles should not smoke. If there is any hereditary tendency to sclerosis, smoking should be forbidden, especially to the young. Association with other poisons, e. g., alcohol or lead, increases the toxic effect of tobacco.—*The D. & H. Gazette.*

The Treatment of Chronic Nasal Catarrh with Sulphur.

Louis Kolipinski (*Medical News*, Aug. 12, p. 293).—The patient is seated with head erect and the mouth open. The anterior nasal cavity is exposed with a speculum, the tip of the nose elevated, and precipitated sulphur is freely blown in with a strong powder blower. This has been properly done when the powder appears in the mouth and opposite nostril and an irritative cough results. The treatment is repeated on the other side. The posterior nasal space and nasopharynx may also be treated directly by way of the floor of the nose or fauces. These procedures are done twice or thrice a week for a month, and then once a week for 2 months. The sensations induced are not unpleasant. Occasionally in woman conjunctival hyperæmia is produced when the sulphur is used too profusely.

In the hypertrophic stage of simple chronic rhinitis the discharge is diminished, the mucopurulent exudation becomes clear and much less, the intermittent nasal occlusion ceases, and the dull frontal headache disappears. The deep red membrane diminishes in size and lightens in colour. In hypertrophic rhinitis the effects are fair. In atrophic

rhinitis the treatment cannot give such results as in the earlier stage. Phlegmonous rhinitis (furunculosis) is often absorbed and much relief is given. In simple chronic naso-pharyngitis (American catarrh) without organic obstructions the fulness, post-nasal dryness and formation of crusts, the hacking, expectorating and vomiting cease. Crusts and fetor, purulent and bloody discharges vanish. Hyperplastic naso-pharyngitis is improved.—*The Medical Review.*

DERMATOLOGY.

Psoriasis.

Dr. Dreuw, assistant at Unna's clinic, Altona, Germany, reports (*Journal A. M. A.*, June 10), that he has used with great success the following ointment, the formula of which was first published by him in 1903, in the treatment of psoriasis:

R	Acid salicylic	(3 iiss)	10
	Chrysarobin	(3 v)	
	Ol. rusci (birch tar),	(3 v)	20
	Sapo virid	(3 viss)	
	Vaselin,	(3 viss)	25

This combination contains, he says, keratolytic reducing as well as macerating and antipsoriatic remedies in rather large doses. His method of using it is as follows: for from four to six days the ointment is applied by the aid of a stiff brush to the affected area (after this has dried somewhat it is well to apply a starch or zinc powder). On the fifth or sixth day, the patient starts taking hot baths daily for from one to three days, and after the bath vaselin is to be well rubbed in from one to three times, a day. This treatment, which covers eight days, may be repeated several times according to the severity of the disease, but, as a rule, the psoriasis patches disappear soon after the first treatment. The ointment causes a marked scaling of the entire plaque, and the black crusts, which become closely adherent after five or six days' treatment, gradually loosen after a few days of bathing and innunction with vaselin or with zinc sulphur ointment. The application

of this ointment causes an intense feeling wherever psoriasis exists and Dreuw considers it an indicator of areas of psoriasis. It also limits the chrysarobin irritation exclusively to the diseased area and causes no diffuse staining. For the best effects, the solid constituents of this ointment must be thoroughly rubbed together. For prolonged use with this ointment, he has prepared a material called mull, and finds it practically unirritating. The use of these preparations is not limited to psoriasis, but they can be employed in other conditions where a special macerating effect is desired with the smallest possible amount of irritation. He has used it thus in trichophytosis and in local circumscribed dry eczema. It can be kept on six or eight days, after which any mild ointment may be applied.—*Medical Review of Reviews.*

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Original Articles.

* GALLSTONES.

BY

RUTHERFORD MORISON, F. R. C. S.,
Surgeon to the Royal Infirmary, Newcastle-on-Tyne.

The following is a summary of my views as to the diagnosis and treatment of Gallstone cases, (for a fuller account see Edinburgh Medical Journal for October 1905). The notes are of illustrative cases occurring in my Wards in the Royal Infirmary, Newcastle-on-Tyne and in a private Hospital, during the year 1903. For the statistics and notes I am obliged to our Surgical Registrar G. Grey Turner, F. R. C. S.

Gallstone attacks are amongst the most painful of human ailments, and once they have occurred they are apt to be repeated.

Gallstones may be present in the gall-bladder for long periods and produce no symptoms.

For the production of gallstone attacks it is necessary that the patient should have cholecystitis and choledochitis in addition to the stones.

* Specially contributed to "The Antiseptic."

The stimulus of gallstones and inflammation is then sufficient to produce forcible contractions of the unstriated muscular walls of the gallbladder and ducts, and these expulsive pains are the cause of the "Gallstone attacks."

As in all the other hollow viscera violent contractions are attended by severe pain, and expulsive efforts acting against a partial obstruction are followed by hypertrophy of the wall and diminution of the cavity; whilst acting against a complete obstruction the active contractions are followed by paresis of the muscular coat, thinning of the wall, distension of the cavity and relief of the severe pain.

Complete sudden obstruction attended by acute inflammation leads to gangrene of the gallbladder, which commences as a patch at the fundus and gradually spreads.

Cholecystitis (inflammation of the gallbladder) is nearly always associated with gallstones. If the stones are removed the inflammation subsides.

The exciting cause of all serious forms of cholecystitis is infection by a Pyogenic micro-organism.

The terminations of cholecystitis, like that of inflammation elsewhere, are by (1) Resolution (2) Fibroid Thickening (3)

Partial destruction (ulceration and sloughing) (4) Total destruction (gangrene).

The biliary ducts when irritated by a stone contract on it. Consequently a small stone may cause complete temporary obstruction of the ducts. If the stone remains impacted the ducts later dilate around it and a large stone may be insufficient to produce any obstruction of the ducts.

The earliest recognizable symptom of gallstones is "an attack of spasms" often referred to the stomach. It leaves tenderness over the gallbladder behind it. If the stone or stones traverse all the ducts and reach the duodenum temporary jaundice follows the attack.

If a large stone is firmly driven into the neck of the gallbladder or the cystic duct, so that it completely blocks the lumen, then the severe pain is followed by distension of the gallbladder.

The swollen tense gallbladder will soon be discovered as a rounded hard tender tumour below the 9th costal cartilage, on a line between that and the umbilicus.

The distended gallbladder may not be seriously infected, and can remain distended and quiescent for long periods.

The infection may be serious enough to cause purulent changes in its contents, and these can only be got rid of by spontaneous leakage or by operation.

The infection may be serious enough to cause gangrene of the gallbladder, followed by rupture into the peritoneal cavity.

If a stone is driven into the common duct and arrested at any part of its course, the same spasmodic pains are present, and shivering and vomiting are likely to be

the more pronounced symptoms. Jaundice follows the attack in a few hours and may pass off in the course of a day or two if the stone reaches the duodenum; or, if the stone is arrested in the duct, it may never totally disappear.

In typical instances the diagnosis is easy. An illness commencing suddenly with severe pain in the upper abdomen, which is followed by jaundice, is unlikely to be due to anything but the gallstones. The diagnosis may be confirmed by the discovery of stones in the faeces. The gallbladder as a rule is thickwalled and contracted, because the obstacle in the duct is not insurmountable.

After the duct has become dilated and paretic and the gallbladder functionless, the attacks of pain become less severe; till finally in rare instances the only symptom that gallstones are the cause of illness consists in recurring attacks of shivering resembling malaria, and the only subsequent sign is jaundice after the attack. The history that this illness commenced with pain is of great diagnostic importance.

Treatment. Removal of the gallstones by operation is the only proper treatment; it is only when for some sufficient reason the removal of the stones cannot be advised, that other measures should be suggested.

Gallstones are a serious possession and though it is possible for even the most desperate looking cases to get well without surgical aid, deaths from gallstones are more common than is generally supposed.

The risk of gallstone operations is the result of delay. Stones can be removed from the gallbladder with no more risk

than is inseparable from any ordinary surgical operation. My statistics for one year show 16 cases of operation on the gallbladder, and all recovered.

On the other hand operations undertaken for the removal of stones from the ducts are dangerous. Sepsis is already present, and this always makes the prognosis uncertain.

Hæmorrhage is common in jaundiced patients, and after many attacks shock is easily produced and difficult to combat. The three great dangers of operation, sepsis, hæmorrhage and shock, are all increased when stones are present in the common duct; but the record of my cases emphasises more clearly than anything I can urge the serious results of operation on these cases. Though the high mortality of late is exceptional (5 choledochotomies with 4 deaths) this is not the only drawback of late operations. Perusal of the notes of the post-mortem examinations show that in some of these cases it is impossible to remove all the stones; and in others such serious changes have been produced that even though recovery followed the operation the patient could not be well.

The operation.

The gallbladder may be opened, emptied, and closed again (cholecystotomy—7 cases—all recovered). The gallbladder may be opened, emptied, and drained (cholecystostomy—8 cases—all recovered). The gallbladder may be excised (cholecystectomy—1 case—recovered).

The ducts may require to be opened and drained (choledochotomy—5 cases—1 recovered, 4 died). The indications for cholecystotomy are that the gallbladder should not be seriously infected and that

the cystic duct must be patent. (In these cases I leave a drainage-tube in the hepatic pouch for a few days for fear of leakage).

The indications for cholecystostomy are temporary obstruction of the cystic duct or serious infection of the gallbladder walls. The gallbladder in these cases should not be attached to the parietes. The indications for cholecystectomy are malignant disease of the gallbladder or cystic duct, or occlusion of the cystic duct which is likely to be permanent; this operation is also necessary in some cases of biliary fistula, and when a stone in the cystic duct offers unusual difficulties in its extraction, or when the object is to remove gallbladder, cystic duct, and stone together. The indications for choledochotomy are to remove a stone or stones from the ducts. In these instances the gallbladder always, and the common duct generally, should be drained; indeed in dealing with some of these very ill patients the operation should be limited to drainage of the gallbladder into the intestine (cholecystenterostomy) and no attempt should be made to remove the stones.

Case 1.

Gallstone attacks for 28 years—Cholecystotomy—Entire closure of gallbladder—No drainage—Recovery.

(Royal Infirmary, Vol. 109, p. 85.)

Female, aged 37, admitted May 5th, 1903.

28 years before she had had her first attack of pain. It was accompanied by vomiting and followed by jaundice. The attacks recurred about every 2 months but gradually became less frequent, till 22 years ago when they started severely again. Every now and again since she has had

attacks; but never very severe or frequent till 2 years ago, when they got worse and more frequent, and laid her up for 2 or 3 days. She was always jaundiced after the attacks, but felt quite well in the intervals. No stones had been found in the fæces.

On admission.—She was a big strong stout woman in good general condition. Except for a tender point over the position of the gallbladder there were no physical signs.

Operation, May 14th 1903.—There were adhesions in the neighbourhood of the gallbladder, but none in the general peritoneal cavity. Adherent omentum was separated from the gallbladder, in which stones were felt, and the gallbladder was opened. Thin bile and 6 gallstones were removed from the gallbladder. The ducts explored from the outside were apparently free from stones. After emptying it the gallbladder was completely closed by sutures and the wound in the abdominal wall was entirely sutured up.

The stones were small, measuring, $1/4'' \times 1/4''$ and were dark, black, tuberculated and friable. Recovered.

Case 2.

Cholecystotomy—Entire closure of gallbladder—Hepatic pouch drained—Recovery.

(Royal Infirmary, Vol. III, p. 66.)

Female, aged 38, admitted June, 27th, 1903.

Until 10 months ago she was strong and well. She was then seized suddenly with a severe pain, so bad as to make her fall, cry out, sweat and vomit. It lasted for half an hour. She says that she turned yellow on the same day, after the attack. Since then she had similar attacks very frequently, often as many as twice a day,

and had lost her health and condition. No stones were ever found in the fæces though frequently looked for.

On admission.—She was a thin, sallow woman. Her gallbladder could be felt to be enlarged but not so much. It was very tender.

Operation, June 30th 1903.—The abdomen was opened by a short transverse incision to the outer side of the rectus muscle. The liver was very movable and the gallbladder which was distended has some few adhesions around it.

The gallbladder contained two very large stones impacted in its neck and about 40 small stones in its cavity. Its walls were thick. The mucous lining was red. The opening in the gallbladder was entirely closed by a continuous suture of catgut and a Lembert suture of the same. A separate opening was made into the hepatic pouch behind, and a strand of gauze was drawn through. Recovery.

Case 3.

Repeated Attacks of Gallstone Colic—Cholecystotomy—Recovery.

(Private Hospital, Vol. 102, p. 175.)

Male, aged 62, admitted March 12th, 1903.

Ten years ago, he began to have "bilious" attacks at intervals of several months lasting about one day. These were attended by a dull aching pain in his right side and frequent vomiting. During the last 6 months these attacks had been more severe, had lasted longer, and had come on every 4 or 5 weeks. After the last attack he was jaundiced for 2 or 3 days. Lately he had lost 1 stone in weight, and felt weak.

On admission.—He was a big stout man. Beyond marked point tenderness over the region of the gallbladder, nothing was discovered.

Operation, March 14th 1903.—The abdomen was opened by a long transverse incision. The liver and gallbladder were, high up under the ribs; and this, together with a thick layer of fat and good muscular development, made the operation a difficult one. A large number of stones (several dozen, of the size of a horse bean) were removed from the thickened gallbladder. Palpation of the ducts discovered no stones. The gallbladder was closed by a continuous catgut suture through all the coats and a purse string Lembert suture of silk. The hepatic pouch was drained. Recovery.

Case 4.

Distended Gallbladder—Frequent Attacks—Cholecystotomy—Recovery.

(Royal Infirmary, Vol. III, p. 66.)

Female, aged 51, admitted June 27th, 1903.

Until 10 months before she was well and healthy. She was then seized suddenly with a severe pain in the right hypochondrium. The pain was so sudden and so bad that she fell down and cried out. It made her sweat and vomit, and lasted for half an hour. She was slightly jaundiced on the same day as the attack. Lately she had had similar attacks as often as twice a day. Her stools were often clay-colored, but though she looked for them she never found any stones.

On admission.—She was thin, weak and sallow, but not jaundiced.

The gallbladder could be felt as a tumour, but not tense and not very large and tender, at the lower border of the right costal margin.

Operation, June 30th, 1903.—On exposing the liver it was found to be very movable. The gallbladder was distended but not tense, and had adhesions around it. Two very large stones were removed from its neck, and about 40 small stones from its cavity. Its walls were red and thick. The ducts contained no stones, and showed no thickening.

The gallbladder was entirely closed by a continuous suture of catgut through all the coats, with Lembert's sutures of silk outside.

The hepatic pouch was drained by a strand of gauze. Recovery.

Case 5.

Recurring gallstone attacks—Indurated head of Pancreas—Cholecystotomy—Recovery.

(Royal Infirmary, Vol. 109, p. 92.)

Female, aged 40, admitted March 23rd, 1903.

She had always had excellent health until the present illness, which commenced 6 months ago with a sudden severe pain in the upper abdomen which made her shout out, sweat and vomit. The acute pain lasted for 11 hours, and left some pain and tenderness in the right upper part of the abdomen. The day after the attack she was jaundiced; in 4 days the pain had quite left and she was well again. Since then she had had 8 or 9 similar attacks; but the pain had not been so bad, though

vomiting had been very severe. She had lost weight and strength with these attacks.

On admission.—She was sallow, and slightly jaundiced, and looked as if she had been stouter. Slight tenderness over the position of the gallbladder was the only physical sign elicited.

Operation, March 26th 1903.—There were some old inflammatory adhesions round the gallbladder and the common duct, and the head of the pancreas was quite hard and enlarged as if from chronic pancreatitis the result of gallstone irritation. Stones were felt in the gallbladder but not in the ducts.

6 small stones ($1/4" \times 1/4"$) rounded and with small nodules on their surface were removed from the gallbladder, into which a drainage tube was sutured. Recovery.

Case 6.

Acute distension of gallbladder from blocking of its neck by a large gallstone—Suppuration of its contents—Commencing gangrene of its coats—Recovery.

(Private Hospital, Vol. 102, p. 193.)

This operation was done at the patient's home, and is used as an illustration of an ultra-acute case but not included in the statistics. Female, aged 42, patient of Dr. Nicoll of Jarrow. During the previous 15 months the patient had frequent short sharp attacks of pain in her right side. Four days before, a severe pain had necessitated the use of morphia twice, but it then passed off and the patient was able to be out and to do some shopping. At night the pain returned, and had continued more or less since.

On December 23rd (3 days after the commencement of the attack) the patient was very ill, with high temperature, quick pulse, dirty tongue, and a large rounded, tense, very tender swelling in the neighbourhood of the gallbladder.

Dr. Nicoll's diagnosis was, suppurating distended gallbladder resulting from the obstruction of its outlet by a gallstone; and I agreed in this, and in the opinion that immediate operation should be carried out.

Operation.—On exposing the gallbladder it was found to be tense and distended and surrounded by a corona of cedematous inflamed and adherent omentum. On separating this the gallbladder was incised, and a quantity of purulent bile escaped. A large stone was felt firmly impacted in the neck of the gallbladder; and this, together with others in the cavity, were removed. The mucous membrane of the gallbladder at a spot near the fundus was in a gangrenous condition. The gallbladder was drained by a tube sewn in and the hepatic pouch by gauze, both being brought out through the wound posteriorly at the loin. Recovery.

Case 7.

Acute distension of gallbladder from blocking of its neck by a mass of gallstones—Pain in left shoulder—Recovery.

(Private Hospital, Vol. 102, p. 187.)

Female, aged 57, admitted May 26th, 1903.

Four days before admission she was seized about 8 a.m. with a very severe pain down the right side and across the pit of the stomach. It extended to the left shoulder, then to the right. The pain was gra-

dually relieved by hot applications and medicines. It had continued, as a severe aching increased at times, till admission. Since her illness began she had occasionally vomited dark green fluid streaked with blood, and felt as if there was a stoppage in her bowels, and difficulty in digesting her food.

On admission.—She had great pain. There was no abdominal distension. Intestinal movements could be heard and the patient complained of rumbling.

A rounded mass could be felt in the abdomen, below and to the right of the umbilicus. It felt definitely rounded below, but hard and flattened on its surface. The liver felt as if enlarged.

Diagnosis.—Suppurating gallbladder due to gallstones blocking its neck or the cystic duct.

Operation, May 27th 1903.—On opening the abdomen, some free straw-coloured fluid was found in it. The gallbladder was tense, and much distended: it was reddened, and in places had a greenish tinge. The liver was depressed. After packing off the hepatic pouch the gallbladder was opened. A number of small gallstones and bile-stained fluid (not purulent) escaped. No stones were found in the ducts.

The walls of the gallbladder recovered to a red colour as soon as the tension was relieved by incision. A drainage tube was sewn into the gallbladder, and brought out at the posterior part of the incision behind.

Pathology. Between three and four dozen rounded and angular white stones blocked the neck of the gallbladder, which was acutely inflamed and so tense that gangrene must shortly have appeared.

The bile-staining of the contents arose from the acuteness of the attack. Bile was present in the gallbladder when the attack commenced, and could not afterwards make its escape.

Case 8.

Distended gallbladder which subsided with relief of all symptoms—Operation undertaken to prevent further attacks—Cholecystotomy—Recovery.

(Royal Infirmary, Vol. 179, p. 82.)

Female, aged 29, admitted May 4th, 1903.

Her only child was born 3 months before and 3 weeks afterwards she had her first attack which came on in the middle of the night, and made her shout out and feel sick. The severe pain lasted for 4 or 5 hours, and after it she was very sore in the stomach and was slightly jaundiced.

Three weeks later she had a second attack which was more severe and made her sick. It lasted for about the same time. Since then she had had 3 other attacks, the last being the most severe. It came on at night (as they all did) when she was asleep. She was very sick; the pain lasted all next day, and after the attack she noticed a hard tender lump in the upper part of the right side of the abdomen. She was jaundiced, and it was 4 days before she got quite well.

After recovering from this attack she was sent to the Infirmary, and on March 28th the tense enlarged gallbladder could be felt as a pear-shaped tumour under the right costal margin. She had no urgent symptoms and was sent home to await a vacancy. On admission in May, she said that she had had no further attacks and

felt quite well. The swelling of the gallbladder had disappeared. She was, however, advised to have an operation done.

Operation, May 5th, 1903.—The gallbladder was free from adhesions. It was a little distended with clear fluid without bile-stain. A single large stone was felt firmly impacted in the neck of the gallbladder and was dislodged and removed with some difficulty through the incision made in the fundus. The gallbladder was entirely closed and no abdominal drain was used. Recovery.

Pathology. The question arose as to what had happened in the interval. The gallbladder when first examined was large, tense and distended; now it had become less and flaccid. I thought that the firm impaction of the stone and the absence of bile in the contents of the gallbladder showed that no escape could have occurred through the cystic duct; and I suggested that absorption of the gallbladder secretion was in progress and that finally atrophy of the gallbladder might have led to spontaneous and permanent cure.

Case 9.

Recurring attacks of gallstone colic gradually increasing in frequency and severity—Probable leak of gallbladder into duodenum—Cholecystotomy—Suture duodenum—Recovery.

(Private Hospital, Vol. 103, p. 120.)

Female, aged 40, admitted July 6th, 1903.

About 9 years ago, she was first seized with a sudden severe pain in her right side, and vomiting. She had many attacks since but once an interval of 2 years passed without any. During the last 2

years they have become more frequent and more severe; and Dr. Benson of Stanley, who attended her, frequently told her that an operation was advisable.

On May 20th (7 weeks before), about 12 midnight, she was seized with violent sickness, and afterwards vomiting. It required several doses of morphia to bring about relief, and she was ill in bed for a fortnight. As soon as she recovered she came for operation. The attacks were all similar in character. There was an acute sudden onset of pain with sickness, followed in some hours by vomiting. The pain was in the liver region and was followed by tenderness all over the right side of the abdomen. No jaundice had been observed.

On admission.—The patient was in fair condition but had a goitre.

Nothing could be made out on palpation. The patient pointed to a spot over the gallbladder as the place where pain began.

Operation, July 8th, 1903.—The hepatic pouch was obliterated by dense adhesions. On separating the colon below from the liver above, the liver and the gallbladder, which was covered by it, were found to be adherent to the duodenum. In separating the gallbladder from the duodenum a small hole was made in the latter. The opening was close to the pylorus and the walls of the duodenum surrounding it were thickened and hard. It was closed by an inner suture of catgut through all the coats, and outside of this Lembert sutures of fine silk.

The gallbladder was very small and thick-walled, and retracted up under the liver, making manipulations difficult. It contained three large and three small stones. There were no stones felt in the ducts. A drainage-tube was fixed into

the gallbladder by catgut sutures. The tube and some gauze were brought out of the wound posteriorly, and the remainder of the wound was closed. Recovery.

Case 10.

Gallstones—Suppuration of gallbladder—Adhesion to abdominal wall—Rupture externally—Biliary fistula—Removal of fistula—Cholecystotomy—Recovery.

(Royal Infirmary, Vol. 108, p. 147).

Male, aged 74, admitted May 16th 1903.

Seven months ago he had an attack of severe pain in the upper and right part of his abdomen accompanied by vomiting and sweating. After this he did not regain his health, and he had consulted me 10 weeks before; I then found a large tense gallbladder and advised operation. This advice he declined to follow, on account of his age, and shortly afterwards "inflammation" set in and an abscess burst.

On admission.—He looked a healthy stout old man. Over the region of the gallbladder there was a deep sinus which discharged a muco-purulent fluid, irritating to the skin in its neighbourhood.

Operation, May 21st 1903. The usual transverse incision, the first part of which included the fistula and infected sinus in an ellipse, opened the abdomen. The omentum adhered firmly to and all round the gallbladder. The gallbladder was entirely separated by dissection from the abdominal wall. Outside of it, between it and the abdominal wall and communicating by a tiny opening with the gallbladder, there was a purulent sac which contained 4 gallstones. A large stone was impacted in the neck of the gallbladder, the cavity of which contained about 3 dozen stones of varying sizes. The gall-

bladder was drained by tube sewn in, and the hepatic pouch by gauze, both being brought out posteriorly. The remainder of the wound was entirely closed.

For a week after the operation the patient was seriously ill with Pneumonia.

(To be continued.)

*SOME POINTS IN THE DIAGNOSIS AND TREATMENT OF COMMON AFFECTIONS OF THE RECTUM.

BY

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The value of symptoms in rectal diseases.

The symptoms of rectal troubles are often very uncertain and are apt to be misleading and a diagnosis which is founded entirely upon the patient's symptoms is frequently wrong and a careful digital examination should never be omitted.

At St. Mark's Hospital I frequently see cases which have been under treatment for months and on questioning the patient find that no local examination has been made. Often in such cases the local examination reveals a condition quite opposite to that for which they have been treated. And in not a few cases the symptoms are found to have been due to carcinoma and in such cases many valuable months have often been wasted, tendering the chances of successful operation either hopeless or much worse than they need have been.

* Specially contributed to "The Antiseptic."

I know of one instance where a local examination revealed the presence of an egg cup impacted in the rectum in a patient who had been ill with what was supposed to be dysentery for some weeks and who was thought to be dying. The patient was a native of South America and after the removal of the egg cup he recovered.

It must not be forgotten that piles developing rapidly in an elderly patient frequently are due to a carcinoma higher up in the rectum. Not long ago an elderly lady, who had got bad piles was sent up to the hospital in order that she might be admitted for operation as all palliative treatment had proved ineffectual. She certainly had very bad piles some of which were prolapsed and swollen, on examining per rectum however I found a large carcinomatous growth which was quite inoperable and which had undoubtedly been the cause of her piles.

Again fistulas not infrequently result from carcinoma and I recently saw a case of this sort where an apparently simple posterior fistula was found to go up to a carcinoma some $1\frac{1}{2}$ inches within the bowel.

The symptoms resulting from rectal troubles may be very misleading, especially those symptoms which are the result of referred pain or referred reflex effects.

A small strangulated or thrombosed pile may and often does cause complete retention of urine. The retention may be the only symptom complained of by the patient and when this is the case the real trouble may easily be missed and the patient treated for stricture or have a catheter passed for days when cutting off the pile, dilating

the sphincter or even the application of sedatives to the anus will quickly overcome the retention.

Fissures also may cause all sorts of referred symptoms, thus irritability of the bladder with frequent micturition, stranguary and other symptoms usually associated with urethral and bladder troubles may be the leading symptoms; in women symptoms due to uterine troubles may be very closely simulated. It is well to bear this in mind and to examine the anus in cases where women complain of uterine symptoms without obvious cause. I have seen cases where metorrhagia and even dysmenorrhœa have been apparently cured by the healing of a previously undetected fissure.

Several mechanical aids to diagnosis in diseases of the rectum have been devised within recent years and some of them prove most useful in certain cases. Of course nothing is so good as the educated finger for purposes of diagnosis, but there are cases where the finger is not sufficient or where it can be supplemented to advantage by the use of different forms of specula. The number of different kinds of rectal specula is legion, and yet very few of them are satisfactory; most of them fail because they are very painful to pass or to withdraw or else because nothing can be seen through them. The greatest improvement has been the introduction of the Kelly tubes. The most useful of these is certainly the short tube called by Kelly the sphincteroscope; as originally devised by Kelly, it had too sharp an edge, but the pattern which is used at St Mark's has been improved by the addition of a collar which forms a broader edge to the tube. With this instrument it is possible to obtain an excellent view of the last two or three inches of the rectal canal. The instrument

is very easily passed and does not cause pain. It is of special value in the diagnosis of internal hæmorrhoids as it is the only form of speculum with which they can be properly examined. Internal piles cannot be felt by a finger in the rectum, and some means by which they can be easily seen is therefore useful.

In certain cases where the piles are very large one can sometimes feel redundant folds of mucous membrane from which one can generally safely infer, that internal piles are present, but this is by no means a reliable method of diagnosis and in the majority of cases of internal piles nothing can be felt with the finger. Of course by getting the patient to strain the piles frequently prolapse sufficiently to be seen, but this is not always successful, and does not show the piles *in situ*. The way in which the instrument is used is to pass it into the rectum and then withdraw the obturator, the tube is then slightly withdrawn and pushed back again; any piles that are present will prolapse into the tube and can easily be seen; by gradually withdrawing the tube and repeating this manoeuvre all the piles and mucous membrane can be examined with the greatest ease and accuracy. This instrument is also of value in examining carcinomata situated low down in the rectum.

The six-inch Kelly's tube is also a very useful instrument in many cases. By means of it the valves of Houston can be examined and any ulcerations in the rectum can be seen and treated locally by instruments passed down the tube: it is also of value in the diagnosis of strictures or growths situated high up in the rectum. In using this tube a forehead lamp is a necessity and the patient is usually placed in the genu-pectoral position in order to

obtain ballooning of the rectum beyond the tube. It is often possible, especially in women, to use this tube in the left lateral or Sims' position, and in women this position is much to be preferred when possible.

The pneumatic sigmoidoscopes have entirely replaced these tubes. Several different forms of pneumatic sigmoidoscope or rectoscope have been invented, but in my opinion Strausse's is by far the best of these, and it has proved a most satisfactory instrument. This instrument is thirty centimetres long, and with it it is possible to examine the whole of the rectum and the greater portion of the sigmoid colon.

The tube is used most easily with the patient in the genu-pectoral position, but it can also be used with the patient in the Sims' position if a cushion is placed under the buttock. After the tube has been passed six inches the obturator is withdrawn and the tube pushed on by sight, so that the surgeon can see where the end of the tube is going to and by dilating the bowel in front by pumping in air he can prevent the end of the tube from touching the rectal wall. The tube is, in fact, passed in behind a cushion of air, and consequently no damage can result to the walls of the bowel, however diseased they may be.

Should a growth be found its exact dimensions can easily be ascertained, and by watching whether or not it moves with the intestinal wall on inflating the bowel, or by pushing it gently with the end of the tube, one can easily determine its mobility and estimate the chances of successfully removing it by operation. The distance of any lesion from the anus is ascertained by looking at the graduated scale on the outside of the tube. Should it be necessary to swab away any blood or faecal material from the surface of the

growth or even to remove portions of it for microscopical examination, this can be done by removing the back glass of the instrument and passing swabs on special holders down the tube or by using special forceps made for the purpose.

This instrument does not cause any pain or even discomfort when being used, and I have only once had to give an anæsthetic for examination with it.

The distance to which this tube can be passed varies considerably with different patients. In patients who have a long sigmoid mesentery and no adhesions round the bowel it is usually possible to pass the tube to its full length, and to see well beyond the middle of the sigmoid flexure; in one case I was able to see into the descending colon. When, however, the mesentery is short or the bowel is surrounded by adhesions the tube cannot be passed beyond the last loop of the sigmoid.

The value of this instrument in certain cases is considerable. It enables us in the case of a malignant tumour situated high up in the rectum or in the sigmoid flexure to obtain exact knowledge of such a growth, to tell whether or not it is removable, and if so by which route it may most easily be reached.

As a substitute to exploratory laparotomy this instrument is of considerable use. Exploratory laparotomy is, after all, only the resort of the destitute, and no surgeon likes to perform such an operation if he can possibly avoid it.

Case.

The patient was a woman aged 42. She had suffered for about 3 months from constant diarrhoea and the passage of large quantities of slimy mucus "per

rectum." She had never passed any blood. She had frequent attacks of pain in the abdomen. She was supposed to be suffering from mucous colitis and had been for some time under treatment for that condition. Nothing abnormal could be felt per rectum but on examining her with the sigmoidoscope I detected a malignant stricture of the rectum situated about 7 or 8 inches from the anal margin.

Fissures.—This is certainly the most painful rectal troubles that we meet with. In cases of recent fissure at the anal margin the pain is often extreme. And I have seen patients who were completely broken down in health as the result of the agony which a small anal fissure had caused them. Fissures are easily detected by the finger and can be seen on separating the folds of the anus or a speculum will reveal them though the use of a speculum is often impossible on account of the pain which it causes. In fact it is often a most difficult matter to examine a fissure properly in a nervous patient and a local or general anæsthetic may be necessary. I have found orthoform blown into the fissure from an insufflator most efficacious in allaying the pain in these cases.

From the point of view of treatment it is important to distinguish two forms of fissure. Firstly those which are of recent formation; these are almost always amenable to non-operative treatment and I have found one of the most effectual methods of treating these fissures to be the local application of pure Ichtyol, by means of a suitable speculum.

Secondly fissures that have been present for some months or even years. In these cases the fissure partakes more of the nature of an ulcer with indurated edges and often there is a well marked indurated

skin tag or pile covering it at the lower end. Often too the fibres of the external sphincter can be seen exposed at the base of the ulcer. These fissures, will, it is true, sometimes heal under careful treatment without operation. But even when they do heal, they require a long time to do so and after all treatment fails the only satisfactory treatment in these cases is operation. The external sphincter should be divided through the base of the fissure well out on to the skin and the skin tag or sentinel pile as it is called, cut away and the indurated edges trimmed off. Healing then occurs rapidly and painlessly in a week or two.

Some patients who have had one of these chronic fissures for a long time suffer very little inconvenience from its presence and it may be difficult to persuade them to have this little operation performed. They should however always be persuaded to have the operation as such fissures sooner or later are frequently the cause of the formation of a fistula.

In many of the cases of acute or recent fissures the best treatment is stretching the sphincter. This acts like magic, the pain disappears immediately not to return again and after remaining in bed or on a couch for a couple of days the patient is able to get up absolutely well. And if the patient is willing to have an anæsthetic this is often the best method of treatment. In treating fissures by this method the fissure needs to be very thoroughly dilated and it is a good plan in some cases to keep the sphincters dilated by plugging the rectum for 24 hours.

In private practice this method of treating fissures by divulsion of the sphincter is by far the most satisfactory in suitable cases. In Hospital practice incision of the

external sphincter is preferable as it can be done under local anæsthesia and the patient need not be confined to bed.

Divulsion is also the best way of treating a painful fissure in cases when the patient is suffering from some other illness which contraindicates an operation. I had a good example of this at St. Mark's Hospital last summer. The patient was a cob-driver, aged 46. He had been suffering from diabetes for some months and was undergoing treatment for that disease. For about 3 weeks before I saw him he had been suffering from a most painful fissure of the anus. The pain was so severe that driving his cob caused him intense agony and he was frequently quite unable to sleep on account of the pain. He had applied at several hospitals for relief but though he had been given ointments, &c. which proved useless, he was told that nothing more could be done for him as any operation would be dangerous on account of his diabetes, I took him into the Hospital and under a ether thoroughly dilated his sphincters, the pain immediately disappeared and he left the Hospital a few days later perfectly well except for the diabetes.

(To be continued.)

* SOME SOURCES OF ERROR IN THE DIAGNOSIS OF PHTHISIS.

BY

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Few things are more important in the practice of medicine than the power of diagnosing with certainty the presence of early tubercle in the lungs. Every month

* Specially contributed to "The Antiseptic."

during which the condition remains undetected adds considerably to the difficulty of treatment and lessens the chance of ultimate recovery. The increase in our knowledge of the manifestations of the disease, while it extends the power of the physician, adds much to his responsibility and involves the duty of detecting the very beginnings of the disease. But if it is a great responsibility to overlook really existing tuberculosis, and so allow the golden days for treatment to pass away unheeded, it is no less a responsibility to take away a patient from his work and family, and impose upon him various fears and disabilities if such a course is not really necessary. Our praiseworthy eagerness to make an early diagnosis is apt to lead us into the danger of making a positive diagnosis when some other condition resembling phthisis in some of its manifestations is in reality present, and there must be few physicians who have not come across cases in which the dread decision has been made only to be revoked as subsequent events showed it to be groundless. Our mistakes fall into two classes, firstly, those which occur when we attempt to diagnose phthisis in the absence of definite physical signs but in the presence of such symptoms as cough, hæmoptysis, night sweats and wasting which are most commonly due to tubercle; secondly, physical signs may be present in the lungs with or without symptoms, and closely simulate those produced by tubercle in its various stages, but are due to diseases producing similar changes in the lung structure or to slight abnormalities of the chest. Many mistakes are due to incomplete or too hasty examination, some to the lack of sufficient experience or training in the study of signs and symptoms. But even when thorough and repeated examinations have been made by a skilled observer

there still remains in some cases the difficulty or even impossibility of rightly interpreting those signs which are correctly recognised; it is often a very difficult and interesting problem to infer from the lung signs together with all associated facts, the exact morbid alterations of structure which give rise to them in a particular individual, and still more so, what particular pathological process is producing these alterations. There is a tendency, I think, to be too conventional in associating certain signs with certain conditions of the lung or even with certain diseases. Students are often led to believe that certain signs in certain positions have a specific diagnostic import, and they overlook the fact that exactly identical signs can be caused by a great variety of morbid conditions. Nothing but careful observation and a comparison of the signs learnt at the bedside with the changes seen in the post-mortem room can give the amount of certainty which is necessary.

Before proceeding with the examination of a patient it is very necessary to divest ourselves of all preconceived ideas. We are liable to be prejudiced by the patient's antecedents and appearance. Too much stress must not be placed upon family history. An exaggerated estimate of the influence of heredity has been current and has worked much harm upon consumptives and led to fatalistic notions which are not warranted by the facts. Many physicians are loth to diagnose consumption in a patient of robust appearance and of healthy parentage, with the consequence that physical signs are interpreted to mean apical catarrh or emphysema until hæmoptysis or other ominous sign makes the true diagnosis undoubted. But there is still greater danger of too readily diagnosing phthisis in a patient who is supposed to have a tuberculous tendency. The follow-

ing words of Cornet* are apposite—"Children of tuberculous parents (*i. e.*, of parents who at the time of conception are already more or less tuberculous) will, of course, enter the world handicapped. This handicap, however, differs in no wise from that which besets children born of parents with any other form of disease, or from that which is acquired *intra vitam* through any untoward influence, and probably predisposes the individual to other forms of disease as well." In obtaining a family history it is more important to ascertain exact details regarding exposure to infection and his association with consumptive relatives or friends than to establish the existence of previous tubercle in the parents or other relatives. Much stress has been placed upon particular conformations of the chest as predisposing to tubercle. But a vast number of consumptives do not present the phthisicoid chest and careful observations show that individuals with such a chest are very often not especially prone to contract the disease. This has been known from the time of Laennec who wrote "It is certain that individuals so constituted form only a small proportion of all consumptives and that the disease frequently attacks the most robust and shapely individuals." Woods Hutchinson (Brit. Med. Jour. Oct. 28, 1900) has shown that contrary to the accepted opinion and text-book statements, the tuberculous chest is not only relatively but also absolutely deeper, narrower and longer than the normal. Instead of being flat it is round and long. Yet there is no doubt that the presence of a flat or alar chest has unduly prejudiced the diagnosis of phthisis.

In the majority of cases a persistent cough is the symptom which attracts the

* Tuberculosis. Lothnagel's Encyclopædia. Page 452.

patient's attention or more often perhaps that of his friends and induces him to seek medical advice. If the cough be due to early tubercular deposits in the lungs there are commonly other symptoms present, such as slight fever, pallor, loss of appetite and weight, night sweats, lassitude and a quick pulse which add to the patient's suspicions. Such symptoms are of great value for diagnosis and still more for prognosis and must be investigated with special care when the examination of the lungs is negative; but they are not peculiar to tuberculous disease being met with in various combinations in other diseases of both adults and children. Neurasthenia, for instance, may almost exactly imitate the exhaustion, night-sweats, loss of appetite and general 'run-down' appearance of early phthisis. Pain in the chest and a weak voice from loss of laryngeal tone increase the patient's conviction that he is consumptive, and if, as is frequently the case, there is a difference in the physical signs at the apices of the lungs, the doctor himself may be deceived. The two following cases will illustrate this difficulty. Case I.—A man aged 25, failed to pass an examination for insurance, phthisis having been diagnosed. He was pale and thin, suffered from night sweats and anorexia. He had a persistent cough with occasional blood-stained sputum. There was slightly impaired resonance and deficient air entry at the right apex, but no crepitations. He was highly neurasthenic and a heavy smoker, the chest was flat and the pulse rapid. On examination it was found that a slight scoliosis of the upper dorsal vertebra with depression of the right shoulder accounted for the lung signs, while the hæmorrhage was explained by pharyngeal congestion, indeed, the patient after a little hawking could produce a few small pellets of

sputum mixed with blood almost at will. The sputum although examined several times never contained tubercle bacilli and crepitations were never heard at the apices. Smoking was forbidden, treatment directed to the pharynx and the patient rapidly improved when at once convinced he was not consumptive.

Case 2.—A man aged 23, was invalided home from South Africa with the diagnosis of phthisis. He was a tall, flat-chested man who drank on an average three pints of beer a day and smoked three to four ounces of twist tobacco. Six months previously he suffered from influenza and had since had a persistent cough with scanty and occasionally blood stained sputum. Slight wasting was apparent, he was easily exhausted and suffered from profuse sweats on exertion and at night the pulse was quick and there was considerable pain in the left mammary region. No physical signs were present in the lungs, tubercle bacilli were absent from the sputum and the slight hæmorrhage was obviously due to pharyngeal catarrh. The diagnosis of cardiac neurasthenia with chronic pharyngeal catarrh was made, and the patient slowly improved with the removal of his fears of consumption.

In women chlorosis is sometimes a source of difficulty, and it may not be possible to distinguish it from early phthisis from the symptomatology and condition of the blood. In phthisis the appearances of anæmia are usually much in excess of the blood changes found, but occasionally we meet with severe anæmias of chlorotic type; lack of energy, dyspepsia, increase in the rapidity of the pulse and respiration are prominent features of both conditions, emaciation too may occur in chlorosis. The anæmia of phthisis is more often diagnosed chlorosis than chlorosis mistaken for phthisis but I have known the latter mis-

take made in two or three instances. Cough may be present from various causes and blood may be found in the sputum or may stain their pillows at night, no doubt coming from the gums or cheek. The temperature only slightly assists us, as tuberculosis may be a febrile and temperatures of 101° and higher are occasionally observed in undoubted chlorotics. Functional heart murmurs are usually very marked in chlorosis and slight in phthisis but this depends upon the amount of anæmia and so helps us little. The etiology in these cases is of the greatest importance and careful search must be made for such positive signs as changes at the apices of the lungs and tubercle bacilli in the sputum. When these fail the decision must be made by testing the reaction to tuberculin injections. Von Noorden* writes—"There are no other conditions in which the results of the injection of tuberculin are so significant and decisive as in chlorosis and tuberculosis."

The early gastric symptoms of phthisis may be so prominent as to hide their tubercular origin, but the opposite error is not likely to be made although febrile symptoms, loss of appetite, wasting, pallor and 'stomach cough' may at first arouse a suspicion of consumption. Many cases of phthisis especially in young adults have a considerable amount of pigmentation, and with the debility, slight wasting and anæmia may cause a provisional diagnosis of Addison's disease to be made, but I have seen one undoubted case of Addison's disease in which phthisis was the first diagnosis, owing to the presence of signs at the apex of one lung, which were probably due to obsolescent tubercle. No active process in the lung developed and

* Lothnagel's Encyclopædia. Diseases of the Blood P. 473.

the increase of pigmentation and muscular weakness caused the true diagnosis to be made. I have never seen the characteristic staining of the buccal mucous membrane in these pigmented cases of phthisis, and it would be interesting to discover whether the bronzing in phthisis really depends upon changes in the suprarenal capsules.

In children from the age of six to puberty consumption is not very frequent, but many of its common symptoms are often present. In growing children fed on insufficient or improper food severe debility is produced, cough is frequent from various catarrhal conditions, and there is apparent wasting from the increase of flesh failing to keep pace with the growth of the frame, although there may be no actual loss of weight. If adenoids and tonsils are present the difficulty of diagnosis is increased by delusive signs in the chest. Chronic catarrh may be localised and produce persistent rales, and the apical signs may be abnormal from asymmetry of the chest, the result of rickets. I have often seen such cases diagnosed phthisis in the out-patient department by students who had overlooked the pharyngeal condition. Removal of the growths soon settles the diagnosis by the symptoms and signs clearing up. There is much similarity between the appearance of tuberculous children and those suffering from sub-acute rheumatism. In the latter we see anæmia, wasting, a slight delicate appearance, quick pulse and respirations, cough is often present from various causes and it is easy if examination be only superficial to make an erroneous diagnosis of tubercle especially if the apical signs are delusive. Excessive cough, with marked emaciation and fever may be due to intestinal worms and, such cases may arouse a suspicion of

phthisis which the physical examination and the discovery of ova will decide.

The physical examination of the chest has many pitfalls in wait for us and provides some of the most difficult problems in the diagnosis of phthisis. Many mistakes of an elementary character arise from incomplete examination. It would seem almost unnecessary at the present time to insist upon the necessity of having the chest stripped quite bare, yet one comes across numerous errors from lack of this simple precaution; it is not sufficient to simply expose the upper part of the chest but the clothing must be taken from the neighbouring parts also. I have recently examined a man with cavities in both lungs, in whom it was at once obvious that the heart was transposed to the right side, and although he had been twice examined before, this had not been detected. The contact of clothing with the skin gives rise to all sorts of curious sounds which at once disappear on its removal, and a friction rub is very closely imitated by the contact of the patient's fingers with his bare chest. I have seen a patient in consultation with a doctor who heard crepitations in both lungs where I could hear none. Further investigation showed that they were due to the india-rubber on the end of his stethoscope being hard and dry and producing a crackling sound.

A fruitful source of error to which I have referred already is the difference which is not infrequently noted between the two apices of the lungs of a healthy individual, and which depends upon the differences between the size and direction of the two main bronchi, but more important for our purpose because less often recognised is slight asymmetry of the chest giving rise to dulness on percussion. Such slight asymmetry is common and in

most cases is due to slight scoliosis of the upper dorsal vertebra, generally from rickets in infancy, but it may be due to atrophy of the shoulder muscles on one side or an abnormally high scapula. Squire* has examined the chests of 100 healthy persons of both sexes and found some difference in the percussion note, generally a slight deficiency over the right apex in 45 per cent; some slight difference in the intensity or character of the breath sounds in 27 per cent.; vocal resonance is louder on the right side in 77 per cent. and vocal fremitus more marked on that side in 79 per cent. Such differences are not likely to deceive us in healthy persons but when some of the symptoms of tuberculosis are present, and we are suspicious of that disease we are only too likely to regard these signs as confirmatory.

In the diagnosis of early phthisis too much stress cannot be placed upon careful auscultation, persistent and localised rales more especially in the upper parts of the lungs are among the most important signs of commencing as well as of advanced phthisis. But sometimes fine crepitation heard continually at the same spot for weeks may be a sign of slight importance and simply due to the collapse of a number of alveoli, whose expansion on deep inspiration causes a fine crackle. This is generally heard at the borders of the lungs and over the pericardium but occasionally at the apex. Similar sounds are heard all over an unexpanded lung left by an empyema. Crepitations heard when examining a patient who has had some hæmoptysis not infrequently give rise to the diagnosis of phthisis when a more complete examination would reveal the presence of mitral stenosis; such signs may occur quite apart from infarction of

the lungs and are caused by congestion. When these crepitations are heard at the apices and there are also cough and hæmoptysis it is natural to make the mistake, especially as in such a case a characteristic presystolic murmur would probably be absent and the loud first sound might be mistaken for an accentuated pulmonary second sound. The upper part of the interscapular space is a locality in which rales must be carefully sought as often it presents the very first local signs. But I have occasionally seen the crackling noise caused by swallowing saliva mistaken for true lung sounds, the bursting of bubbles of saliva in the oesophagus producing sounds very similar to those produced by the bursting of bubbles of mucus in the lung passages. Both sounds are very likely to be heard after asking the patient to cough as many persons have the habit of swallowing a little saliva or sputum after coughing but they can easily be distinguished, for, the crackling of saliva appears only with swallowing and not with respiration.

Recurrent slight or even profuse hæmoptysis combined with cough and physical signs of lung disease may be caused by a latent aneurysm pressing on a bronchus generally the left or by small practically unrecognisable bronchiectatic dilatations. The pressure of an aneurysm on a bronchus may set up pneumonic consolidation of the apex of the corresponding lung or chronic fibrosis with bronchiectasis. The latter combination at an apex exactly simulates fibroid phthisis with cavities and the diagnosis must depend upon the history, signs of toxæmia and the presence of tubercle bacilli. The difficulty in distinguishing bronchiectasis may be illustrated by the following case. A man aged 30 had suffered for about eight years

from slight recurrent hæmorrhages. There was slight morning cough after which a small amount of sputum was brought up. A few crepitations could be occasionally heard in the left interscapular space. Phthisis had been diagnosed five years before, but the sputum on repeated examination was always negative, and there was no loss of weight. There were occasionally slight feverish attacks but in the intervals the temperature was quite normal. The diagnosis of bronchiectasis was suggested by the presence of clubbed fingers, Dittrich's plugs were found in the sputum and finally tuberculin injections gave a negative reaction.

Malignant disease of the lung is apt to provide more surprises in the post-mortem room than perhaps any other lung disease. I well remember three cases in the same hospital ward under the care respectively of three distinguished physicians who made the diagnosis of phthisis, unresolved pneumonia and pleuritic effusion and yet the post-mortems revealed in each case a malignant growth. In being wise after the event we saw that too much attention had been paid to physical signs and that there was in each something anomalous in the history or symptoms which should have put us on the right track. Chronic pneumonia especially that form due to the influenza bacillus may mimic a phthisis both in its entire course and in the constitutional disturbance. The discovery of Pfeiffer's organisms in such cases is important but not decisive as there may be a secondary infection with tubercle. There are still other groups of lung troubles (advanced bronchiectasis, gangrene, abscess which are associated with cough, expectoration, dyspnoea, pain and occasionally fever, emaciation and hæmoptysis, and if to these are added the physical evidences of infiltration or cavity formation

the clinical picture of advanced phthisis is very closely imitated. Since however it is late phthisis with which they are confused the examination of the sputum should settle the matter. Pulmonary syphilis is not often diagnosed partly because it is rare but also I think because it is mistaken for tubercle. Syphilitic infection involves almost exclusively the middle lobes or the middle part of the lung and proceeds from the glands of the hilum which explains the severe dyspnoea and troublesome cough. Fever and loss of strength are less marked in syphilis than in tubercle and may be absent. Such rare conditions as echinococcus disease, anthrax and actinomycosis need only be mentioned here, their possibility should be borne in anomalous conditions and the diagnosis settled by examination of the sputum. I will not dwell upon the difficulties of diagnosing acute miliary tuberculosis in infants from simple marasmus with lung signs due to simple broncho pneumonia, or between tuberculosis and obscure pus-infections in children although they provide many interesting problems for discussion.

A consideration of all these possible sources of error adds emphasis to the need of thorough and comprehensive study of every case of probable phthisis. Too much stress cannot be placed upon repeated examination when a single one is inconclusive. The thermometer must be called into requisition and every variation noted, for not only are rises in temperature important but also a persistent irregular subnormal temperature must be regarded as suspicious. The prolonged observation of the body weight is as important for diagnosis as prognosis. If a man takes sufficient nourishment and there is no evident cause of loss such as diarrhoea the suspicion of tubercle is greatly

* Brit. Med. Jour. May 28, 1904, p. 1242.

strengthened. In many cases the demonstration of tubercle bacilli in the sputum is the great recourse in making an early diagnosis, but we must remember that their presence means the destruction of a tuberculous area, and although it is generally impossible to diagnose phthisis before such destruction has taken place either because the patient does not seek advice or examination of the chest is negative, we should be alert to diagnose these early cases so that they may have the great advantages of early treatment. The discovery of bacilli in the sputum practically always means that the patient is suffering from tubercle but I have twice found them in the sputum of individuals suspected of phthisis but in which further examination failed to find them and the subsequent course showed that the suspicions were unfounded. Both patients had been exposed to the possibility of inhalation of tuberculous dust in their own homes. Due weight must be given to the signs of toxæmic action such as persistent tachycardia, disorders of digestion and night sweats. Finally when the diagnosis baffles all other methods at our command injections of tuberculin will settle the question. The best way to perform the test is to have the temperature taken every two hours for two days and then make a subcutaneous injection of 1 mg. of Koch's old tuberculin at night. The reaction is looked for in the course of the following ten to sixteen hours, the temperature being again taken every two hours. If no reaction occurs it is well to wait a day or two as it may be delayed. In the fourth day 5 mg. are injected and after another interval as much as 8 to 10 mg. if necessary. A rise of 1° F. is considered positive. If there is no reaction tuberculosis may be considered as definitely absent.

*ON THE IMPORTANCE OF THE TREATMENT OF CONVALESCENT PATIENTS.

BY

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In the practice of our profession we have daily to treat disease in its various manifestations. At times we are beset with almost insuperable difficulties. The patient may not respond to the remedies we have selected, and we are then apt to be disappointed at our results. We are glad, on the other hand, when our patient is able to be out of bed; in other words we gain fresh confidence when we find him once more convalescent. We are at such times somewhat inclined to be elated at the successful issue that has been brought about. We vainly imagine that our interest in the patient is over. Not so, however, for when once we find our patient so far improved as to be, as we say, in the convalescent stage our responsibilities are by no means lessened, but rather in some respects increased. It cannot be too strongly enforced upon medical practitioners that the management and treatment of the convalescent stage of any illness is of paramount importance to the patient himself. And why? simply because during convalescence from certain diseases, as we shall presently point out, grave pathological changes readily occur which tend greatly to shorten life and at all events to cripple the sufferer.

What we have said is specially true of convalescence after debilitating diseases, of which enteric fever and influenza are

* Specially contributed to "The Antiseptic."

excellent examples. After these two illnesses the patient is left in a very weak and often helpless condition. He has no mental or bodily vigour. His pulse may be slow and feeble, his powers of locomotion distinctly impaired, and in every case he suffers from a greater or less degree of anæmia. It is under such circumstances that, unless due precautions are taken, the tubercle bacillus finds an entrance and the patient becomes the victim of that terrible disease, tuberculosis. Hence in these, as in all cases of convalescence, we must guard the patient against such an invasion if we would prolong life and avert the tendency to decay and death. The same holds true in the case of children convalescing from measles or from pertussis. There are no two diseases which so readily afford a suitable soil for the growth and development of the tubercle bacillus as these do. Many children have had but a slight attack of measles, and have been allowed to be up and about in a few days with the result that a secondary tubercular involvement of the chest or abdomen has taken place.

We shall now briefly consider the various points which must be attended to in the treatment of convalescent patients from any form of disease. In the first place we must pay considerable heed to the state of the *gastro-intestinal tract*. The appetite as a rule is poor, and the bowels constipated. The latter condition arises very naturally from the prolonged rest in bed which greatly interferes with intestinal peristaltic action. It is not wise in such cases to order powerful cathartics. What we must give are rather mildly acting purgatives which are in themselves intestinal tonics. One of the best drugs for this purpose is cascara sagrada. It may conveniently be combined with alkalies and general tonics as in the following prescription:

R. Sod. Bicarb. zii
Ext. Cascaræ Liq. ʒiv
Spt. Ammon. Arom. ʒiv
Inf. Cascarillæ ad ʒvi. S. ch. M.
Ft. Mist. Sig. ʒii Vel. ʒi T.D. Ex. Aqua.
Or it may be given in pill form combined with extr. nucis vomicæ.

The appetite must be stimulated not only by tonics such as quinine, calumba, gentian and acids, but by the diet itself which should be selected with the greatest care. Dainty dishes given in small quantities at frequent intervals are best. A feeble patient needs to have some nourishment every two or three hours, not in large amounts but in suitable portions. Eggs, fish, fowl, meat juices and above all soups are valuable in restoring the appetite during convalescence. It is a pity that we do not order soup more frequently for the use of our patients. These are not only a useful form of nourishment but they are excellent appetite stimulators, while they are also very readily digested and assimilated by the enfeebled stomach.

Then, again, we must attend to the condition of the *heart and circulation*. The pulse should be carefully estimated every day, and its various features noted, not merely the rate, but the pressure, volume and so on. The heart sounds should be ausculted from time to time and any impairment noted. It frequently happens that convalescent patients are ordered open air exercise. When all the time they should be resting by reason of the weak state of their heart which can only be ascertained by direct examination. The *urine*, too, demands attention in many cases, and above all things it should be examined for phosphates, albumen, and sugar. This is of special importance during con-

valescence from certain diseases such as influenza.

The *nervous system* is often profoundly affected so that the patient has little or no mental energy, and frequently is forgetful of things. When this is so we must be extremely careful, for mental instability may readily be induced in such cases. Many cases of grave insanity have found their beginning during the period of convalescence from disease and very often such a lamentable sequel might have been averted had due attention been paid to the patient at that time. We sometimes forget that the brain and general nervous system is apt to suffer along with the other organs during any serious and debilitating illness, and yet we give but little heed often to the state of a convalescent patient's nervous system. A fatal error this, surely is!

We have referred to the liability which convalescent patients shew sometimes to tuberculous disease. Accordingly we must in many cases pay particular attention to the *state of the chest*, and in particular to the *bacteriology of the sputum*, if the patient suffers from any expectoration. It were well if every medical practitioner made it a more general practice to make a microscopic examination of the sputum of his patients, especially of those who are convalescent. By so doing he might at times detect tuberculous mischief in its initial stage, and so be enabled, by adopting instant measures, to check its progress. Sometimes I have known the convalescent stage of such a disease as influenza to be prolonged simply because the patient had developed pulmonary tuberculosis, which only a most careful and minute examination of the chest enabled me to recognise. Hence the enormous importance of attending to these matters.

And now what, in general terms, must be our lines of treatment during convalescence? Fresh air is all essential. The ever-open window is necessary; and not only so but wherever possible the patient should sit or lie out of doors in the sun. He should bathe as it were, daily in the sunlight which will increase the amount of his blood constituents and at the same time improve his general bodily tone. Again, change of air and of scene are usually required; while rest from work and worry are most important adjuncts to treatment. It is a mistake to send a convalescent patient back to his daily work too soon. A prolonged rest is of undoubted value in restoring body and mind to their former normal state. We have already referred incidentally to the use of tonics. There are two in particular which will be found most useful. There are iron and strychnine. These are not only general tonics, but cardiac and nerve stimulants as well. Iron is best given in the form of ferr. redact., ferr. carb. sacch.; while strychnine is preferably ordered as the simple liquor of the B.P. A useful form of iron is hæmatogen, and we have also found ovoferrin of value in such cases. The two latter are organic preparations of recent introduction and can be warmly recommended as efficacious in the treatment of the anæmia which so often characterises the convalescent stage of an illness.

These remarks are somewhat desultory, but they will be found valuable as guides in practice. No one can fail to profit by acting on the advice given as thereby many a life will be prolonged, and an immense amount of unnecessary suffering averted.

* MALINGERING.

BY

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(Continued from page 462, Vol. ii, No. II.)

I shall now proceed to quote a few illustrative cases of malingering under their appropriate headings, and in doing so confine myself to my own brief experience, and the few authoritative records I have had access to. My cases are mostly from my own Regiment, but I hope my testimony will not lead you to suppose that the Regiment I represent is more depraved than other Regiments. If only the medical officers of other Regiments will speak out, I am sure I shall find myself with less experience of malingering than most of my brethren here. Limited by the time at my disposal and my own experience of these cases, I can do no more than describe a few of the more typical instances of malingering that we commonly come across in Hyderabad.

Nervous system:—No diseases are cheaper for the malingerer to copy as these of the nervous system and none more difficult for the medical man to detect. Over 50 per cent of the troopers that pretend to be ill complain of *pain* in some part of the body or other. Now, a purely subjective sensation such as pain, is, in the absence of any evidence of organic disease, producing it difficult to make out. Nor, yet can we at random deny its existence. As a malingerer once told a comrade of his—who in turn reported it to me—the doctor cannot get inside the body and see the pain. And he wont dare to cut into the part to detect the pain unless there is pus there.

*A paper read before the Hyderabad Medical Association and sent to the Antiseptic for publication

* *Akhhargya* is a favourite complaint with my men, and I have yet to find out what exactly it means. It may apply equally to pleurisy, pleurodynia, lumbago, and a host of other diseases. Its chief features however are pain and immobility of the part affected. A hypodermic injection of aquapura, and a threat of its repetition every hour until the pain is relieved, and the patient goes back to work convinced that the remedy is worse than the evil.

Headache is another common complaint, and strange to say is most often one sided * *Athasarkardurth*. This form of headache is I believe sometimes quite real, being the result of a drunken debauch over night with a consequent inability to go to work in the morning. In some of these cases, the smell of alcohol may be detected in the breath and the tongue is found coated. A large soap enema, and a cold douche to the head will soon rid us of such cases.

Giddiness—* *Chakkarhana*—is another subterfuge for striking work, and it is said to be due to biliousness or * *Jakhra*. This gratuitous pathological explanation is really an imitation to the medical officer to treat the liver and stomach, and once accepted may land him into a very labyrinth of symptoms and complaints. Strict and secret observation and a careful examination of the nervous system coupled with absolute rest in bed and nasty medicines may lead the impostor to throw up the sponge.

Lumbago and sciatica are often simulated, and when detected I have forced wet cupping, blisters, galvanic, cautery and a flourish of acupuncture needles efficient in bringing the deceivers to their senses.

An application for a month's sick leave on account of general debility is not un-

* The words in italics are "Hindustani".

common after a day or two of fever or a very slight injury and the applicant for the leave can and does by his drawn features, his low feeble voice and unsteady gait add force to his argument in favour of *Kamzori* or *Nathwani*. His general demeanour after he leaves the hospital is surprising by the sudden accession of the strength it indicates. I have seen a man run to his friends to announce the success of his cleverly laid scheme. In such cases a spy in the camp is a useful auxiliary to the medical officer, and the Hospital Orderly may be easily trained to watch and report on their behaviour before and after the medical inspection.

Mental diseases are not often simulated in the bishphere, probably from lack of resource and initiative. Our men here are mainly imitative in their ideas and actions, and are generally coached up in their acting by the older hands. The furthest they go is to complain of feeling *Gabra* or *howlhowl* a sense of fear and inability to control the mind. Blisters and clisters are an immense aid to us in these cases.

Feigned paresis rather than paralysis is resorted to by those who can show some evidence of a slight injury, more especially by those who want to obtain their discharge from the service, with if possible a wound pension thrown in. These men can often be made to give themselves away with a little patient manœuvring. A certain amount of coaxing and an ostentatious examination of parts not involved in the supposed complaint will make them forget the part they are acting.

A scorpion seems to sting a man but too often after he has discovered that he is too late for parade. A little cross examination converts the scorpion into a spider or some other unknown vermin, and re-

The words in italics are "Hindustani."

veals the motive of the sting. The riding school from 12 to 2 P. M. on a barebacked mule is the best cure I have known for this complaint, for after a systematic application of this remedy scorpions has almost disappeared from any regimental lines.

Of the organs of special sense, the eye is most honoured by the malingerer's attention. Conjunctivitis was complained of by a patient who rubbed his eyes hard before coming into my room, and was put down to exposures to sun and dust. I closed up both his eyes and prescribed low diet. He was well enough to go to work in half an hour and was certainly very glad to go to his breakfast.

Blindness—especially night blindness—is another favourite race employed by those who wish to leave the troops. Close observation, an ophthalmoscopic examination, and a judicious use of the pin reveals the imposture, while a blister or two to the temple, with an unpleasant mixture to take internally cures it permanently. If we walk such a man in the dark and have a naked sword or an imitation snake in his path we will, if pretending *linch* or *swerve* instinctively. If the above measures fail, a sharp application of copper sulphate to the eye or threat of an operation will drive these patients away for ever.

Ear-ache and noises in the ears kept a patient in my hospital for several short periods. Knowing my man, I made enquiries and discovered that these complaints came on just in time to save him from some stiff duties. His ultimate cure was effected by a little brotherly talk over the severe consequences of malingering. This man usually came to me with a big ball of cotton wool in his ear and some black stuff behind it.

General Diseases.

"Sir, I had fever last night" is a hackneyed statement of a trooper who for some reason other than fever seeks admission into Hospital; and one whose lot is cast amongst such Phillistines learns instinctively to diagnose an overnight fever from the patient's facies. Besides, seldom can a man who had high fever in the night show a clean tongue in the morning. It is an old school-boy tradition that fever can be produced by putting an onion under each arm, and standing a while in the sun. I tried the experiment with negative results. I have since been informed by an old hand that I must also put a little of the onion juice into each eye and nostril and rub it on the nails to get a rise of temperature. I think we may grant the truth of this statement without any further experimentation. That mere standing in the sun makes one hot is within the knowledge of most malingerers—a knowledge they are none too slow to take advantage of. Croton leaves under the head during a night of sleep are, I believe, also used by school boys here to get fever in the morning. I give the statement for what it is worth.

One case of induced fever I can vouch for. One of my men, an inveterate malingerer now out of the Regiment could get an actual rise of the temperature whenever he liked. His method was a mystery and is so to this day. A hypodermic injection of quinine proves a good counter to this form of deception, and the thermometer will always speak the truth where the patient does not.

A bad attack of prickly heat may be palmed off as measles, but the absence of the concomittant symptoms of measles reveals the true nature of the case.

Respiratory System.

Cough without any evidences of pathological changes in the respiratory system must be either hysterical, or malingered, or both. Of the former, I came across one case in a young boy who on the eve of his examination got a persistent cough lasting for three days. One hypodermic injection of morphia followed by several others of water put him right. The coughing malingerer is not a rare individual, but he generally overacts his part and can be easily trapped by an offer to remove his uvula or tonsils.

Hæmorrhage from the lungs, like hæmorrhages from the stomach or bowel are often complained of, and all forms of hæmorrhage may be considered here together. Prodded gums are perhaps the most frequent source of the blood so ostentatiously produced for our inspection. Sometimes a cut finger or a chicken may provide the blood. The character of the blood, and the fluid with which it is mixed, and the manner it is mixed together with a careful examination of the mouth, the lungs, stomach and rectum ought in most cases to settle the genuineness or otherwise of the complaint.

Dyspnœa, and pain in the chest can also be detected and treated on general principles.

Circulatory System.

Palpitation must be seen before it is believed in. When artificially produced by a run before the Medical examination there is dyspnœa with the rapid and forcible action of the heart, and both these subside after a short rest. One of my 'Hospital birds' smoked so much tobacco before I saw him that he exhibited all the symptoms of syncope pallor of the skin, cold, clammy sweats, faint action of the heart,

a weak soft pulse and giddiness. He was a strong man and had a strong odour of tobacco about him. In his pockets were found a foul clay pipe and an abundant supply of vile tobacco, the confiscation of which not only restored him to health for the time being, but cured him permanently of the terrible looking malady he so cleverly assumed.

Digestive System.

A fellow student of mine once produced a dirty yellow furred tongue by chewing pomegranate bark and said he had dysentery. The assistant principal, who said he had done the same thing himself when he was a medical student caught him and gave him extra night duty at the Hospital. An extra grain or two of chunam with the *pan* so freely chewed by some of our men produces a transient stomatitis which comes in handy to some of our would-be patients. A restricted diet cures the disease as well as the malingerer.

Vomiting by the use of emetics, the cheapest of which is hot water with common salt dissolved in it, diarrhoea or enteritis produced by a pill of croton seed are illnesses easily managed by malingerers, while colic is the sheet anchor of the truant school-boy as well as of the lady trooper. Assumed dyspepsia in all its forms can I think be easily managed by a nasty mixture of lumbarb, valerian, and assafoetida and failing these a flush of the stomach pump will settle the question. Piles must be carefully looked for and not taken on trust even if blood occurs in the motions.

Butlin quotes a case in the *Lancet* where a girl 7½ years old had sickness, purging and bowel pains, blood and mucus passed by the bowels, convulsions, rolling of the eyes, rigid limbs, screams and frothing at

the mouth. Eventually she promised never to do it again. This shows that even young children may stimulate disease cleverly.

A case is on record where a woman for more than 12 years sustained a composite simulation with the following feigned manifestations—haematemesis, gastralgia, vomiting of substances like liver and of bone, passing bone from vagina, symptoms of hepatitis, epilepsy, amaurosis, aphonia, deafness, paralysis of the arms, gravel, anasarca, dyspnoea, retention of urine, hydatid simulacra were passed per vaginam made from pigs' intestines. Extra-uterine pregnancy was diagnosed amongst other things. This of course is an extreme case.

Severe constipation is complained of by troopers who wish to go off work for a day and they invariably ask for a purgative even naming the drug of their choice such as senna and salt, jalap, or calomel. I usually offer them an enema and they prefer to go to work without it rather than after it.

Cutaneous System.

Blisters made with vesicants are frequently passed off as shoe-bites or blisters due to riding and ulcers artificially made are shown as the result of a horsebite or a horsekick. In these cases the hemispherical bleb, or the general character and surroundings of the sore, more especially its situation will raise our suspicions. The bite of a horse cannot leave marks of the teeth on one side only of the arm, nor can your comrade's horse kick you while you are mounted, on the inner side of the thigh. And yet, some men are silly enough to bring complaints of this form with the serious belief that they can hoodwink us. Blisters are raised and ulcers are made with a variety of materials.

Croton oil seeds, the bark of the Namli-naru the juice of the **Bahilawan* (anacardia occidentale) the leaves of one species of **Jangliniem* (ailanthus), and a host of other indigenous drugs are used as blistering agents. The application of splints acts as a detenant to men given to such tricks.

Women can when they have a chance or a call for it, turn out as good at malingering as men, if not better, and they have the advantage over the men, in this country at least, in that their physical examination is, in the absence of a doctor of their own sex, necessarily incomplete. Thus a purda woman can falsely complain of pelire pains, uterine hæmorrhages, nervous troubles, such as dyspnoea, palpitation, convulsions, &c., to gain sympathy or to avenge an unkindness from some member of the family, and yet not run much risk of detection. Further such terms as hysteria, neurasthenia, neuromimesis are, as I said before, often used to cloak cases of voluntary imposture especially in the female sex, and the confusion thus induced makes the medical attendant's task difficult and onerous. To such an extent has modern neurology been biased by social and sexual considerations that if a well-to-do woman steals a ring from a jeweller's case, the act is put down to kleptomania, and if a pretty woman kills her rival the deed may be attributed to suggestion.

I know a high class Hindu lady who after a tiff with her husband developed violent convulsions alternating with alarming fainting fits. She was pronounced hysterical and dosed with valerian bromide, assafoetida without any good effect. A few nails kept red hot over a charcoal fire were kept in her room for 48 hours and during the whole of that period and

for long after it there were no fits. In a case like this the distinction between neurosis and malingering is without a difference. Indeed we frequently see cases amongst the lower orders of Hindu women who when drunk or excited get a 'fit of hysterics' which they call possession **anghbarna* and execute a sort of a der-vish dance which may be taken to correspond to the attitudinising stage of hysteropilepsy. This same fit can often be seen to pass off and be replaced by or rather its semblance kept up by voluntary movements in close imitation of the genuine ones.

I dare say some of you have read in the "Diaries of a Lady of Quality" how Queen Caroline when a girl of sixteen, being prevented by her mother, the Duchess of Brunswick, from attending balls, feigned pregnancy and created a court scandal, caused the accoucher to be summoned, and having whitened her face and made a great display of apparent suffering, finally bounded from her bed and exclaimed to her mother: "Will you keep me another time from a ball." Such a malingering is I believe, not uncommon in these parts. Other times other manners may vary the practice undoubtedly obtains. I know of a zenana lady who being sterile, and fearing to lose her husband's favour on that account, from time to time, gave out that she was pregnant and after 4 or 5 months announced an abortion, being careful in the meantime by pads and bandages, by simulated vomitings and longings to convince her husband and her friends of her interesting condition. She attributed her frequent abortions to the sorcery (**Jathu*) of her enemies and thus scored an extra point.

* The words in italics are "Hindustani."

* The words in italics are "Hindustani."

Conclusion.

I have only referred to a few of the forms which malingering assumes, and wish to leave time for other members to contribute their illustrations, but I think I have said enough to show that the general characters of all malingering are inconsistency and exaggeration, and that detection can only be effected by observation of small details and logical deductions from them. Armed with these qualities we shall not be at a loss to realize our ends when we meet with cases in which suspicion should be our attitude. We must however be cautious and not aim at a hurried diagnosis, nor be unduly suspicious and make out every patient a malingerer who fails to meet our cross examination in a straightforward manner. In doubtful cases consultative aid should be sought, if only as a means of protecting our own interests and if, at times our convictions are bound to be declared we shall be called upon to display as much mental discretion as moral courage.

Cases and Comments.

Cases of Choleraic Diarrhoea among the Convicts at Port Blair.

BY

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In Port Blair, amongst the convicts, cases of diarrhoea come to hospital, the symptoms of which simulate cholera in all respects. But the main difference is revealed during autopsy.

As for instance, spleen is large. Small intestines are more congested than in cholera and simulates enteritis; sometimes fibinous exudation can be seen between the coils of small intestines and the peritoneum. Stomach is generally found congested. On microscopic examination no comma bacillus is ever found in the intestines or in their contents. These symptoms are found in an aggravated state especially when the patient dies in reaction stage. The rice water stools have many a times being examined for the specific bacillus of cholera but was never found.

As for the symptoms, the patients rarely feel out of sorts for a few hours before the real symptoms appear. There is no premonitory diarrhoea in this colicky pains are generally complained of a few hours before the patient begins to vomit or pass the rice water stools. The patient after vomiting and frequenting the latrines 3 or 4 times becomes collapsed, his eyes become sunken, voice husky, skin cold and covered with clammy perspiration and thirst becomes urgent; but urine is passed even when collapsed though in small quantities, and at the later stage it becomes suppressed.

The pulse generally disappears at the wrist after 3 or 4 stools. Respiration becomes hurried, the patient becomes apathetic. The stools at first healthy become loose and bilious and afterwards like "rice water stools" or turbid whey. In these stools small flakes of mucus and sometimes blood can be distinctly found; there are innumerable epithelial cells but no comma bacillus.

All the secretions and excretions not unlike cholera are completely arrested at the later stage. The sweat glands act more before death. The patient be-

comes bathed in cold and clammy perspiration. This stage lasts from 3 to 8 hours after which reaction sets in, the patient gradually recovers or becomes delirious followed by coma and lastly death closes the scene.

As regards the treatment we generally adopt the following:—

→ If the patients are brought early we administer a dose of chlorodyne ms. 20 to an ounce of peppermint water internally. Then mustard plasters at the pit of the stomach and at the calves and ginger friction to the extremities. If the patient perspires freely Dilute Sulphuric Acid with Tinct. Belladonna and Spirit Chloroform are administered. If the patient is brought in a collapsed state we apply hot water bottles, order ginger friction, and mustard application over the heart and at the nape of the neck. Then comes our sheet anchor of treatment "the normal saline solution" injection at 100° to 104° F. which is given subcutaneously about a pint at a time, the needle having been well boiled in oil. Three hours after the first injection another one is given. Half an hour after the second injection generally the patients come round. The reaction is moderate, patients pass water, thirst disappears and the patients fall fast asleep. After he is awake he complains of hunger when arrowroot or sago congee with a pinch of salt in it is given. The reaction never goes up to 100.4 or 101° F. No uræmic symptoms, no typhoid condition, nor any high temperature follows this method of treatment. In our opinion preparations of opium do decided harm than good. As you suggested we leave the stomach alone or only give him the above cooling draught if we may be allowed to call it, every 4 or 6 hours.

For thirst we allow pieces of ice *ad libitum*. The free use of hypodermic injec-

tions of strychnine and ether are not given at this stage, but if after the injections of normal saline solutions, the heart fails, it is then our duty to keep it up by ether and strychnine. It would be out of place to discuss the physiological action of the normal salt solution here. Suffice it to say it assists the heart by dissolving the thick blood and replacing the water and salt which have been drained out during the constant stools.

A Case of Plague—A Rare Sequela.

BY

M. RAMASAWMY PILLAY,
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Bellary.*

Govinda, aged 7, was admitted into the Plague Hospital on 20th January 1904 with a temperature of 102° and a swelling of the right inguinal glands. On the 26th the temperature became normal, having ranged in the interval between 101° and 103.4°. There was slight delirium. On the 28th the bubo was opened and a week later the incision was extended by half an inch in order to ensure free drainage as it was feared that pus might collect in the abscess cavity and gravitate into the pelvis. On the 31st the temperature again rose to 100 and lasted for 3 days with slight variations. Almost till the end of February the fever returned off and on with short intervals of complete intermission and its course and duration were most irregular. Now and then there was slight epistaxis and there was also obstinate constipation. For several days he passed white urine loaded with lime phosphates. The same was the case with his elder brother who was a patient along with him. The boy gradually wasted. The temperature became finally normal on the 26th February. The ulcer healed steadily,

though slowly and the patient was discharged on the 21st March.

About three or four weeks later, the father noticed that the boy's penis never became erect either during sleep or during defæcation or urination as it used to do before. It remained quiescent even when handled or otherwise tickled. After observing him for the past fortnight I find the erectile power lost, at any rate for the present. The boy is now in excellent health. Whether this defect existed during the attack none could say; even if it did, it could not have been noticed in the general weakness of the patient.

Remarks.—This is the first case where I observe this sequela. Besides continued fever, general emaciation and the passing of lime phosphates, there is nothing to distinguish this from other ordinary bubonic cases. I have had under my care over 300 male plague patients a good many of whom including 2 men partly crippled on account of paralysis during the attack have met me in the town subsequently. From none of them except in the case I heard a similar complaint, nor have I seen it mentioned in any publication I have read on the subject of plague.

EDITORIAL NOTICE.

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THE ANTISEPTIC.

DECEMBER, 1905.

Diabetes Mellitus in Vegetarian Hindus.

DIABETES Mellitus is a very ancient disease. It has been known to and described by medical writers both in Europe and Asia several centuries ago. It is described in our ancient Ayurveda, and mention of it is also to be found in the writings of Celsus and Aretæus. Galen seems to have written about it at some length. And through the 17th and 18th centuries the subject was pursued by such physicians as Willis (1679), Dooson (1776), Cullen (1784), Rollo (1797), Latham (1810), and Gregory (1829), and important facts were added to the meagre stock of information available about the disease.

But it was the classical researches of Claude Bernard (1848) that marked the first mile-stone in the path of progress towards the discovery of the true nature of diabetes. Bernard discovered sugar in the liver after death and he proved that during life this sugar existed in the liver in the form of glycogen. He believed that glycogen was constantly being converted into sugar during life. These conclusions however were disputed by Dr. Pavy who denied the conversion of

glycogen into sugar as a physiological process. Much of the pathology of diabetes as we know it at present we owe to the researches of Dr. Pavy who considers that diabetes is due to faulty assimilation of the carbohydrate food by the system. According to him no sugar can circulate through the renal vessels without being eliminated and if there is no sugar—or, at all events no appreciable quantity of sugar—eliminated in the urine in a healthy person it is because there is no appreciable quantity of sugar in the blood to eliminate. Dr. Pavy divided the stages of carbohydrate assimilation roughly into four. First the ferments in the alimentary canal hydrolise the carbohydrates and convert the insoluble into the soluble form and prepare them for absorption. After absorption the carbohydrates are brought within the protoplasmic action of the active cells of the villi and are transmuted into a lower form of hydration, transformed into fat and synthesised into proteids. Thus the carbohydrates are completely disposed off in health and no sugar as such gets into the general circulation, and no sugar is eliminated in the urine. The carbohydrates that escape without undergoing this process in the villi of the intestines get to the liver and are then converted into glycogen which in its turn is formed into fat and synthesised into proteids. If on the other hand the protoplasmic action of the cells on the carbohydrates is imperfectly accomplished,

there is faulty assimilation of the carbohydrates and sugar will appear in the general circulation and be eliminated in the urine giving rise to the phenomenon of glycosuria. That is Dr. Pavy's explanation of the process by which glycosuria is produced. The discovery by Claude Bernard that puncture of the floor of the 4th ventricle in the brain was followed by glycosuria appeared for a time to offer a satisfactory explanation of the symptoms of diabetes. But after a time this observation opened the flood gates for a large number of experiments on the nervous system of animals and the resulting observations proved that there are at least a dozen lesions of the nervous system which give rise to glycosuria. In fact the great mass of the literature on diabetes deals with the results of experimental researches conducted in the laboratory. These have their value, but as Professor Saundby rightly remarks, "it is absolutely necessary to keep such physiological considerations in their proper place, using them only for the purpose of elucidating the facts of the disease, not substituting one for the other, as if a frog with its spinal cord divided, or a rabbit with its medulla injured were really and truly a case of diabetes".

It is not our purpose in this article to wade through the mass of experimental and clinical facts brought forward by a large number of observers to elucidate the fundamental facts connected with the pathology of diabetes.

Nor have we an explanation of our own to offer to account for the different symptoms which constitute diabetes mellitus. The rival schools of the Pathogeny of Diabetes may be left to fight out the claims of "over-production of sugar by the liver" and "the diminished capacity of the tissues to consume sugar" for the honour of producing diabetes mellitus. And while the experimenting physician is left in his laboratory in Europe with his dogs and rabbits, we are here face to face with a very large number of human beings suffering from diabetes mellitus and its various complications. Professor Saundby in his work on diabetes mellitus quotes Sir William Kinsey's remark that in Ceylon diabetes "is most prevalent amongst the well-to-do natives." We are certain that it cannot be more prevalent among the well-to-do natives of Ceylon than it is among the better class natives of India. We are told that in Ceylon diabetes is looked upon as a punishment for ill-gotten wealth. Although no such impression exists in India as to the source of the property of any diabetic patient, it is painfully apparent that here this disease is an untoward accompaniment of accumulated wealth. As gout in England was supposed by some to indicate the aristocratic descent of its unwilling possessors, so in India is diabetes considered to indicate the flourishing financial condition of its unfortunate victims. But the point that we are immediately concerned with is this—that among the very large number of diabetic patients that one meets with in India, a very large per cent belongs to the class of vegetarian Hindus. The members of this class have very strong religious and personal objections to eating animal food. And the question naturally arises how are these purely vegetarian diabetics to be dieted? In cases where a patient declines to take any animal food, is the medical attendant justified in insisting on his patient implicitly obeying his instructions as to the taking of animal food? In this connection we cannot help asking once again the question which has been discussed a hundred times and over, how far and to what extent is the restriction of the carbohydrate food essential in the treatment of diabetes mellitus. To discuss these questions is the object of this article, and we shall as far as possible base our arguments on our own clinical experience of the many cases of diabetes which have come within our notice in India. We shall first of all consider the question. Is it necessary or advisable to restrict carbohydrate food in the treatment of diabetes? And if so to what extent?

This is a subject on which considerable diversity of opinion exists among medical men. At a discussion on the diabetic treatment of diabetes in the section of medicine at the 65th Annual Meeting of the British Medical Association Dr. Shingleton Smith said that "until the sugar has disappeared from

the urine the restriction from carbohydrate food must be absolute unless some complication necessitated a change." That is one extreme. At the other end we have medical men like Dr. Monson who in the Journal of American Medical Association expressed his view that diabetic patients "should be placed under no different conditions of diet than one granted a healthy person. If anything they must be allowed sugar even more than in health."

Between these extremes there are to be found varying grades and degrees of opinion. Probably the fairest and most reasonable view of the question was held by Professor Saundby who opened the discussion on this subject at the medical section of the British Medical Association Meeting. Professor Saundby's paper will be found published in the *British Medical Journal* of October 16th 1897, page 1041, and deserves to be carefully studied by every one interested in the dietetic treatment of diabetes. "When the diagnosis of diabetes mellitus has been established" says Professor Saundby, "sometimes when only the presence of sugar in the urine has been detected it is the very general practice to place the patient upon a so-called 'diabetic diet.' That is to say he is furnished with a list of permitted and forbidden articles of food and drink arranged upon the principle that all carbohydrates are injurious and he is told that he must keep to this diet until the

sugar has disappeared from his urine. I believe this to be a perfectly fair statement of the general practice in Europe, and I suppose in America as well, in spite of the fact that not a few protests against it have been made by those who have a right to be heard on this question." We must admit that Prof. Saundby has described the usual practice followed not only in Europe and America but in India also perfectly correctly. In India there is only one addition to the usual practice that is in case any vegetarian patient raised a mild protest against the enforcement of an animal diet he is given the benefit of a fairly strongly worded address on the ignorance and conservatism of Hindus in general and of himself in particular and of the fearful consequences that may befall him if he in his ignorance declines to follow the well known scientific principles underlying western medicine.

Prof. Saundby explains his own position in the matter thus. In healthy people the urine contains little or no sugar. This proves that all the carbohydrate is assimilated by the system. But if a large quantity of sugar is taken say from 150 to 200 grammes of grape sugar, by any one it is invariably followed by the presence of sugar in the urine. Therefore the capacity to assimilate carbohydrate food is not unlimited. Then again "Carbohydrate food is not the only source of sugar for in severe diabetes glycosuria continues although much

reduced in amount when the patient is placed on flesh diet and this is explained by the fact that a carbohydrate molecule is formed in the process of converting albumen into urea in the proportion of 45 parts per cent.

Then says Professor Saundby—mark his words. “*This fact duly appreciated must convince everyone of the futility of persisting in withholding carbohydrates in the hope of removing the glycosuria; or at least it cuts away the physiological ground for this practice and compels us to look for its justification, if it can be justified in clinical experience.*” (The italics are ours). That is fact number one, which we want to impress on the attention of our readers that the dietetic treatment of diabetes has no physiological basis, but has its foundation on clinical observation. If that statement is true then it follows that the diet of each diabetic patient must be regulated by a due consideration of the symptoms and conditions of the patient and would necessarily vary in each case. A diabetic diet drawn up to suit the case of a patient in London will absolutely be useless for a Brahmin diabetic patient in Madras.

Even in a restricted diabetic diet there must be some carbohydrate food. Absolute restriction of carbohydrates is not now advocated by any except a few faddists. Dr. Pavy says that “it is not for a moment to be understood that in the restricted diet there is a complete exclusion of carbohydrate matter.” But since Dr Pavy and

others formulated their ideas with regard to a restricted diabetic diet there has been a steady move of medical opinion especially on the continent of Europe towards relaxing the rigidity of diabetic diet especially in old standing cases. This move was influenced partly by considerations of improving the general nutrition of the patient and partly of preventing the dangers arising from the accumulation of morbid products, the result of a purely proteid dietary. Medical opinion has so far veered round on this point that not only is it no longer contended that carbohydrate food is unassimilable in diabetes but it is admitted that they are indispensable articles of diet. M. Mosse of Paris recommends the use of potatoes by diabetics to the amount of *two or three pounds daily*. Professor Lepine of Lyons mentions a case of a man who had suffered from diabetes for twenty years and who after an attack of influenza and bronchitis became worse. Considering the man's case as hopeless he was allowed the use of sugar. But instead of the man getting worse he began to improve. And now Professor Lepine suggests the use of honey by diabetic patients carefully and gradually introduced. Dr. Monckton, a medical practitioner in New Zealand who has had considerable experience in the treatment of diabetes extending over a period of twenty-five years, writes to the *British Medical Journal* of May 17th 1902 to say—“with regard to diet in diabetes I make no restrictions, except to point

out that in most cases some one article of diet may disagree and if so, it has to be abandoned.” There are the opinions of medical men who have had opportunities of watching cases of diabetes in European patients. Now what are the facts with regard to diabetes among the large class of vegetarian Hindus in India?

Our experience of a large number of Diabetic cases as well as the experience of a number of our fellow medical men, which we have ascertained, point to the following conclusions. A large number of Hindu gentlemen do pass quantities of sugar in their urine. In a very fair proportion of these cases thirst and tendency to boils and carbuncles is observed. Emaciation appears only in the later stages of the disease. History of hereditary tendency to diabetes was present in *about 40 per cent* of cases. The majority of the diabetics are between 35 and 45 years. A certain number of cases in young men under 20 years have been under treatment. A good number of old men of over 55 and 60 and even 70 have been noticed to be diabetics. In a large number of cases the duration of the presence of sugar in urine has been long—as long as 15, 20 or 30 years. We had under our care a diabetic patient who died in his 74th year who during his life-time enjoyed exceptionally fine health and yet who for the last 28 years of his life passed sugar in his urine varying from 7 to 12 grs. per ounce. The disease is comparatively

rare among Hindu women and also among the poorer class of Hindus of both sexes. The disease is generally prevalent among better class Hindus who are habitually doing hard brain work. But we have also observed a fairly large number of cases among the landed aristocracy who do little or no brain work at all. In a large per centage of cases history of sexual excess is remarked. And as to the dietetic treatment of these diabetic cases, in the overwhelming majority of cases no dietetic treatment as it is understood among Europeans is prescribed, nor is it practicable, as the patients are strict vegetarians and object strongly to taking animal food. What is understood by diabetic diet in Southern India is a change of food from rice to wheat! And yet as we have already observed the duration of the disease is long in India and a good many diabetic patients live to a good long old age. This we believe is not the case with diabetics in Europe or America. Before the section of medicine of the American Medical Association of 1898 Drs. Fitz and Joslin presented a communication on “Diabetes Mellitus at the Massachusetts General Hospital from 1821 to 1897: A study of records.” And on the point of duration of diabetes they said that “one case lasted 12 years, three only twelve weeks; the average duration was one year and a half. Dietetic restrictions had undergone no marked alterations during this time and opium was the only drug persistently used.”

From the above mentioned facts several things are clear. In the first place the average duration of diabetes is longer in India, where little or no attempt is made to restrict carbohydrate-food, than in Europe and America where such restriction is fairly rigidly enforced. Secondly that carbohydrate diet in itself is not conducive to diabetes, for the poorer class Hindus who are pure rice eaters as a class escape diabetes while the better class Hindus suffer largely from the disease. That rich and luxurious carbohydrate food in wealthy people with sedantry habits operates differently in the different sexes; while the men belonging to the upper classes of Hindu society suffer largely from diabetes, the women of the same class who partake of the same kind of food and who are perhaps a little more sedantry in their habits than the men escape the disease to a large extent. That diabetes is largely prevalent among the brain workers of the Hindu community is an undoubted fact. But the exceptions are numerous enough to vitiate a theory that diabetes is caused by excessive brain work.

Another very interesting fact noticed in Southern India in the very general occurrence of carbuncles among the diabetics and the very rare appearance of diabetic coma among them. Probably this is due to three causes.

In the first place the Indian diabetic never restricts his carbohydrate food

and seldom takes animal food in any large quantities. It is now generally recognized by the medical profession that undue restriction of carbohydrate food and ingestion of proteid diet in its place are generally instrumental in the production of Diabetic coma. Then again the average Hindu never allows himself to become constipated. If he does not get his regular daily motions he takes the necessary steps to get them at once. He never allows the evacuation of his bowels, to be made only once in 4 or 5 days as many Europeans are content to do. And this habit of keeping the bowels free together with the consumption of a fair quantity of alkalies with his diet as a general rule saves him from the relentless doom of Diabetic coma.

There is one more interesting point connected with Diabetes as we have observed it in this country. We have with us notes of a dozen cases of Diabetes in vegetarian Hindus in whom we tried after great deal of persuasion a fairly rigid diabetic diet. The result in every one of these cases was rapid loss of weight. We know what Dr. Pavy would say to that. He would say that these were cases of glycosuria and not of true Diabetes. Very well, then, how do you distinguish between Diabetes and glycosuria? Every one of these dozen patients had between 10 and 15 grains of sugar per ounce of urine. They were passing large quantities of urine per day.

They all had great thirst muscular weakness and some emaciation. In spite of all these symptoms if any one chooses to call these cases of glycosuria all that we have to ask is, 'what is there in a name'. We know it is fashionable among physicians in England when it is pointed out to them that their theories don't quite fit in with facts observed in a large number of cases of Diabetes in India, to say, that these are not cases of true diabetes. We are not concerned with angelic hair splittings as to the difference between glycosuria and diabetes. All that we have to decide is how are we to treat the large number of cases of Diabetes or glycosuria (whichever you please) that we meet with in this country. Whatever the answer to that question is one thing is certain that to write out a diet list like this:—

May eat.—Butcher's meat of all kinds, pork, ham, bacon, poultry, game, fish, oysters, crabs, lobsters, animal soups, mutton broth, beef, tea, bran, bread, eggs, cream, cheese, greens, water cress, mushrooms, nuts, &c.

May not eat.—Bread or biscuits, sugar, cauli flower, carrots, French beans, peas, arrowroot, macaroni, rice, sago, tapioca, vermicelli, pastry &c. and hand it over to your Hindu diabetic patient with strict instructions to follow that and send him home will be a most ridiculous proceeding.

Professor Saundby's plan of dieting the patient with food free from starch and sugar, as far as possible, for a period of about a week or 10 days then gradually relaxing the restriction carefully watching the effect on the urine is a reasonable one and is a decided improvement on the old system of 'diabetic diet' as long as sugar continues in the urine. "I do not care to dwell on the repulsiveness of ordinary diabetic diet," said Professor Saundby, "on its indigestibility its danger where albuminuria is present, or upon its alleged action in producing acetonaemia; but I will only add that I have been treating patients on this plan for some years with satisfactory results."

We are perfectly certain that most medical men in India who have had experience of large number of diabetic patients will agree with Professor Saundby that extreme rigidity in the enforcement of diabetic diet for any length of time is not the most satisfactory way of treating the disease. A few of the most offending articles of Hindu diet may be stopped and less objectionable ones substituted in their place. But we entirely fail to see the necessity of compelling a Hindu diabetic to take Butcher meat or Beef tea. It offends his religious susceptibilities, reduces his body weight and in a good many cases aggravates his disease.

Our Contemporaries.

MEDICINE.

Diabetes Mellitus.

BY

MAX MEYER, PH. D., M. D.,

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The morbid anatomy of this disease is obscure, and the following lines may throw some light upon the matter.

Albuminates, carbo-hydrates and fat, the greater part of our daily food, being mixed with the digestive ferments, are conveyed into the blood circulation. A real chemical decomposition of the so-prepared food molecules neither takes place in the intestines nor in the blood, but exclusively within the cells of assimilation, which possess inherited chemical and biological forces to split up the food molecules, selecting those which become necessary for the maintenance of life, and excreting those which are of no use. This cell chemism, highly active in the healthy body, becomes impaired, even ceases under pathological conditions, the result of which is known as disease. Still the body is living, and needs vital energy, but the cell chemism is unable to bind enough energy of the food molecules for the maintenance of the organism, hence it loses in size and increases in tenacity of the tissues.

This condition marks old age, and in diabetes mellitus we find the same state of affairs, *i.e.*, premature senility of the cells.

The healthy, active cell changes the food molecule into nutritive substances, and the

waste material as uric acid, carbon-dioxide, salts etc., is thrown off, but the presenile cell has not power enough to convert the complex compounds into useful mediums; it labors under the stress of weakness, and is only able to transform starches into dextrin, and then into sugar. Here its strength is exhausted. The cells gradually fill up with sugar, this by osmosis passes into the blood, and is filtered out by the kidneys, and finally we find the sugar now in the urine.

If we compare the symptoms of senility with diabetes mellitus, we find both to be similar.

In conclusion, we can say that the danger does not lie in sugar production, which is a symptom merely, but in the premature senility of the cells, hence in our therapy we must lay stress to bring them back to active normal life, which is the external battle between the free and combined affinities of a non-saturated chemical union.—*The Medical Brief.*

Chronic Acetanilide Poisoning.

BY

PROF. ALFRED STENGEL,
(*Journal American Med. Assoc.*,
July 22, p. 243).

Chronic acetanilide poisoning is probably more frequent than is supposed, for the symptoms may be inconspicuous. The drug in its pure form or in proprietary combinations is so easily obtained that its indiscriminate use has resulted.

CASE 1.—A man aged 38, was seen in July, 1902, for increasing weakness, nervousness, and slight shortness of breath. There were occasional palpitations of the heart and frequently a sense of throbbing in the neck. He had noticed a blue colour of the lips and finger nails. For several years he had suffered from facial neuralgia and later from severe headaches, but otherwise

he had good health. He was a strongly built, well nourished man. The face, lips and finger nails were deeply cyanosed, but the surface was not specially cold. There was marked pulsation of the vessels of the neck. The pulse was 85 and sometimes rose to 105 or 110. The heart was enlarged to the left and to the right, the left border extending beyond the mid clavicular line and the right border a little beyond the right edge of the sternum. Its action was irregular and impulse rather diffuse. Repeated blood examinations showed marked polycythemia, the number of red corpuscles being 6,000,000 or greater. Nucleated red cells were never found, and basic granulations and polychromatophilia were absent. The patient had for 2 years taken a "cephalgin" for the neuralgia and headaches. The amount could not be determined. The blueness of the skin had existed during the time which he had been taking the remedy. Under tonic treatment he improved and by the end of 1902 he was practically well.

CASE 2.—A woman aged 27, was admitted to hospital on June, 30, 1903. She had excellent health until 8 or 9 years before, when she began to suffer from sick headaches. Four or 5 years before she began to take "tablets" to relieve the pain, and continued them up to Mar., 1903. Her stomach became increasingly irritable, and 9 months before admission she noticed that the skin was of a greyish or light purplish hue. Later it became a deeper blue. During 5 or 6 weeks before admission she suffered from dyspnoea and palpitation of the heart. This discolouration of the skin improved somewhat after discontinuance of the tablets.

The face was of a light steel-blue colour; at times it had a dusky hue; at other times a clear blue. The finger nails and lips were more deeply cyanosed. The surface temperature felt normal. There was slight enlargement of the heart, mainly to the left. The first sound at the apex was murmurish;

the second pulmonic sound was slightly exaggerated. Examination of the blood showed red corpuscles, 3,460,000; leucocytes 6,960; and hæmoglobin, 72 per cent.

The neuralgic symptoms were readily controlled after the acetanilide was withdrawn. It seemed to lower the patient's resistance, and instead of controlling the neuralgic manifestations it acted as a general depressant, and they occurred with even more frequency.—*The Medical Review.*

Death after inserting a Needle for Supposed Empyema.*

BY

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THE point of interest in the following case consists in the fact that the insertion of an exploratory needle into the left side of the chest was almost instantly fatal.

The facts are as follows:

The patient, a female child, aged 3 years, was admitted into the Sheffield Children's Hospital on April the 14th, 1905, with a history that six months previously she had had measles, from which she had never properly recovered; but with the exception of this illness she had always been a healthy child. On admission her temperature was 100° F. She was sufficiently plump and well nourished, and did not seem distressed in breathing, but was troubled with a peculiar "brassy" cough, and there was slight clubbing of the fingers.

Examination of the chest showed a fair amount of movement of the thoracic wall, but it was less on the left than on the right side. Pulsation was unduly marked around the apex of the heart over an area of about

* Read at the Provincial Meeting of the Society for the Study of Disease in children, at Sheffield, on Saturday, June the 17th, 1905.

1½ inches, and there was a faint mitral systolic murmur. The apex beat was in the fifth space, just outside the nipple line. There was dulness to percussion all over the left side, being especially evident in the supra-scapular region.

On auscultation the respiratory sounds on the left side were nowhere well heard, were universally weak, and had a soft "blowing" character, with prolonged expiration. Over the lower two-thirds anteriorly they were scarcely heard at all.

Posteriorly they were "tubular" all over and very weak, and no crepitations were detected. On the right side the percussion note appeared to be normal, but the breath sounds were unduly harsh. The chief feature of the respiratory sounds was their weakness and soft blowing or tubular character.

The next day, the physical signs being the same, an exploring needle was inserted by the house-physician by my request and in my presence. No anæsthetic was used, and the child was kept lying down. The puncture was made in the eighth space, just below the angle of the left scapula, and a few small flakes of "curdy" pus were withdrawn, with some blood. Immediately afterwards blood, of a darkish hue, was seen to be issuing in a continuous stream from the needle, and almost simultaneously the child gave a cough, and expelled some blood from its mouth on to the pillow. The needle was instantly withdrawn and a finger placed over the site of puncture. The pupils dilated the sphincter ani relaxed, the lips changed colour and no efforts at respiration were made. The child appeared to be moribund at once, and it was apparent from the first that its condition was extremely grave. The fauces were cleared, and artificial respiration commenced, and a few gasps were produced, but no proper inspiratory effort. Five minims of adrenalin solution and gr. $\frac{1}{60}$ of strychnine were injected hypodermically. The foot of the bed was elevated, and cloths

wrung out of hot water applied to the precordium. The adrenalin injections were twice repeated, and saline solution given *per-rectum*. The artificial respiration was continued for almost an hour, but from the first no sign of recovery was shown. It was thought that an intercostal vessel might have been wounded; as against this, percussion of the chest showed no alteration of the dulness; but on the other hand, through the abdominal wall an increasing fulness, amounting to a slight bulging in the epigastric region, was plainly visible, suggesting the entrance of blood into the stomach either through a puncture or through being swallowed. For a short time blood continued to flow passively out of the mouth, and then from the nostrils in addition, becoming of a darker coffee-ground colour.

At the post-mortem examination two days later, the larynx, trachea, heart, and lungs, were removed *en masse*. The left pleura was found to be adherent to the chest-wall all over, and also to the diaphragm. There were a few small clots on the surface of the lung at the site of puncture. The left lung appeared appreciably smaller than the right, and to have a firmer consistency; so that it roughly retained the shape and moulding of the pleural cavity. The area of the heart left uncovered by the retraction of the lung was especially noticeable, and the lung itself had numerous small grey tubercles dotted all over it. The site of puncture by the needle was seen about an inch from the base of the lung whose substance it had penetrated for a short distance. Pressure at this point caused blood to flow out, and section through the puncture showed an absence of healthy lung-tissue which had been partially replaced by more solid and indurated areas containing a number of small caseous foci. The smaller bronchi were occupied by blood-clots and puriform exudations, which were easily dislodged by squeezing. There were no blood-clots in the upper lobe, but the larger bronchi and trachea were full of blood-stained frothy mucus.

• Professor Arthur Hall of University College, Sheffield, made a microscopical examination of the heart and left lung, and reported as follows: "Section of lung is tuberculous with well-marked peri-bronchial inflammation, and a more or less irregular bronchopneumonia. The heart appears to be in a condition of cloudy swelling of the muscle-fibres, but there is no evident fatty degeneration."

The lower lobe of the right lung was engorged and appeared to be in an early stage of red hepatization, and there were also a few scattered milary tubercles. Situated at the bifurcation of the trachea was a much enlarged gland, occupied by softened disintegrating caseous material. The stomach contained a quantity of dark altered blood, part of which was in clots. It was estimated that the quantity of blood lost did not amount to more than six ounces.

Pericardium.—This was almost completely left uncovered by retraction of the lung. It contained about 1 oz. of clear serous fluid. Heart muscle pale and yellowish in colour, and flabby, weight 2½ oz. Right ventricle dilated. A few small whitish nodules were noticeable along the free edge of the mitral valve, one of these being distinctly larger than the others, and being situated on the middle cusp.

Liver.—A few small grey tubercles on the surface of the liver, normal on section.

Spleen.—Post-mortem lividity on the posterior surface at the lower extremity, a milk spot the size of a sixpence on its anterior surface. Numerous small grey tubercles all over it.

Kidneys.—Right pale, capsule stripped off easily, a blood-clot over the right suprarenal capsule and upper extremity of the right kidney (probably due to the artificial respiration used at the time of collapse). Left kidney a similar condition.

Descending colon and sigmoid flexure.—Collapsed and contracted.

Intestines.—Not examined in detail.
Mesenteric glands.—Enlarged.

Brain.—Not examined.

Six or seven similar cases have been recorded in the 'Lancet,' in 'St Thomas's Hospital Reports,' and in the 'American Journal of the Medical Sciences,' and a brief but good summary is given in an editorial "On Sudden and Unexpected Death in Children," contained in the January number for this year of 'THE BRITISH JOURNAL OF CHILDREN'S DISEASES.' In these cases death is variously given as being caused by reflex inhibition of cardiac and respiratory centres, due to irritation of some small branches of the vagus by the exploring needle, or as being caused by asphyxia. In the case just related death, in my opinion, resulted, not from asphyxia, but, from cardiac failure in a patient suffering from and in a debilitated condition due to tuberculosis with chronic or fibrocaseous changes in the lungs.

For much of the above I am indebted to the careful notes of Dr. Margaret Duncan, House-Physician to the Children's Hospital, Sheffield.—(*The British Journal of children's Diseases*.)

The Tongue as a Clinical Guide.

The dryness or moisture for the tongue denotes the extent of the disease of the intestines, and will point us in that direction. A fissure tongue points to the kidneys, either an inflammation or something wrong with secretion.

Yellow coatings are usually associated with morbid liver.

Raised papillæ, bright red, denote irritation of stomach, especially mucous coat.

ing. Shows exhaustion; no digestion, and need rest.

A broad pallid tongue, with a loaded base, says atony, and excessive acidity and refers you to a want of action of the entire viscera below.

A shrunken tongue, pinched in expression indicates functional inactivity of digestion. In this condition of the tongue we have atony also. It is the tongue of advanced fevers, inflammation of the mucous membranes, and want of assimilations.

A contracted pointed tongue, with dryness and dark fur, is the usual tongue of typhoid fever and other low grades of fever.

Broad, thick tongue, papillæ not visible, but looking raw, denotes a septic condition of blood and favors typhoid fever.

Deep, dark red tongue and dark coating indicate septic condition of blood.

Shades of dark brown and black denote typhoid condition or septic condition.

Pale, dirty fur on tongue denotes acidity and a septic condition of system.

Contracted, pointed, inability to hold still, and drawn to one side of mouth, denotes trouble with the nerves, and perhaps the brain.

Dry tongue always denotes feverishness or inflammatory condition, affection of the nerve-centres of ganglia.

Thick tongue, and curved edges upward denotes atony of the nerve-centres of ganglia.

Pointed, narrow tongue is the tongue of sluggish condition of digestion and assimilation and congestion, especially of the base of the brain. Restlessness and constant change of position are usually present.—(*Chicago Medical Times*)

SURGERY.

Suturing the Heart Muscle.

IN 1896 was recorded the suture of the heart muscle to close a wound, and in 1902 I collected 34 cases which had been reported in the intervening six years. In September, 1904—a little more than two years after these 34 cases were collected—Stewart collected 60 cases, showing in general that surgeons had learned the lesson from the statistics, were on the lookout for the cases, and were submitting the patients to operation. I have made no search for cases reported since last September, but the assumption that there are some such is surely not far fetched.

Now 60 cases is a large number if one thinks of them as representing a series of recent operations on a rare condition, which was untreated up to the time of the series. But 60 cases are hardly enough to supply all necessary facts so that reliable general inferences may be drawn and safe general rules formulated. Further more, it is not to be expected that in the short time of two years there should have come any marked changes in the statistics of recovery and death between the first and the last half of the 60, especially at the operators have been so many, for only eleven men have had the opportunity of repeating the operation once, and only three, Ninni, Giodorno, and Barth, have done it three times. In the 1902 list 38 per cent. of the patients recovered, counting all the cases; in the 1904 list 38½ per cent. recovered, showing that there was a remarkable average struck in the four contributing elements, the patient, the wound, the infection, and the operator. It hardly seemed fair, in discussing the 1902 list, to count as against the operation those cases in which hopeless conditions were disclosed, and those patients who died of the hæmorrhage from the original wound in spite of the operation. Eliminating these and consi-

dering only those patients who had a chance, which was given them by the operation, the percentage of recoveries was nearly doubled. Much the same is true of the 60 cases. Stewart notes a mortality of over 76 per cent. in those patients operated upon within four hours, and in those whose wound did not kill within that time and who had the operation later, the mortality was 30 per cent. In regard to the other two matters of infection and drainage there is such a close similarity in the 60 cases as in the 34 that we have to say that the increase in the cases and the operations has not as yet taught anything new or definite, and the same may be expected to be true of the next 60 cases, unless, it chances, which is unlikely, that many operations can be done by one operator and give him special opportunities for observation.

There has come, however, a suggestion of the application of the operation. Guibal, in the *Revue de Chirurgie*, 1905, suggests suture of the heart in those cases of rupture in which the pericardium is intact, a rupture that is produced by traumatism and is not a pathologic end product. Guibal says the operation has not yet been done for this condition but the condition at times is met. The traumatism to the heart may be by fractured ribs or sternum, or a blunt missile; it may make a contused wound in the heart penetrating to the endocardium or not, but not tearing the pericardium. Or the rupture may be due to compression, in which case the incompressible blood in the heart bursts the organ in its thinnest parts, that is, in the auricles, and the tear may even extend into the large veins. Given a rupture of the heart with intact pericardium, the conditions under which the heart works differ from those in which the pericardium is torn. In the former case a certain amount of blood escapes from the ventricle into the pericardial sac at each systole, and in time the pressure of blood in the sac approxi-

mates and then equals the pressure in the ventricle. When this state is reached blood cannot enter the auricles from the large veins, for they are subjected to an external pressure equal to the systolic ventricular pressure; the heart is practically strangulated, for its own blood supply is cut off; it may not be inapt to say it is drowned in its own blood. This does not occur if there be a wound in the pericardium associated with that in the heart; blood poured into the pericardium can escape into the pleura, or mediastinum or on the surface. If death comes from the hæmorrhage it is due to the general acute anæmia. If it comes in the case of the intact pericardium with the wounded heart, it is due to the compression and the anæmia of the heart alone.

The supervision of this hæmopericardium may be quick or slow. Guibal refers to two cases in men; one, that of Podrez, took but three days to attain a critical stage; the other, that of Mansel-Moullin, required three weeks. That it may, however, be much quicker than in either of these cases is evident from laboratory work, and this has shown that the deaths due to heart trauma which occur from a few minutes to a few hours after the injury are due to acute hæmopericardium.

It will not be wise to pass this suggestion lightly by. It is more than likely that patients with this injury are in the hands of surgeons at this very moment. Probably the heart injury is one of a number of associated lesions, and if it is it is surely the one of maximal importance. If the patient dies, it is not at all improbable that the heart injury cuts a figure next in causal importance to injuries of the central nervous system, and if that be so we have the satisfaction of knowing that the heart is accessible, that its injuries can be repaired, and that healing may be expected.

The appreciation of the condition does not seem to be difficult. The history and cha-

racter of the general injury would be suggestion, and shortly, that is, within a few minutes, or a few hours, or a few days, would supervene the symptoms of embarrassed heart action, and the rapidity of its action would not be an element of the symptom complex of an infection. At this time the area of cardiac dullness should be much increased. In the case of Podrez, Guibal states that the cardiac dullness extended from the third to the sixth rib, and from the right border of sternum to the left anterior axillary line.

If we can recognize the gradual supervention of compression of the brain due to a slowly forming extravasation of blood, if we can locate the clot and operate for its removal, we should be able to recognize this compression of the heart. In the case of the brain we only get those symptoms which come to us through the nervous system, while in the case of the heart we can use the ordinary methods of physical examination, and no operation should be undertaken unless the physical signs show that the pericardium is distended far beyond its usual limits. If it is so, and the heart is working rapidly and ineffectively, the inference must be that some thing is distending the pericardium and interfering with heart action; that this, after a trauma of the thorax, and in the absence of symptoms of infection, is most likely to be a hæmorrhage and that permit the condition to go unrelieved will be quite as reprehensible as it would be to permit a patient to die of compression of the brain without opening the skull.

Mansell-Moullin operated on his patient, relieved the hæmopericardium, and later, on the man resumed foot-ball, in playing which he had gotten his injury. I think that surely others of us must have the same opportunity presented sooner or later, and the only way to adequately meet the contingency will be to prepare to recognize it.

It is hardly practical to enter into technical operative details in this place, but

there are some points which merit brief mention. The suture material of choice for the heart muscle is still silk, though long-lived catgut is permissible. The refinement of placing the suture during diastole, and tying in a succeeding diastole is abandoned. Operators on human hearts find, as I found on dog's heart, that the rhythm of heart action continues even though the organ be hanging from a string, and so the first suture is tied and the ends left long and used to hold and steady the organ during the placing of the other sutures. This is really a manoeuvre of considerable value, especially as the heart might otherwise require to be lifted from the pericardium for each suture and be thus subjected to an unnecessary amount of handling. Finally the fear of subsequent ills such as from wounding and tying the coronary arteries is abolished. Ricketts showed that either coronary might be tied in the dog, without harm, and it had been the same in my dog work. In addition Stewart wounded the coronary artery in placing a suture in a human heart and tied it, and his patient recovered. So that the fact that the coronary arteries may be treated as other arteries if they are cut, seems to have a good foundation in experience.

There is naught more disheartening to a surgeon than to have an otherwise exemplary technique stultified by infection. The operator on emergency cases has this saving clause in the face of this mischance: that he may divide the responsibility with the original wounding instrument, even though he has no way of definitely knowing that the infection really occurred before his operation. Basing conclusions on a most meager list of cases I found that in heart wounds infection was caused in one-third of the cases by the wounding instrument. This, I think, makes it incumbent on every operator to consider every such wound as probably infected and to arrange for drainage.

The merest glance at the list will show the need of this, for almost all the cases that lived long enough for infection to develop, exhibited it, and it cut a decided figure in the mortality, being the cause of death in all the fatal cases that did not die of hæmorrhage or of the shock of the primary operation. But, there seems to be a difference in the susceptibility to the infection of the two serous sacs involved. The pericardium is much less frequently affected than is the pleura and this makes it probably correct practice to close the pericardium without drainage, and probably wrong to do that with the pleura. Indeed one must expect, if one does not drain the pleura primarily, to have to do so secondarily, and surely in the face of this contingency one should always choose the practice that exposes the patient to the least risk, and that must lie in the placing of a precautionary drain. Further than this one might, with reason, strap the left side of the chest to limit motion, lessen the amount of effusion, and give the pleura a chance to dispose of what was inevitably present. It is not likely that, with a pneumo-hæmothorax present the left lung will be of much practical value to the patient, even though his acute anaemia makes him suffer some from air hunger.

It hardly seems likely that any of the lesions of the heart which interest the physician will be amenable to surgical intervention, even though an English physician did suggest that mitral insufficiency might be remedied by contracting the orifice. The pathologic heart is already potentially, if not actually, incompetent, hence does not invite one to add to its load, and the explorer in this field will have to be either a preternaturally wise or a very venturesome man.—
(*The monthly cyclopædia.*)

HARRY M. SHERMAN.*

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OBSTETRICS AND GYNÆCOLOGY.

Eclamptic Convulsion occurring fourteen days after confinement.

BY

GEORGE CUSCADEN, L. R. C. P. & S.
(EDIN.)

Hon. Out-Patient's Surgeon, Women's Hospital, Melbourne.

On April 17th, 1905, I was called to professionally attend Mrs. B., æt. 33, primipara. With the aid of forceps I delivered her of a healthy male child weighing 9 lb. Her convalescence was uneventful. On May 1st she had been across the street to see her mother, and on her return she was seized with an epileptic form of convulsion which lasted 30 minutes. This was followed six hours later by another fit, which lasted 20 minutes. I saw her in the second attack. The muscles of the nostrils and the face moved spasmodically, the mouth was down to one side, the tongue was bitten, the forearms were flexed, the thumbs applied to the palms, and the fingers over them. Slight coma followed, when she became semi-conscious and answered when spoken to. Her temperature immediately after the fit was 102°, pulse 120. The urine contained albumin. She complained of internal pain over the dorsal spine, with tenderness on pressure. May 2nd: Temperature, 99°, pulse 90. May 3rd: Temperature and pulse normal. She said she felt quite well, and wished to get up. I advised rest in bed, with milk diet. On May 9th and 10th she had two more fits, not so severe in character. Again, on May 18th she had two mild fits, only lasting a few minutes. I saw her on June 21st. She has had no more fits. She is now in good health, and eats and sleeps well. Urine is free from albumin. I might mention that the temperature and pulse were raised, the former

101° to 102°, pulse 120 to 130, following the convulsion. In the course of a day or two they again became normal. The urine of the eclamptic is usually scanty, contains albumin in varying proportions, various casts, epithelium from the urinary tract and blood cells. Cases of eclampsia have occurred in which the quantity of urine was not lessened, and showed only a faint trace of albumin. Eclampsia is most frequent in labour, seldom after it. Twenty-eight days have passed in a patient observed by Bailly, and 58 in a case of Sir James T. Simpson. It has been questioned whether attacks first occurring more than two weeks after labour should justly be included under puerperal eclampsia. In the great majority of cases in which the disease happens in pregnancy the time from the seventh to the ninth month offers the greatest liability. Epilepsy presents the most striking resemblance to eclampsia: the same loss of consciousness and of sensation, the same series of tonic and chronic convulsions, succeeded by coma; but then the fact of pregnancy the predomination of eclampsia, the number of attacks, the condition of the urine (not albuminous or only slightly); and, above all, the previous history of the case would prevent doubt or confusion in diagnosis. The epileptic does not present a constantly rising temperature; the eclamptic does. Faulty metabolism and impaired secretion are important factors in the causation of eclampsia. So far as my experience goes I have had good results with thyroid extract treatment.—*The Australasian Medical Gazette*.

(Read before the Victorian Branch of the British Medical Association.)

Maternal Impressions.

BY

DR. ROBERT E. COUGHLIN.

Dr. Robert E. Coughlin says in May *Brooklyn Medical Journal* that he has always been in accord with those who believe that so-called maternal impressions were acciden-

tal coincidences, but the following cases occurring in his practice have shaken his views in the regard:

Case 1. Mrs. T. engaged him to attend her in her expected confinement, which, according to the table for calculating the period of utero-gestation, would read April 7, 1901—she having menstruated last July 1, 1900. In September, when she was about two months pregnant, she was shocked to see her husband return one day from his work with a bandage saturated with blood on the middle finger of his right hand. While at work he had met with a slight accident, the injury consisting of a lacerated wound, which had been dressed by an ambulance surgeon. Two days following, Mrs. T. dressed her husband's wound. At this time it occurred to her that she had done wrong, and in consequence she spoke of the matter to several persons.

On Thursday, April 11, 1901, after an easy and uneventful labor, Mrs. T. gave birth to a female child, the child being well and healthy in every respect. An examination of the infant's hands showed that at the first joint of the middle finger of the right hand a birth-mark, or nevus, was present. It consisted of dilated arteries, causing quite a swelling on the side of the finger, the color being blood red. Its size was about that of a small pea. The location of the nevus was exactly in the location corresponding with the wound on Mr. T.'s finger.

Case 2. Mrs. A. In 1897, during the middle part of June, this patient menstruated as usual. During the first part of the following month, Mrs. A. took a trip to the aquarium at Battery Park. One fish made a deep impression on her, namely, a porpoise, which jumped out of the water a great deal, emitting a loud cry, at the same time opening its mouth very wide while doing so, and drawing the mouth to one side as it threw water up into the air. When she returned home, Mrs. A. imitated to her children the

actions of the fish, showing them especially how it drew its mouth to one side. At this time she did not know that she was pregnant. Nothing else occurred in her pregnancy worth relating, and she gave birth to a child on 13th April 1898. Examination of the child showed it to possess a mouth very like a fish, drawn to one side, reaching to the right ear, the right ear being at the same time malformed, resembling very much the fin of a fish.

A subsequent operation was partly successful in correcting the deformity.—(*The Medical Review of Reviews*.)

An Unusual Case of Difficult Labour.

BY

SHILL (J. S.).

Dublin Journ. Med. Science, July, 1905.

Mrs. M., xii.-para, aged 43, was admitted to the Coombe Hospital as a case of hydramnios, with mal-presentation of the foetus. On examination the diagnosis was confirmed, and the foetal heart could not be heard. The membranes were punctured high up with a stilette to allow of some fluid draining away. When the membranes tore the head was brought down, and it became engaged; labour proceeded naturally till the head had come into the cavity of the pelvis, and presented at the outlet. In spite of vigorous pains no further progress was made, so the forceps was applied the head, which, was felt to be unusually large, was delivered with considerable difficulty, not so much on account of the size, but from impaction of the shoulders in the brim. The child's neck, was very short, so the head could not be drawn sufficiently away from the vulva to permit of the hand being passed to relieve the obstruction higher up. As the child had evidently been dead for at least a week, it was decapitated, and the arms were brought

down; but no amount of pulling could bring the child farther than to expose its nipples. Evisceration brought it only as far as the umbilicus. Dr. Sheill then cut off the body as high in the vagina as possible, and was then able to push up the impacted pelvis and bring down the feet. The child, without thoracic or abdominal viscera, weighed 12½ lbs. The mother left hospital ten days later quite well.—E. H. L. OLIPHANT. *Journal of Obstetrics and Gynaecology*.

The Significance of Pseudo-ascites in Ovarian Tumours.

BY

HORMANN (KARL).

Munch. med. Wochenschr., 1905, No. 12.

Ascites accompanying ovarian tumours is not a true ascites, but is due to congestion, and is in reality a secretion of the tumour. The local metastasis is a sequence of such a condition, and is exemplified in the papillomata. Further, free fluid may appear in the abdomen from rupture of a cyst. When this fluid is serous it is readily absorbed, but this only occurs very slowly when the fluid is thick and mucoid. Such fluid also influences the peritoneum and causes a transudation with increase in the amount free in the peritoneum. The distinction between a true ascites and a collection of secretion-products (in part or whole) is easy when the fluid is examined. In true ascites there is little or no mucin. A number of examples are given. (This explanation seems rather inadequate to explain any case of ascites or pseudo-ascites occurring in connection with ovarian tumours).—ALEX. MAC LENNAN. (*Journal of Obstetrics and Gynaecology*).

OPHTHALMOLOGY.

Improved Method of Treatment
in Glaucoma.*

BY

KENNETH SCOTT, M. B., F. R. C. S.,
LONDON.

As glaucoma is such a serious affection of the eye, not unfrequently met with in general medical practice, the following brief notes of a distinct advance on the present methods employed in its treatment may be of help and interest. There is no intention on this occasion to state this from any didactic attitude supported by lists of statistics; for although it is a few years since I first originated the method, it must be some little time yet before it becomes possible to finally confirm the good results obtained, in a manner sufficiently precise for scientific purposes, by series of examinations extending to a more remote period of time. These results, however, have been long enough under observation to enable me to conscientiously offer the information at our meeting here where our members, in addition to possessing the common purpose of working to relieve the suffering of mankind, enjoy the further privilege of having common sympathy in kin and country, to unite them into still closer bonds of harmonious fellowship and instructive intercourse together.

It is unnecessary to enter here into the details of the nature, causation, or other points connected with glaucoma which are fully dealt with in text-books and other writings; nor is there need to discuss the *rationale* of the operation originated by Von Graefe, of that particular form of iridectomy whose essential feature is that it must include a wide portion of the base of the iris—that part which constitutes the filtration angle of the anterior chamber of the eye.

* Read at the Annual Meeting of the Caledonian Medical Society held at Manchester, 23rd June, 1905.

The ordinary functions of the iris must first be considered just for a moment. These are two in number—

1. The iris forms a curtain or screen, with a varying aperture, the pupil, in its centre, which regulates the amount of light admitted to the interior of the eye.

2. The iris regulates the size of the pupil in its association with the movements of vision and accommodation, in controlling the clear and distinct focussing on the retina of the succession of outward impressions which is being constantly transmitted through the eye to the brain.

After the ordinary wide iridectomy of Von Graefe has been performed, the first mentioned function of the iris can be almost equally well effected by the descent of the upper lid over the front of the cornea; but the second-mentioned and more important duty of the iris is abolished, owing to the severance of the continuity in the circle of the pupil, which induces a mechanical paralysis of the iris-structure; this in turn is necessarily followed by physiological changes, which commonly result in disused tissues of the body; and here this is particularly the case, as there is an almost perpetual movement of the iris and pupil in normal health occurring during the waking hours of the day. Along with this, there must necessarily follow a gradual cessation in the general function of the eye as a whole; and it is not unnatural that, possibly in consequence, to some considerable extent, the improvement first effected by the operation or iridectomy should, even in the earlier and more favourable cases, so frequently fail to afford permanent relief.

The importance of this aspect of the subject should not be ignored or neglected, and the modification in treatment now brought under consideration has for its object the retention, unimpaired, of the prin-

cipal functions of the iris, whilst at the same time fulfilling the essential features of Von Graefe's operation as already mentioned. This is accomplished by making a full incision in the iris, which removes the outer portion *only* of a sector of tissue, up to the ciliary insertion of the radiating fibres of the muscle, and leaves the fibres composing the sphincter of the pupil-aperture quite intact; therefore the full action of the latter remains unimpaired for all practical purposes. After the operation the patient is able to use the eye in ordinary life, the pupil responds actively to light and accommodation, whilst the tension of the globe becomes and remains normal; the eye is therefore placed under the most favourable conditions for the maintenance of a restored state of health. This favourable result is, of course, more fully seen when the case has been taken early enough, and with this new modification there is not the same dread or uncertainty as to the result of the operation on vision, as compared with the original older form of operation.

The secondary pupil obtained in the modified operation is usually masked by the upper lid, but even in those cases in which this does not occur there is no confusion of vision. This is only natural and to be expected, because the most sensitive area of the retina, situated at the yellow spot, still remains in active use, and therefore any visual impressions which might reach the retina through the new pupil impinge on a more peripheral portion of it, which less responsive, and consequently the images formed are very much less distinct and are unconsciously ignored.

Although there is an entire absence of risk in performing the operation, it is not always easy to do it, and requires the exercise of much care and skill, but the good effect obtained is in every way indubitably superior, and is well worth the effort to obtain it.

I would utter just one brief word of warning against the mistake of delaying too long with the instillation of myotic drops, such as eserine, &c., which in the very earliest stages of what may be termed "non-progressive glaucoma" is useful, especially when combined with other suitable precautions, and is then instrumental in mitigating, and even occasionally arresting, the onward progress of the symptoms. This prodromal stage, however, is always a dangerous one and must be carefully watched, and no hesitation should be permitted in the adoption of more radical steps when there is an absence of improvement. This risk is due to the serious structural alterations which are induced, and which, in the great majority of instances, when once established not only remain permanently, if allowed to go too far, but they also become rapidly more emphasised and from speedy progressive steps along the road towards ultimate and irrevocable blindness—*The Caledonian M. Journal.*

Sudden Blindness Following
Orbital Injuries.

From ancient times to the present there have been reported many cases of sudden blindness following injuries which involved the orbit but not the eyeball itself. These injuries may take the form of blows or falls upon the orbital margins (with or without demonstrable fracture) or upon other parts of the skull (contrecoup), penetrating wounds such as gunshot or punctured wounds with canes and umbrellas; and occasionally result from falls upon other portions of the body, as upon the feet or buttocks.

H. B. Decherd, M. D. (*Medical News*, July 8, 1905), reports a case of sudden blindness following a blow upon the eye with the ferrule of an umbrella occurring in the service of Callan at the New York Eye and Ear Infirmary, and comments as follows on the nature of the blindness:

rather rough and firm scar. Around this healed area was a rim, one centimetre in width, which was red; in many places there were denuded areas; in all there were fifteen applications of the tubes of radium, which caused the red rim to disappear and the small ulcerated areas to heal; also the firm and somewhat rough old scar became soft and pliable, so that it is but slightly noticeable.

CASE 4.—Woman, aged 71, developed a small epithelioma on her right cheek, measuring one and one-half centimetres in diameter. The glands of the neck were not infiltrated. The radium was applied nine different times and caused the depression to fill in and heal over. One year has elapsed since the last treatment, and excepting for a slight redness of the area, nothing is noticeable.

CASE 5.—Woman aged 40, had a mole above the right supra-orbital ridge. She persistently picked at this until she says she pulled it out clear from the roots. Two and one-half months from this time I saw her. There was a deep hole where the mole had been with a diameter of two centimetres, extending down to the periosteum of the bone. The edges were highly inflamed as well as the surrounding tissue, and there was a discharge of blood and serum. This is undoubtedly an epithelioma developed by irritating the mole. During November she received eight applications of the radium and the deep, ulcerated surface has filled in and healed over so as to be barely noticeable. At the present time this case seems perfectly well.

CASE 6.—Woman, aged 32, has very extensive lupus vulgaris extending over the entire right side of her face, from the ear up into the scalp, down to the cheek, and back to the angle of the jaw and around to the chin. Various methods of treatment had been tried during many years. In all, she has had fourteen applications of radium, and great numbers of the elevated areas have smoothed down, and there is a great amount of new

intervening scar tissue which is soft and pliable. Due to illness, no further applications have been made, and all the healed areas have remained well, so this case gives fair promise of becoming entirely well.

CONCLUSIONS.

From these cases the following inferences may be drawn, namely:

1. That the rays coming from radium, when the same is contained in hermetically sealed tubes placed directly on an ulcerated area, that a slight sensation will be left in from seven to eight minutes, but when the skin is unbroken, no sensation is felt, even if the tubes of radium remain on for a period of thirty-five minutes.
2. If these tubes of radium are kept on an ulcerated area for a period of thirty-five minutes they produce an increased redness of the diseased part and cause an erythema of the surrounding tissue which may last for several hours or as long as twenty-four hours.
3. That radium rays have caused an ulcerated lupoid area in three cases, an ulcerated area of a rodent ulcer, and two small epitheliomata to heal over, and that these former ulcerated areas have become firm, white scar tissue, which gives them every appearance as though they were healed, and in one case of very extensive lupus vulgaris it has produced such marked improvement that the case may reasonably be considered as healed.
4. That the rays of radium have caused the firm, rough scar tissue in two cases of old lupoid areas to become soft and pliable, and therefore are not as disfiguring.
5. These effects of radium have been very rapid, considering the usual intractability of this class of diseases, and considering that in all cases various therapeutic measures and means have been tried repeatedly with little or no effect.

6. What is of very great practical value, if radium has a therapeutic use, namely, these results have been obtained with tubes of radium of low activity, costing but a few dollars, while it is supposed that only radium of high or very high activity, costing several hundred dollars a tube, possessed any therapeutic properties.

7. The treatment in none of these cases commenced longer than a year and a half ago, and while four of these cases have remained healed for a period of over one year, yet many years must elapse to see whether the disease will not reassert itself again before the same can be pronounced as cured. And if, after a lapse of several years, cases of lupus, rodent ulcer or epithelioma, treated by the aid of radium, remain cured, then radium is only to be classed with the Finsen light and the X-rays and surgery, as one of the methods in the treatment of small epithelioma and rodent ulcers.

8. In the two figures of the false joint of the ulna is seen a very good example of the comparative value of radium and X-rays in the examination of bones directly. The X-ray is a three-minute exposure, while the radium picture is a one-week exposure from which can be concluded that the X-rays show far greater differentiation between the bone and connective tissue than does radium, and since it requires at least several hours for the radium rays to penetrate the flesh it would, therefore, be impracticable to use radium for making skiagraphs.

9. The conclusions drawn from nearly one hundred experiments give positive proof that while suspending tubes of radium of various strengths for long periods in various solutions and various powders, that neither these solutions nor the powders are capable of affecting photographic plates and are, therefore, not rendered radio-active and, therefore, neither the solution nor the powders are rendered radio-active and can in

no way affect the metabolism or pathology of living organisms.

Monographs on the therapeutic and physical properties of radium will be cheerfully sent to any who may desire the same.

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The Pharmacology and Therapeutics of Ice.

Under this somewhat novel title Fielden in the *British Medical Journal* of June 10, 1905, reminds us that we find ice recommended in a great variety of conditions.

Small lumps sucked prove most grateful to the patient parched with thirst, and also after operations upon the stomach. In the latter condition it is even more grateful than sips of water during the first twenty-four or forty-eight hours. It is recommended also in assisting to control hemorrhage from the mouth, throat, lungs, and stomach. For hematemesis, however, small pieces may be swallowed. In these conditions not only is the action direct, but also markedly reflex. Iced drinks are more refreshing than the same liquids without the addition of ice. In painful conditions of the stomach pieces of ice when swallowed possess a sedative action, and they may prove valuable in vomiting from various causes.

Externally we may employ this valuable adjunct to treatment in the form of compress, poultice, ice-bag, or ice-cradle. As a local anesthetic prior to the opening of abscesses, etc., or for the performance of paracentesis, it has fallen into disuse since the introduction of the ether spray and of ethyl and methyl chloride. It is well to remember that a piece of ice dipped into salt and held against the skin will prove a valuable anesthetic should ethyl chloride not be available.

To the head it may be applied in the treatment of heat-stroke, convulsions, delirium, headaches, otitis media, in certain cases of insomnia, and in meningitis (simple and tuberculous). In meningitis the ice-cap is said to be "most efficacious," lowering temperature and modifying intracranial circulation. It is recommended to be kept applied till the temperature remains subnormal for some time. In the *British Medical Journal* of April 15, 1899, Professor Lindsay reported the recovery of a case of probable tuberculous meningitis in which the main treatment was continuous application of cold to the head. Although continuous cold was obtained by using Leiter's tubes (and not an ice-bag), the author refers to the case to illustrate the value of cold in the treatment of meningitis. The ice-cap is suggested in cerebral hemorrhage; but it is pointed out by Bartholow that it is harmful if the "face is pale, the surface cool, and the circulation depressed."

The ice-bag is useful in treatment of wounds of the eye to prevent inflammation, and is frequently employed in inflammatory disease of that organ, and, as mentioned by Shaw, seems to do good so long as it allays the pain.

Dr. Gardiner Robb says that he has found ice to the face in small-pox gives greater relief than any other application. In spinal and cerebrospinal meningitis ice may be applied along the whole length of the spine, and has been found of great service. In this case there is (as when applied to the head) both a direct and a reflex action.

Ringer recommends ice poultices to the throat in tonsillitis, scarlet fever, and diphtheria, especially if the glands are likely to suppurate.

To the chest in the cardiac region ice is of great benefit in treating pericarditis, and some writers speak of its usefulness in endocarditis. It has been found to give great relief in the palpitation of exophthalmic goitre, and in functional heart troubles.

Extensive application of ice to the chest has given decidedly beneficial results in cases of hemoptysis. Several writers have seen no bad symptoms from its use in pneumonia, and the existence of pneumonia is no contraindication to the use of ice-packs for hyperpyrexia. As it was a paper on pneumonia treated by ice applications which led the author to write this article, he briefly quotes some statistics regarding mortality in this disease. He has not found any more recent than those quoted by Mays in the *Lancet* of July 8, 1893, who collected 50 cases treated with ice applications, of which 2 were fatal—that is, a mortality of 4 per cent. Besides these, Mays quotes from a paper by Fientdt, a Finnish medical man, who treated 106 cases (10 of which were double pneumonia), with 3 deaths, equal to 2.82 per cent. Together these constitute 156 cases with 5 deaths—that is, a mortality of 3.2 per cent. In comparison with these figures Osler puts the mortality at from 20 to 40 per cent. In the Johns Hopkins Hospital it was 29.8 per cent. Taylor estimates the mortality at 17 per cent. Certainly a striking difference in favor of ice.

The author has not found any statistics regarding the efficiency of early as compared with late applications of ice in this disease, but theoretically he imagines that a more beneficial action would be obtained if applied in the early stage, when we might expect a smaller amount of inflammatory exudation to be thrown out. On the other hand, if consolidation has already occurred, it might be found that moist warmth by flushing the blood-vessels would tend to a more rapid absorption of the effused products. The author is unable to speak from personal experience, but makes this suggestion from theoretical considerations.

The treatment of pneumonia by the ice-cradle and not by direct application to the skin has been used, and in 43 cases treated by this method the mortality was 7 per cent.

For its mode of use he refers his readers to Sir William Whitla's Directory of Treatment. In the *Medical Annual* of 1899 it is pointed out that if ice is used in the treatment of pneumonia the patient needs careful watching; if the feet are cold hot bottles must be used; if the temperature falls below 99°, and the hands are cold or the lips bluish, the ice-bag should be removed.

The pains associated with pleuritic complications or affections are frequently greatly relieved with ice, but in some cases have been found to be aggravated.

To the abdominal wall ice has been employed in treating appendicitis and other painful inflammatory conditions of the viscera and peritoneum; also in splenic hypertrophy, hematemesis, and for the relief of vomiting from various causes. It has also been found of great service in hemorrhages from the bowel or uterus, in and the latter case pieces may be introduced into the uterus or rectum.

Locally, ice may greatly benefit conditions of the testes, and is recommended to assist reduction of prolapse of the uterus and rectum. It has been found useful in some cases of lumbago, also to assist in the reduction of strangulated hernia, and for the relief of hemorrhoids which are swollen, painful, and bleed.

To the limbs the ice-bag may be applied when neuralgia of various nerves requires immediate relief by active treatment, but it is for inflammation in joints and bursæ that we find the ice-bag more frequently pressed into service. After excision of joints and other operations upon bone the application of an ice-bag over the dressings will greatly diminish the oozing which is sure to occur as well as lessen the pain which might otherwise follow. As an alternative to moist warmth ice may be employed in the expectant treatment of osteitis, myositis, and inflammation of other tissues prior to the formation of pus.

An ice-pack to the trunk or trunk and limbs will be found of the utmost value, as already mentioned, in treating hyperpyrexia occurring during typhoid, acute rheumatism, scarlatina, and other febrile conditions. Even if pneumonia occurs as a complication the ice-pack is not contraindicated. The rectal temperature must be watched, and when it falls to 100° the pack must be removed, when a still further decrease will be noticed. If kept on too long collapse is liable to occur.—*The Therapeutic Gazette*.

DERMATOLOGY.

The Practical Treatment of Lupus Erythematosus.

BY

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The most common form of this disease is the circumscribed or discoid type and it is this variety only that we will discuss in this short paper.

The parts affected are the face, ears, scalp, and sometimes the hands.

It begins as small, red spots or patches, head to split-pea in size, sharply defined borders, slightly raised, and covered with thin, adherent scales which dip into and plug the dilated sebaceous orifices. These small spots spread peripherally and coalesce into one or more large patches, which retain all of the above mentioned characteristics. The patches on the cheeks and nose often join, resulting in one large patch of irregular shape, constituting the so-called butterfly-lupus, that on the nose corresponding to the body and that on the cheeks to the wings of the butterfly. It is usually several months or even years after the onset of the disease before this type is observed.

The small, highly inflammatory patches often disappear spontaneously, without leaving a trace of the disease, but more commonly slight atrophic scarring results. During the process of evolution the centres of the lesions are the first to show lessening of scales and infiltration. After the disappearance of the large and older patches there is practically always more or less of this atrophic scarring, which, however, is never due to ulceration but to fatty degeneration of infiltration elements and to pressure from the adherent scales.

The disease is most common in cold climates, and women constitute more than two-thirds of all cases. It is seldom seen before the 15th or after the 50th year.

The cause is still unsettled. Some hold that it is due to a toxin from a distant tubercular foci, while others, like Crocker, believe it to be "primarily a vaso-motor disturbance leading to an inflammation of the skin, perhaps of toxic, but not of tuberculo-toxic origin, especially predisposed to by a feeble blood current, with a secondary microbic invasion of the disturbed epithelial layers." I am inclined to accept the latter view, as in many cases, especially in men, there is no history nor any suggestion whatever of tuberculosis.

Dryness and hyperkeratosis, with downward dipping of horny plugs, constitute the changes in the epidermis, while the cutis presents dilated lymph-spaces and channels, swelling of papillary bodies and marked softening, due to atrophy of collagenous tissues and breaking down of cells.

The diagnosis of the chronic type is fairly easy when we remember that it usually occurs after the 15th year; is situated on nose, cheeks, ears or scalp; is very chronic; as a rule symmetrical; is sharply defined; of violaceous or livid color; is covered with thin, adherent scales, with processes dipping down into the sebaceous orifices; absence of

ulceration together with no papules nor nodules; and finally, the presence of more or less atrophic scarring.

The treatment of this disease has been very discouraging indeed. One thing after another is tried until improvement is seen or the patient is *not* seen, which is the more likely, when such methods are followed.

Even so able a man as Crocker says, "For my own part I try calamin lotion; collodion, with or without salicylic acid; mercurial plaster; benzolin, and sometimes the spirit-soap treatment, and if good results are not obtained, I try linear scarification."

As for internal treatment, little can be said. Wholesome diet, sound hygiene and whatever remedial measures are necessary to put the patient in the best possible physical condition, seem to meet all the indications.

Thompson's solution of phosphorous, freshly prepared and given in gradually increasing doses, as recommended by Bulkley, and iodoform pills of one or two grains, given after meals, as advocated by Whitehouse, have seemed to exert a beneficial influence in many cases. The compound syrup of hypophosphites certainly does much good in cases showing anemia, with feeble circulation.

The external treatment is of more importance and the measures advocated include nearly everything in the pharmacopeia.

It is generally conceded that only mild measures should be used in the highly erythematous patches, whether large or small. Soothing, astringent lotions, such as: Boric acid, one-half drachm; calamin, two drs. zinc oxide, 2 drs; glycerin, one and a half drs.; camphor water, to make three ozs. or zinc sulphate, one dr.; potass. sulphurette, one dr.; rose water, to make four ozs., or plaster mull of mercury; or non-flexible collodion, alone or with two to five per cent.

salicylic acid; or friction with tincture of green soap, have been found best in this stage. It should not be forgotten that this type occasionally involutes spontaneously.

In the chronic type stronger remedies are indicated, and practically everything from chemical and thermal caustics to X-rays, high frequency currents, Finsen-light treatment, liquid air, and radium have been used and with varying results.

I have yet to see a single case improved by the X-rays, and I have had several cases treated by this method, as well as having seen many so treated by others. Two of the cases shown by me to-night have had from four to eight months' treatment by means of the X-rays and high-frequency current and without the slightest improvement. I have seen many cases made infinitely worse by such treatment. It is only fair to state, in this connection, that I have seen excellent results from these methods in lupus vulgaris.

The only external treatment used by me, at the present time, in the chronic stage of erythematous lupus, and with almost invariably good results, is 1st, soft plaster-mull of mercury, preceded by friction with tincture of green soap, until all scales are removed; 2d, the application twice daily of a 50% solution of resorcin in alcohol until decided inflammation results; 3d, the continuous application of Lassar's paste (consisting of 10 grains of salicylic acid, two drs. each of starch and zinc oxid and four drs. of vaselin) until reaction subsides, when the 50% solution of resorcin is resumed until marked irritation again ensues, when it is to be discontinued and the soothing paste is again applied, etc., the process being repeated until a cure results.—*The Post Graduate*.

Etiology of Eczema in Infants.

Arthur J. Hall (*British Journal of Dermatology*, August, 1905) in a series of papers

discusses the causes of infantile eczema. He draws his conclusions from a close study of sixty cases.

Of the various theories that have long been advanced concerning the cause of eczema in infants, the theories of digestive disturbance and external irritation have received the most support. In point of numbers the first of these has had the greatest number of supporters. Hebra thought the cause due to one or more of the numerous external irritants to which infants are subjected; and Unna is confident that the irritant is a specific micro-organism. The following arguments against the digestion theory are suggested:

Most cases give no evidence of other digestive trouble, either before or during the eczema.

Most of the cases were breast-fed at the time of the first appearance of the eruption.

Only a small number of the cases occurred during the summer, when gastro-intestinal disturbances are most commonly seen in infants. Again, why isn't infantile eczema seen more often at the time of weaning, when far more irregularities of diet occur than during the first three months?

The writer does not consider that the constant presence of any specific micro-organism has been satisfactorily demonstrated. In favor of the theory of external irritation, the following arguments may be mentioned:

1. In nearly every case the eruption begins on the head or face, practically the only exposed parts during the first few weeks of life.

2. The eruption on other body is less severe, and tends to disappear when the original lesion is cured.

3. The disease is constant.

longer protected with such extreme care as during the first few weeks of its life.

4. Increase in number of cases during the cold months.

Among the numerous external irritants to which the infant is subjected the following seem more or less constantly present: Chilling of the skin, imperfect drying, soaps, irritating dust in the atmosphere, germs, and finally the sweat of the mother's skin.—G. H. F.—*Medical Review of Reviews*.

RHINOLOGY & OTOTOLOGY.

Collodion: Its Use in the Treatment of Relaxed Drum Membranes.

W. Sohler Byrant, M.D. Collodion: Its Use when the Membrana Tympani and Malleal Ligaments are Relaxed. (*Journal of Laryngology, Rhinology and Otology*, July, 1905.)

Byrant quotes five cases wherein he has successfully used collodion on the drum membrane. He divides the appropriate cases into two classes:

Class 1. Relaxed posterior upper segment of the membrana tympani, a very common condition.

Class 2. Laxity of the malleal ligaments especially with the malleo-in-cudo-tympanic

He gives the ætiology, diagnosis, prognosis and treatment of each class, laying stress on the frequency with which these cases occur from over-treatment and over-inflation. The collodion which is contractile is painted upon as a rule upon membrane, in amount determined violaceous or livid area, but discomfort and pain thin, adherent scale, contraction due to a too down into the sebaceous of collodion.

naschian tube is
stability of

overcoming the natural elasticity of the drum membrane by too frequent inflation, which may even also cause laxity of the ossicular ligaments.

Treatment of this condition by the use of collodion offers an encouraging prognosis.

Untreated, the condition has little tendency to spontaneous cure, but rather to an increased defect.—(*Medical Review of Reviews*.)

Thiosinamin in the Treatment of Ear Diseases.

Recently we have been hearing much, both *pro* and *con*, on the therapeutic effect of the use of thiosinamin in various ear conditions, and again this month we find a report on its employment in otology by Kassel (Posen), Thiosinamin in the Treatment of Ear Diseases (*Zeitschrift für Ohrenheilkunde*, Bd. 50, page 98).

This observer made thiosinamin injections in four cases, in which during the course of an otitis media adhesions developed in the conducting apparatus.

He used a 15 per cent. alcoholic solution, to which he added a 10 per cent. solution of anæsthesin. Of this mixture he injected one gramm three times a week.

All the patients admitted, after the second or third injection, that the perception of hearing had become more acute. During the following injections (15-20) no further improvement was noted. The subjective noises were not influenced favorably.—(*The Medical Review of Reviews*).

Bony Cyst of the Middle Turbinate Bone.

Ernest Schatz, Report of a Case of Bony Cyst of Excess