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A Monthly Medical Journal

EDITED BY
THE HON'BLE U. RAMA RAU
AND
U. KRISHNA RAU M.B., B.S.

CONTENTS

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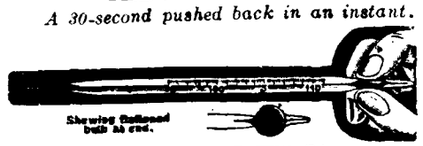

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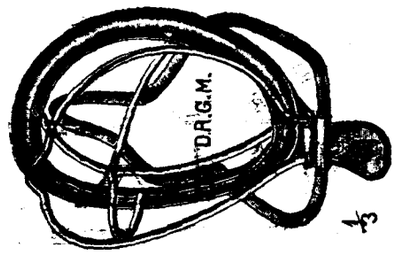

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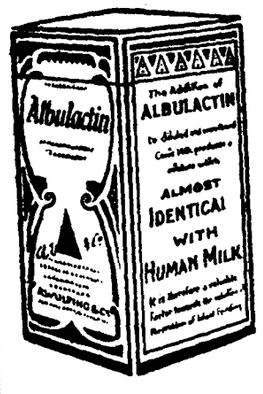

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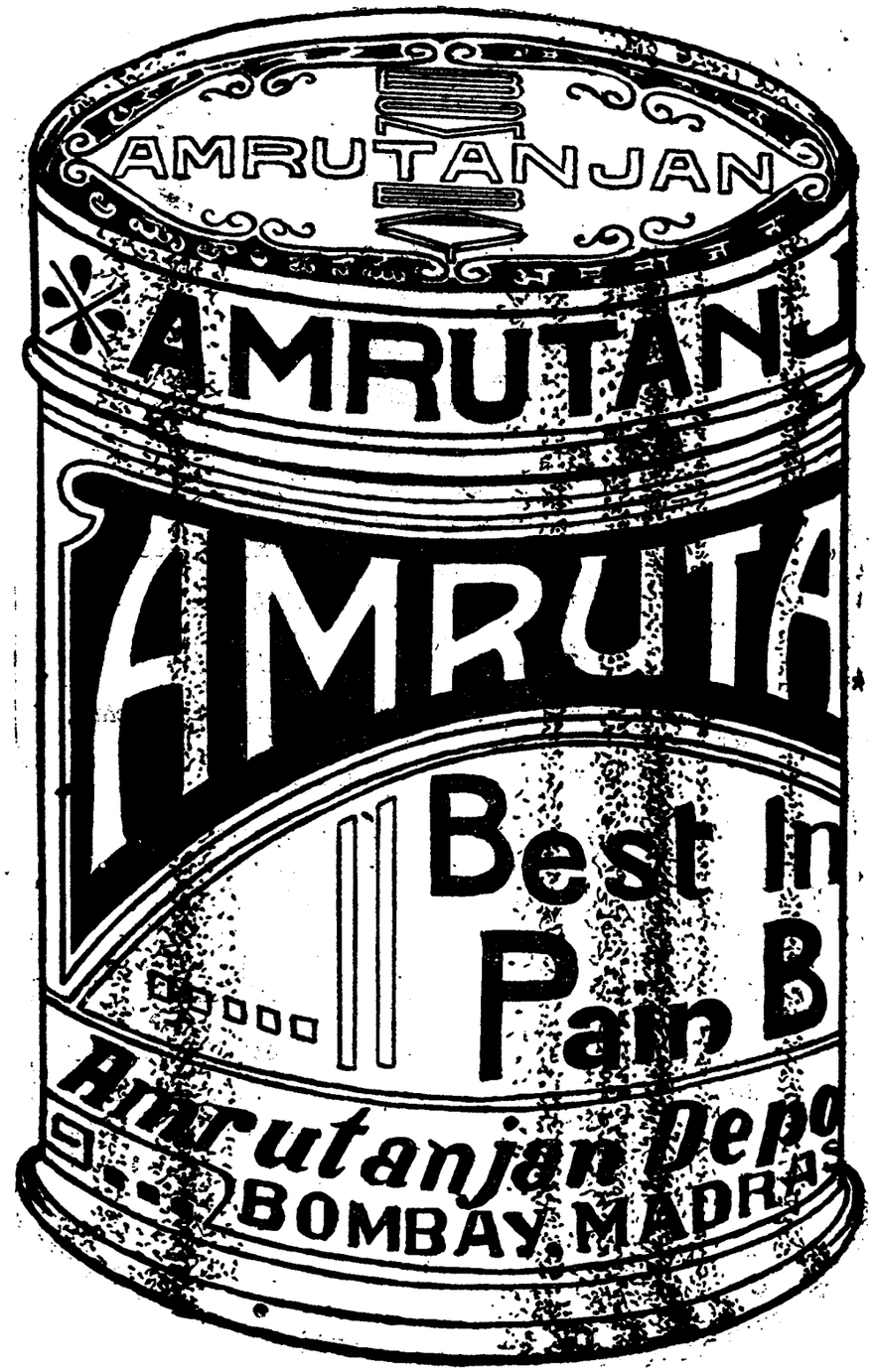
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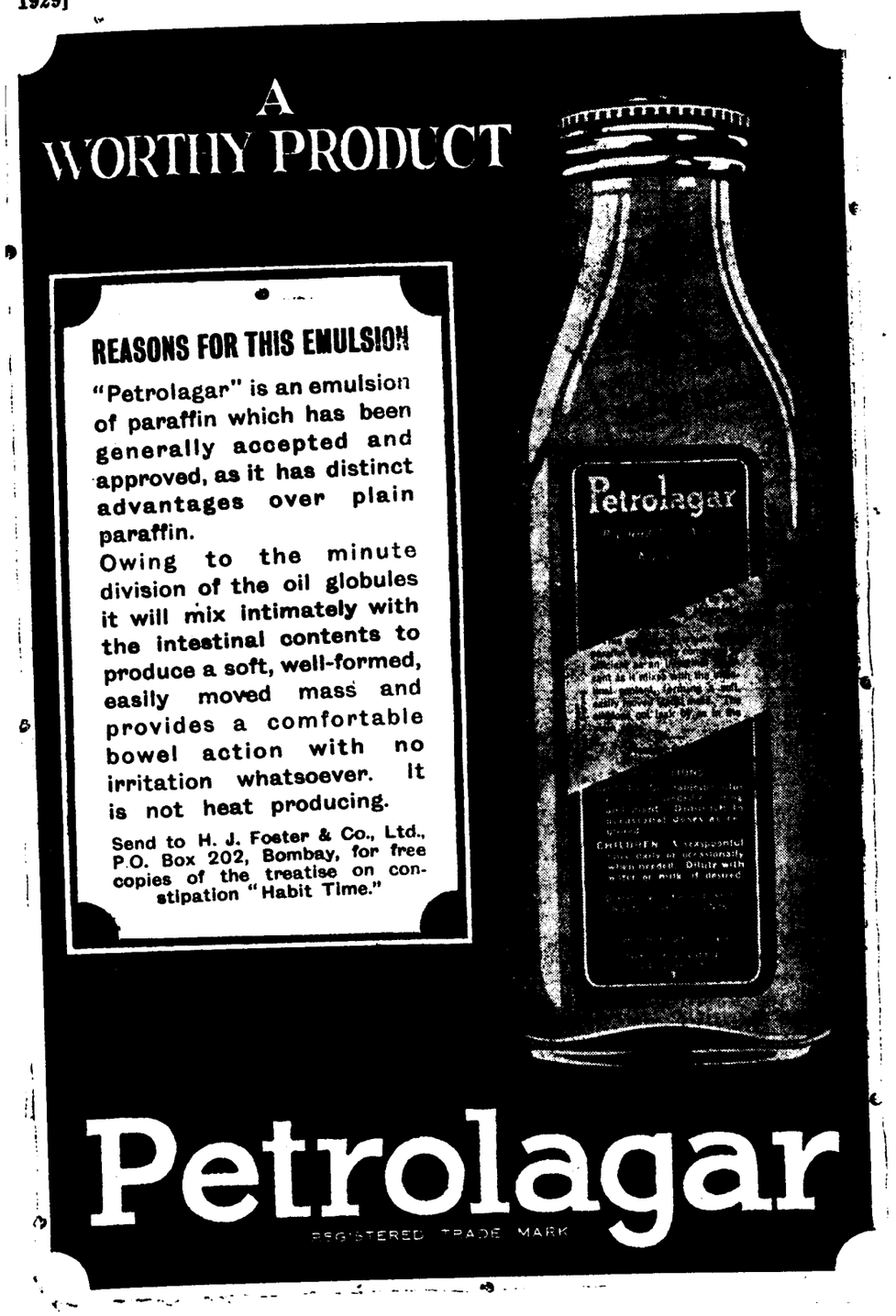
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ORIGINAL ARTICLES

*MODERN SURGICAL TECHNIQUE IN THE TREATMENT OF ABDOMINAL WOUNDS

BY

S. B. SURTI F.R.C.S., D.P.H., L.M.S.
Civil Surgeon, Gulbarga,

In selecting a subject for the Jubilee number of the "Antiseptic," my choice has fallen upon one, not only of deep interest to the abdominal surgeon, but of vital importance to the profession at large.

Modern surgical technique is undergoing constant evolution, and therefore to give skilled operative assistance, and assume intelligent charge of the after treatment of a laparotomy case, the general practitioner should make annual trips to the large city hospitals, which unfortunately, but a limited number can afford either the time or expense to do.

The object of this paper, therefore is to lay before those interested in the surgical branch of the medical profession, in a practical manner the methods now in vogue with the best abdominal surgeons in the country.

* Specially contributed to the Silver Jubilee Issue of the Antiseptic.

It is not possible in a paper of this length, to go thoroughly into the entire subject or to give the individual opinions of various men, and as such, in the main, only general principles relating immediately to the abdominal wound will be considered.

The term "abdominal surgery" covers generally the operations which involve the opening of the abdominal cavity, and in modern times this field of work has been greatly extended.

In many cases of severe intra-abdominal disease it is impossible for the surgeon to say exactly what is wrong without making an incision and introducing his finger, or, if need be, his hand among the intestines. With due care this is not a perilous or serious procedure, and the great advantage appertaining to it is daily being more fully recognized. It was Dr. Oliver Wendell Holmes, the American physiologist and poet, who remarked that one cannot say of what wood a table is made without lifting up the cloth; so also it is impossible to say what is wrong inside the abdomen without making an opening into it. When an opening is made in such circumstances-provided it is done soon enough—the successful treatment of the case often becomes a simple matter. An exploratory operation, therefore, should be promptly resorted to as a means of diagnosis, and not left as a last resource till the outlook is well nigh hopeless.

It is probable that if the question were put to any experienced hospital surgeon if he had often had cause to regret having advised recourse to an exploratory operation on the abdomen, his answer would be in the negative, but that on the other hand he had not infrequently had cause to regret that he had not resorted to it; *Postmortem* examination having shown that if only he had insisted on an exploration being made, some band, some adhesion, some tumour, some abscess might have been satisfactorily dealt with, which left unsuspected in the dark cavity, was accountable for the death. A physician by himself is helpless in these cases.

In abdominal surgery we have perhaps the best field for object lessons relative to the new fourth, or physiologic era in surgery. The first era in surgery was the heroic, under which practically no abdominal surgery was done.

In the second or anatomic era of surgery, abdominal operations were in general so dangerous that few were attempted, excepting in cases of great emergency, and usually with a fatal ending.

The third or pathologic era of surgery was based upon the studies of Pasteur and of Lister. Aside from its technique of preventing the development of bacteria in wounds, it included the idea of removing all products of infection with painstaking care.

Notwithstanding the injury that was done to patients by surgeons carrying out the principles of this era, abdominal surgery made its first great advances. Detailed attention was given to the deliberate disposal of products of infection found within the peritoneal cavity, and little or no attention was paid to the natural resistance forces contained within the patient himself. There was an enormous waste of such forces, in fact, in our abdominal surgery of the pathologic era. The entirely modern or physiologic era is based upon the studies of Metchnikoff and Wright, and includes the principal idea of allowing the patient to retain his natural forces in such a way as to give control of infections.

Metchnikoff and his followers taught us that certain cells of the blood and lymph circulatory systems not only disposed of bacteria daily under normal conditions, but that these cells were increased in number rapidly to meet emergencies of infection. These investigators showed also that bacteria were destroyed by certain fixed body cells. Wright and his followers showed further that in the presence of an infection, several kinds of antibodies were elaborated in the animal economy and these antibodies lent their aid in removing infections and in destroying certain toxins that were produced by bacteria. The principles of this fourth or physiologic era of surgery brought us face to face with the problem of operating in such a way as to leave the patient in the very best condition for managing infections himself with his own phagocytes and antibodies, and led to a revolution in methods forcing us to drop out of our technique such parts of the system of the third or pathologic era as interfered with the ability of the patient to produce phagocytes and antibodies.

For instance, a prolonged and painstaking operation for removing all of the pus from the peritoneal cavity so shocked the great vasomotor centres of the patient that they were palsied, and unable promptly to take up the work of conducting the manufacture of phagocytes and antibodies, with which the patient himself could dispose of the products of the infection, much better than the surgeon could do in his crude mechanical way.

Unnecessarily prolonged operations acted in precisely the same way; and where we had thought best to expend a half hour in carrying out the theories of the pathologic era in surgery, we

may now expend five minutes under the principles of the physiologic era.

Shock is produced more rapidly by manipulation of the abdominal Viscera than by gross injuries, when animals are fully anaesthetised, especially when the anaesthetic used is Chloroform. The parietal peritoneum and the peritoneal mesenteries are especially sensitive to shock under manipulation.

French of Bonn speaking on the causes of death after Laparotomy suggested at the Congress of German Naturalists and Physicians, that whichever method a surgeon has made his own, and can perform with ease and rapidity, that is the best for him; but it does not follow that it would be the best for others.

He considered that the results of the various methods in vogue are due not so much to the special method nor to antiseptics, as to the skill, rapidity and subsequent care of the operators.

The normal blood destroys or eliminates the cocci, but if the heart is weak, the circulation sluggish, it is unable to effect this, and the cocci are not destroyed, but thrive and locate whereever they find a lowered vitality, as in the peritoneum after an operation.

Persons do not die after a laparatomy because they become septic; they become septic because they are dying or while they are dying. He advises therefore that in cases of weak, or debilitated heart, in thrombosis after pneumonia or influenza, it is best not to operate at all, but to wait. Debilitating measures, too cool baths, hunger, strong purgatives are to be avoided before the operation. The technique must be good; the after treatment very careful. Lavage of the stomach, warm enemas, tonics, quinine etc, combat the weakness.

A long and tedious operation lowers the vitality especially when the abdomen is opened, and hence perfected and rapid technique, whatever the method, increases the chance of success. He concludes by warning operators not to trust too much to antisepsis, but to improve their skill and help to establish the indications for the various typical operations, instead of trying to invent new ones.

Preparation of Patient, Surgeon and Assistants—Apart from the general principles which govern the preparation of a patient for any major operation, certain special requirements are

indicated which lessen the operative risk, and the tendency to post operative complications in abdominal surgery.

Fæcal masses and decomposing material in the intestines augment the surgical dangers by the accumulation of gases and by the absorption of toxins formed within the canal. Both are fostered by diminution of peristalsis and by lessened rectal excretion. If we add the physical and mental depression that attends a post operative nausea it is not difficult to see why progress in improperly prepared patients may be tedious or even alarming. Elaborate preliminary preparation on the other hand defeats its own object. Long and careful dieting with repeated catharsis, lessens the functional capabilities of the digestive tract. This is still further impaired by the mental worry and anticipation that attends a preparation extending over several days. So that, other things being equal, I am of opinion that continuation of the customary diet up to a brisk, vigorous catharsis and confinement in bed for not less than twenty four hours before operation, is sufficient to put a patient in the best condition for the majority of abdominal operations. With this in view, I allow a patient his customary diet up to the evening before operation, when he is given 1½ to 2 ozs of castor oil, which sweeps the intestines free of all foreign material and leaves practically nothing for fermentation. In patients thus prepared, the ease in handling the viscera at operation is increased to a remarkable extent. When there is a likelihood of extensive gastric or upper intestinal operations, local septic conditions may be practically eliminated by a diet of sterile food such as sago conjee, whey, albumin water etc. for several days, and repeated gastric lavage. Otherwise the simple method given above is sufficient.

If possible, a thorough warm bath is given, the evening before operation. The abdomen is widely shaved at this time or on the operating table, and he is allowed to pass the night without the discomfort of a wet antiseptic dressing. These dressings are not only a source of discomfort and annoyance, but they irritate the skin, contributing, if anything against a sterile field. A recently introduced and very effective way of sterilizing the skin consists in simply painting it over with a 2 per cent solution of Iodine in petrol after shaving. Especial emphasis is given to cleansing the umbilicus which is always much dirtier than the surrounding skin.

To combat the thirst that comes after all abdominal operations, *hot water* given in teaspoonful doses frequently will partially allay the thirst and supply all the real needs of the stomach for some hours after the operation.

It has been the practice with surgeons after abdominal operations to withhold water by the mouth for twenty four hours, or until the patient is free from nausea and vomiting. During this time the thirst is distressing.

Some surgeons have for several years administered water by the rectum in small quantities to allay thirst; but the routine method of injecting a large quantity of saline solution (0. 6 per-cent) for the prevention of thirst after abdominal operations was first resorted to in the Johns Hopkins Hospital.

The procedure consists in the injection of a quart of normal saline solution into the lower bowel immediately at the close of the operation, and while the patient is still under the influence of the anaesthetic. The patient is elevated to the moderately high Trendelenberg position, a stiff rectal tube is inserted well up into the sigmoid flexure, and the fluid slowly poured into a glass funnel which is held 3 or 4 feet above the level of the patient's buttocks. Morphin and Atropin given shortly before operation control the excessive bronchial and faucal secretions and augment the effects of the anæsthetic. Their use is attended by less post operative pain and from clinical evidence the post operative vomiting is lessened. I have on several occasions used Messrs. Stella and Co's preparation called M. A. S. S. as a substitute for Morphin et atropin, with excellent results, the patient falling into natural sleep as it were both during and for several hours after the operation and consuming only a fraction of the quantity of chloroform that would have been necessary if the injection were not resorted to. Mental equilibruim is important. Calmness on the part of the surgeon and his subordinates, quiet undisturbing surroundings, especially during anaesthetization, avoidance of disagreeable technical shocks etc are all important. Bodily warmth must be maintained throughout an operation especially in the very young and very old. This is secured by warm, ventilated operating rooms free from draughts; by the protection of the body from rapid evaporation after irrigation, or from the use of wet towels or sheets. If possible infants should always be kept warm artificially during operation. Equally important is it to maintain the bodily warmth for the few hours after operation, when there is shock, sweating and general relaxation. The head-down or so called *Trendelenberg's position*, is most valuable for securing access to the lower abdomen, unhampered by the intestines. In septic operations, the upper half of the abdomen must be carefully protected from infection, owing to the greater absorptive powers of the lymphatics of the Diaphragm. Its use in the plethoric patients with flabby

hearts entails risk and in any case it is best to return the patient not too suddenly to the horizontal position, because of the resulting cerebral anaemia.

In existing septic peritonitis, the use of the "*pelvis low*" *(Fowler) position* " is of great value, before, during and after operation, as it limits the contact of septic material to the lower surfaces of the peritoneum from which absorption is much less active than from the diaphragmatic region. This may be secured by raising the head of the bed or table to eighteen inches or by placing the patient more or less upright.

The need for aseptic surroudings relating to the preparation of the operating room need not be discussed in this article. Asepsis on the part of the operator, and his assistants is met by the wearing of a sterile gown and cap and a mouth guard of muslin, because with every breath and particularly in the course of conversation during an operation, bacteria are projected from the mouth of the operator and his assistants over the field of the wound.

The hands and forearms may be prepared simply by scrubbing with sunlight soap and then immersing them in a solution containing about a tablespoonful of strong bleaching powder in 2 pints of warm water and drying them in the air. One have adopted this method in my hospital for the last five years, with excellent results. This destroys practically all the bacteria which are likely to cause trouble. Latent colonies of bacteria which work out of the epithelium of the hands in the course of an operation are generally dormant colonies which are managed by the blood serum or tissues of the patient safely. As regards the use of rubber gloves, except in septic cases, I never put them on, and their use in abdominal surgery is particularly undesirable; first because they interfere with the nice sense of touch required for separating adhesions, or for doing rapid suturing. The oparator wearing rubber gloves is apt to require longer incisions which allow him to work by sight, and this is not in harmony with the principles of the physiologic era in surgery.

The peritoneum protects itself so well if given fair opportunity that we do not need to apply the extreme degree of asepsis that would be needed in opening the knee joint or the meninges of the brain. One can do a much higher class of operative work within the peritoneal cavity where nice sense of touch is not interfered with, and the greater length of time required in operat -

ing where rubber gloves are used and the longer incisions counter balance the benefit of such asepsis as would be gained through the use of the gloves.

It has been shewn experimentally with Petri plates in the operating room that large numbers of bacteria are constantly falling into every open wound, no matter what precautions have been observed in advance. These bacteria are for the most part disposed of in the patient's tissues and blood and lymph-vessels; but the longer the incision and the greater the length of time during which any given wound remains open, the more bacteria fall into the wound from the air.

If one can work more quickly and through shorter incisions with bare hands, he naturally makes better asepsis of the wound, provided that his hands have been well prepared in advance.

Assistants.—One assistant besides the anæsthetist is sufficient in the majority of abdominal operations. There should be one "sterile" nurse for instruments and dressing and one non-sterile nurse for work about the operating room not bringing her in contact with the field of operation. A well trained orderly for the heavy work, such as lifting patients on and off the operation table and cleaning up between operations, is of great assistance. A second Surgical assistant is at times necessary, but it is better to learn to work with as few as possible coming in contact with the wound.

Position of the operator.—A right handed operator should be on the right of the patient, a left handed operator on the left. In pelvic work it will often be convenient to change one's position from one side to the other so as to bring the palmar surface of the fingers to bear on the organ or structure being handled.

Instruments may be sterilized by dry heat in the oven by immersion in 95 per cent of Carbolic acid, or in the more common way by boiling in water for fifteen minutes. In the latter case bicarbonate of soda in the proportion of a teaspoonful to a quart of water is added to prevent the rusting of instruments. The Carbolic acid preparation is particularly suitable for small, sharp, delicate instruments, and does not interfere in any way with their edges. The carbolic acid which clings to them on removal is instantly neutralized by immersion in alcohol.

All pre-operative requirements having been attended to, the surgeon now starts with the *incision*. This should be made with a sharp scalpel until the peritoneum has been opened.

For operations below the Umbilicus:—A median incision is used, which should terminate about 2 inches above the pubes. The skin and subcutaneous fat are usually divided to the required extent in the first cut, except in very fat subjects where it may be necessary to incise the subcutaneous fat again before the aponeurosis is exposed; any vessels that bleed freely are secured by compression forceps, which are left *in Situ*. The aponeurosis superficial to the recti is now divided almost to the same extent as the superficial incision; this may be done directly from without inwards, or by inserting the point of the knife beneath it at one end with the edge directed upwards, and running the knife along so that the portion of the cutting edge near the point divides the fascia in a perfectly clean manner. No director should be employed; it is deservedly regarded by all skilful operators as a dangerous and useless instrument for such work. When the recti muscles are reached it is unwise to seek for any separation between them; whether one appears or not the division should be made by cutting close to, if not actually at, the middle line until the deep aponeurosis or transversalis fascia is exposed. The safest method of procedure at this stage is to pinch up a transverse fold of the fascia between two pairs of forceps and divide it by drawing the edge of the knife across it like a bow of a violin, when except in the case of emaciated persons, the subperitoneal fat comes into view; the remainder of the fascia may now be divided to the full extent with scissors or, if there is need for much expedition, it may be divided along with the peritoneum. Before incising the latter all active bleeding should be arrested with catch forceps; it is usually unnecessary to apply ligature or torsion. The peritoneum can be opened in the safest manner by pinching it up and dividing it carefully between two pairs of artery forceps, when, at the moment of division. air at once enters the cavity, unless there are adhesions. The margins of the divided peritoneum are then seized on either side in catch forceps and the opening is made sufficiently large to enable two fingers to be introduced.

If any exploration of the cavity is required it may often be accomplished sufficiently by introducing two fingers. When it is determined to proceed with the operation the peritoneum is divided to the full extent of the parietal wound; this can be best accomplished by using two fingers of one hand introduced into the cavity as a director and completing the division with a pair of scissors. With the object of protecting the margins of the parietal incision from injury and also to prevent the peritoneum from being stripped back, it is desirable at this stage to fix the

parietal peritoneum to the subcutaneous fascia on either with a few pairs of tissue forceps. Before proceeding with the intra-peritoneal portion of the operation it is usually advisable to introduce a flat sponge or pad between the abdominal wall and the intestines. If there is any probability of blood or fluid entering the cavity it is also well to place a sponge behind the abdominal wall, immediately below the parietal wound, or to introduce one into the pouch of Douglas.

(To be continued).

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* BACILLUS COLI INFECTION

BY

MUFTI SHAH NAWAZ M. B. B. S.

Translation Bureau, Medical Section, Osmania University, Hyderabad Dn.

Def:—It is an acute infectious disease characterised by fever, sweats and local symptoms which vary with the site of the infection. If untreated the condition readily tends to become chronic.

Etiology:— Specific cause of this disease is always some or other strain of B. Coli. B. Coli under normal conditions is a harmless saprophite of the intestinal tract and is non-haemolytic but under certain conditions it may become pathogenic and may invade the mucus surfaces or gain entrance into the blood stream and cause secondary infection of:

(*a*) Biliary passages.

(*b*) Urinary passages.

(*c*) Serous sacs.

(*d*) any of the internal viscera.

Such pathoganic forms are always haemolytic and comprise several types seperable from one another by their cultural and sugar reaccions and by agglutinating reactions with specific sera.

N. B:—Serum reactions of various types of B. Coli are remarkably specific and each strain will only agglutinate with its own specific serum. In all cases of B. Coli infection the specific cause is to be found in blood, bile and spleen of cases and sometimes also in urine or sputum or local discharges depending on the site of secondary infection.

* Specially contributed to the Silver Jubilee Issue of the Antiseptic.

Mode of infection:—The same as in typhoid fever and *probably* infection always comes from another B. Coli case or carrier. The likelihood of autogenous infection is slight because the ordinary colon bacillus of the intestine is non-pathogenic and non-haemolytic and is not agglutinable with specific sera.

B. Coli infection may occur alone but is *often superadded to some other pre-existing infection of which the most common would appear to be Typhoid, Tuberculosis, oral Sepsis and chronic Dysentery.*

Incidence:—B. Coli infection is very common in India. Almost all cases of continued fever which show negative results for malaria, typhoid, paratyphoid, Tuberculosis and syphilis are due to B. Coli infection and the blood of such patients will give negative result when widal tests are made against one or more strains of B. Coli.

It may occur in any age but children and young adults are most frequently attacked.

Pathogeny:—B. Coli infection can give rise to a great number of pathological conditions. Indeed there is hardly any other microbe that is more ubiquitous in its distribution within the body or more protean in the diseased conditions which it can set up.

1. Inhaled into the nose and throat it is the common cause of naso-pharyngeal catarrh, of otitis in the ear and sinusitis in the nose and is often associated with other germs in oral sepsis.

(2) Swallowed in the stomach and intestine in infected milk it is a cause of infantile diarrhœa and summer diarrhœa in children and taken in tinned food it sometimes gives rise to food poisoning.

(3) It may occasionally set up a relapsing type of enteric fever resembling typhoid and by contamination of drinking water is the usual cause of endemic goitre. It is also a frequent cause of suppurative conditions in the intestines especially in and arround the appendix and the associated peritonitis of the acute condition of the bowel like perforation, strangulated hernia etc is often due to B. coli infection.

(4) Introduced into the vagina it is the common cause of cervicitis, vaginitis, cystitis in the female and carried into the bladder on a dirty catheter it is not an infrequent cause of cystitis in the male.

(5) In almost all cases of B. coli infection there is infection of the bile and it is only a matter of time before Cholecystitis, Catarrhal cholangitis, catarrhal duodenitis are set up. These bring in their train congestion of the liver, tendency to formation of gall stones, hypohydrochlorhydria, dilatation of the stomach and engorgement of spleen.

Further cirrhosis of the liver is now-a-days looked upon as sub-infection of B. coli and there is reason to believe that cirrhosis of pancreas resulting in diabetes is brought about like that.

Lastly abscess of liver is also in some cases due to B. coli.

(6) Such colon Bacilli that have passed to the liver through the blood stream tend to be excreted in the urine and on their way out they may set up acute or sub-acute nephritis. Much more frequently however they cause secondary infection of the pelvis of the ureter or perhaps infection of the bladder and lead to Pyelitis, or Cystitis and to chronic Bacilluria, but proportion of urinary infections is few when compared with number of cases which show Biliary infection.

N. B. In most of Bacilluria cases, colon Bacilli can be found on making blood cultures but in pure bile infection blood cultures are usually negative.

7. Sometimes B. coli multiply in blood stream and the condition shows as Septicæmia. B. coli septicæmia with high fever and severe symptoms or as a terminal blood infection before death is rare, More commonly however the only evidence of blood infection is in some localised secondary lesions like patches in pneumonia, arthritis, meningitis, iritis etc. and such conditions are not at all uncommon particularly in the lungs where consolidation of the apex may simulate tuberculosis.

It is impossible to take into consideration all the forms of B. coli infection in detail and only the most common simple types will be dealt with.

They comprise :—

1. B. Coli fever.
2. B. Coli Cholecystitis
3. B. Coli Bacilluria.

B. Coli fever :—In this form the outstanding clinical feature is fever continuing for weeks or even for months, the nature of pyrexia varying in different cases but two main types are more frequently met with. These are :

(1) Typhoid type

(2) Low intermittent type.

Typhoid type :—In this form there is probable infection of the lymph follicles of the small intestine similar to the local lesion of the para-typhoid.

The clinical features are suggestive of a mild attack of enteric and the primary attack of fever lasts for 2–4 weeks.

The chart of the case is similar to a chart of mild typhoid but pyrexia is less regularly remittent and is spiky like a case of para-typhoid. The primary attack is commonly followed by a series of recrudescences and relapses which may continue for months.

B. Coli infection also often complicates typhoid and *probably in many cases of relapsing typhoid the relapses are due to super-added B. Coli infection.*

Low intermittent type :—In this form there is infection of the bile with more or less concomitant cholecystitis. Pyrexia takes the form of low intermittent type with rises in the afternoon to (99–100) and subnormal temperature in the morning.

Such cases are usually mistaken for Tubercle or Malaria but quinine has no permanent effect on the temperature.

N. B. In most cases of B. Colifever there is a history of previous attack of typhoid or para-typhoid months or years before or appendicitis or dysentery or other intestinal trouble which is primarily responsible for the entrance of B. Coli in bile and gall bladder.

Clinical features :—

1. Onset of B. Coli fever is usually slow and insidious but in typhoid type it may be abrupt with chilliness and rigor. With the onset there are general constitutional symptoms. Many cases show sweating and chills and for that reason are apt to be mistaken for Malaria or Tuberculosis but there is no definite periodicity of Malaria nor the patient looks so emaciated as the duration of pyrexia would lead us to expect (cf with Tub :)

Tongue:—slightly dry and furred.

Bowels:—usually constipated and complaint is often made of flatulence.

Urine:—scanty and high coloured and shows excess of indican.

Pulse:—soft and usually slow.

Blood:—Leucopenia with relative increase of lymphocytes.

Blood serum agglutinates one or more strains of B. Coli in 1 in 20, or 1 in 40, or 1 in 80 dilution or perhaps even higher.

Abdomen:—slightly distended from flatulence.

Epigastric Reflexes:—show change when compared with one another.

Right abdominal reflex is sometimes diminished. On general palpation there is generally a tenderness of the bowels especially over the sigmoid and Ileo-cæcal valve.

Liver:—is full and firm pressure over the gall bladder just below the costal margin in the right nipple line causes pain.

Spleen:—Seldom palpable but on light percussion is found to be full.

B. Coli cholecystitis:—In this form the outstanding *features are*:—

1. Cholecystitis.

2. Other phenomenon brought about secondarily by bile infection.

Sequence of events in the pathology of infection would seem to be:—

(1) Infection of bile during the attack of typhoid paratyphoid appendicitis or other bowel infection perhaps months or years before.

(2) Setting up of chronic cholecystitis with thickening of bile, reduction of its alkalinity and chronic congestion of the liver followed by:

(3) defective gastric, pancreatic and intestinal digestion and disorder of reflexes controlling the pylorus and Ileo-cæcal valves and defective intestinal peristalsis.

(4) These in turn lead to defective deficient secretion of Hcl and defective output of bile and pancreatic juice, flatulence and dyspepsia, intestinal stasis, constipation and auto-intoxication all of which are marked features in every case.

Symptoms:—Most cases complain of flatulance and dyspepsia with distension of stomach after food and of discomfort or pain in the upper zone of the abdomen coming on after meals.

Sometimes also there is an ache in the liver or colicky pain over the gall bladder or there may be pain below the right scapula or over the tip of the right shoulder. The stomach pain is relieved by belching the wind and by the taking of the alkalies.

From time to time there may be short attacks of fever perhaps with chills but without any *definite periodicity*.

The patient is peculiarly susceptible to chill and feels the cold greater and readily contracts naso-pharyngeal or Bronchial Catarrh on exposure.

Headache is a frequent complaint and mental concentration is difficult. Many patients are also conscious of their heart's action (palpitation).

Physical signs:—Abdomen is usually pigmented. There is tenderness over the Sigmoid and Caecum and fulness of liver and spleen.

There is pain over the site of gall bladder on firm palpation and the stomach frequently gives a splashing sound.

Acidity of the urine is usually less and phosphaturia is not uncommon. The patient usually mistakes it for spermatorrhœa.

Colon Bacilluria:—Here the site of infection is in the urinary passages either in the pelvis of the ureter (pyelitis) or in bladder (cystitis) or in both situations. The infection may come primarily from the bowel and it is of interest that the cæcum and the ascending colon are connected by a chain of lymphatics with the right kidney but more usually the urinary infection is secondary to a primary bile infection the colon bacilli reaching the pelvis of the ureter through the blood.

Symptoms:—Dysuria with difficult scalding or burning micturition, Pain or discomfort in the loins. The urine is generally offensive in smell and is concentrated and somewhat turbid. Reaction of the urine is *acid*. Microscopically are found Colon

Bacilli, Leucocytes or pus cells and perhaps also red cells and desqumated epithelical cells from the pelvis of the ureter. These often show an imbricated appearance characteristic of pelvis of the ureter. In addition there are also visible physical signs of pyelitis or cystitis or both and a firm pressure over the pelvis of one or both ureters or over the bladder causes pain. Together with local symptoms and visible signs some cases show an attack of obscure fever with chills and sweats like malaria or have persistent B. Coli fever either the typhoid or low intermittent type.

Diagnosis of B. Coli Infection:—Diagnosis is usually easy provided the possibility of the disease is kept in mind. It is confirmed by making widal test with the patient's serum when positive results against one or more strains of B. Coli are obtained in 1 in 20, 1 in 40, 1 in 80 or even higher dilutions. Positive result in 1 in 20 dilution is enough for a diagnosis.

To determine whether there is urinary infection, a sterile catheter specimen of urine must be obtained and cultures made. If a culture of B. Coli is obtained it shows that there is urinary infection.

Probably all urinary cases also have bile infection excepting cystitis cases where the infection may be quite local.

Prognosis:—Immediate prognosis is good as B. Coli infection is not a very fatal disease. The ultimate prognosis is not so good for although treatment may temporarily abolish the symptoms and signs, the affection of biliary or urinary passages is likely to remain and indigestion of diet or exposure and chill may from time to time through out the patient's life bring back an acute recurrence with return of symptoms and physical signs.

Treatment:—

General Management:—The general management of B. Coli infection is the same as for typhoid and in a case of B. Coli fever absolute rest in bed with the use of bed pan must be insisted upon. The temp: of B. Coli fever is particularly susceptible to exercise and walking cases keep up their own pyrexia through the daily exertion that they make.

Diet:—In a fever case there is no need for a restricted diet as in typhoid and liquid or soft diet can be allowed freely. The patient should take plenty of milk, butter milk, curd, fruit and above ground vegetables along with well-cooked "Chapatis" eggs, fish chicken and minced meats. All articles of diet

however which tend to produce flatulence in the stomach and intestines must be avoided e.g. rice and other starchy foods dals, peas, underground vegetables, stem part of the cabbage, cauliflower and spinach. The leafy parts can be taken.

When there is associated dilatation of the stomach liquid food like milk, buttermilk, soups and broth should be prohibited and the diet should be dry and largely nitrogenous with carbohydrates only in the form of bread toast, rusks, fruits etc. When the stomach is empty liquids like water, butter milk and fruit juice can be taken freely.

Serum treatment:—Specific anti-colon Bacillus serum made by B. W. and Co. is of great value in B. coli fever cases. Its dose is from 25 to 100 C. C. but to get the best result, administration ought to be begun early.

Vaccine treatment:—This is the usual treatment for B. Coli fever but if anticolon Bacillus serum is available it should be used as well. Autogenous vaccine made from patient's own organisms grown from patient's urine is best but in biliary infection it is impossible to get autogenous vaccine and a stock vaccine made from all the strains of B. Coli to which patient's serum reacts should be used. The injections are given subcutaneously every 4th or every 8th day and a course of at least 8 to 10 injections is required. The initial dose is 100 millions and successive doses are increased by 100 millions each time. When the appropriate dose is reached the fever usually quickly disappears without any reaction from overdosage being produced but in rare obstinate cases it may be necessary to push the injection until the dose reached causes distinct local and febrile reaction. When this happens next injection must be delayed beyond the usual interval.

N. B.—After the disappearance of fever always 4 or 5 more injections should be given to lessen the possibility of relapse. Any return of symptoms after the apparent cure calls for another course of vaccine injections.

Medicinal Treatment:—No specific drug for the disease; so treatment is based on general principles and complications dealt with as they arise. Unload the liver at the start with a full dose of calomel or blue pill and repeat the dose of either once or twice weekly.

See that the bowels move daily and if need be give a table spoonful of Liquid paraffiin or dose of cascara evacuant or aloin pill at bed time. The common formula for the pill is:—

℞

Aloin	gr. ½
Ext. Nucis vom :	gr. ½
Ext. Belladonna.	gr. ¼
Ext. Gentian	ʒs.

M. ft. pill.

Sig:—at bed time.

Keep the kidney active by giving plenty of water, butter milk and fruit juices between the meals and keep the skin active by a daily warm bath and sponging followed by a brisk rub-down with a rough towel.

Rest of the treatment is Symptomatic:—

1. *Cholecystitis*:—Give Soda Bicarb or Soda phosphas gr. 20--30 in a large tumblerful of very *hot water* (So hot that the patient dare not drink it and can only sip it) early each morning on rise. This would keep the bile liquid and make it alkaline.

Give an alkaline chologogue mixture before meals, common one being:—

℞

Soda Bicarb gr. 10—15
Tinct Nuc's vom. Mx.
Ext: Taraxaci liq ʒss-ʒi
Infusion gentian Co. ad. ʒi.

M. ft. Mist. for a dose.

Or give an acid chologogue ½ an hour after meals. Common acid chologogue mixture would be:—

℞

Acid Nitro hydrochloric dil mx—xv
Liqr strychnine Hyd. mv
Tinct card co. mxxx,
Aq. Menthe pip ad an ʒi

Mft Mist. for a dose.

Also order a liver pill at bed time biweekly and give a small dose of antacid aperient each morning the best being 'Kutnow' powder or 'Eno's fruit salt.

If there is pain over the gall bladder apply hot fomentations or Turpentine stupes and give full doses of alkalies like soda Bicarb. When the acute symptoms have subsided prescribe bending

exercises, walks and outdoor games. Give plenty of milk, curd, buttermilk, fruits and green vegetables in the diet.

If dilatation of the stomach occurs wash out the stomach with hot normal saline each morning using a syphon tube or unload the stomach each night by an emetic.

Restrict the liquid diet and let the patient wear an abdominal support or flannel belt from below upwards which should be put on while lying down.

In the way of medicines give soda Bicarb gr. 10 with Taka diastase grs 5 immediately before meals and an acid mixture with pepsin or papain ½ an hour after meals. The prescription for the acid mixture is given below:—

℞

Acid Hydrochloric dil mx—xv
Liqr strychnine Hyd. mv.
Glycerine pepsinae ʒss—ʒi.
aq. Menthal pip ad an ʒi.

M. fit. Mist for a dose.

N. B. (Omit glycerine pepsinae while prescribing for a Hindu gentleman and never give it to a Mohammadan (patient). Prescribe papya or papain instead.

Also give a liver pill twice weekly.

Pyelitis:—For this give Hexamine gr. 10 and Acid soda phos gr. 20—30 separately each in ½ a tumblerful of water twice daily. If there is dysuria, stop Hexamine and Acid phosphate of soda temporarily and place the patient on urinary sedative mixture until the burning disappears. The prescription for such a mixture is given below:

℞

Pot citras gr. 20-30
Spt. æther Nitrosi mxxx—xl
Tinct Hyoscyanus ʒss-zi
aq, camphor ad an zi

m. ft. mist for a dose.
sig:—every 4 hrs

* INFANTILE CIRROSIS OF THE LIVER

BY

P. GOPALAKRISHNAN, TIRUVARUR.

Infantile Cirrhosis of the liver, is, as its name implies, a disease of infants under three years of age. It is characterised by fever, with enlargement of the liver, which contracts during the last stages.

This disease so far known, is only prevalent in India, especially in the Bengal and Madras Presidencies. In the latter presidency, the disease is very common in the Tanjore and Trichinopoly Districts. The older Ayurvedic Physicians, must have been aware of this, as there are still specialists in Kumbakonam, who call this "*Zora Katti*", (literally an enlarged Spleen), but no doubt a misnomer. They are supposed rightly or wrongly to possess a specific for this complaint.

So far as it is seen it is a disease more of the Hindus, especially vegetarians, than of other castes. Also it is a disease of children, born amongst richer people, who pamper their young ones. The children of the poor, who depend, for their nourishment, on their mother's milk, are less prone to the disease. The youngest age, at which I have seen an infant attacked is 7 months and the oldest 2 years and 9 months.

Statistics, as to the death rate, prevalence, the age limit etc. could not be relied upon, as most of these parents take these mites to the Ayurvedic physicians.

Cause:—The following have been attributed as causes: Congenital Syphilis, Alcoholism, Parasitic Infection, and Avitaminosis. These as causes, could not be tenable, as the disease must attack children of other castes too and also the children of the poorer classes. Infantile liver is mainly found amongst the the children of richer classes and that in the Hindus, who are purely vegetarians. Moreover, parents deny Luctic infection and alcoholism.

Can the disease be due to the ingestion of a large quantity of rice, which is the staple food of the Madrasses especially the Brahmins amongst whose children, this disease is fairly common? Probably the cause might be found in the liver, which is over-worked with excessive or faulty feeding. Indian mothers are not very regular

* Specially contributed to the Silver Jubilee issue of the Antiseptic.

in feeding their children. In many cases, we find undiluted milk being used or breast-milk supplemented with some starchy food. An excess of carbo-hydrates taxes the liver which has to cope with an increased quantity of starch. And if this over-work continues the liver is over-stimulated and a compensatory hypertrophy takes place. This is infantile liver. After some time, the liver cells degenerate as a result of overwork and contract on account of the formation of fibrous tissue between the cells.

Signs and Symptoms.—The onset of the disease is insidious. There may not be any signs to show the existence of the disease, for some time, perhaps excepting a little dyspepsia; or the child might be getting thinner, for which the mother takes the child to the doctor, who finds it out. Gastro-intestinal symptoms, such as, vomiting, indigestion and constipation appear, before we suspect the enlargement of the liver. The face wears a muddy complexion. During all this period, the child plays about and is cheerful.

Fever appears early and persists throughout the course of the disease, getting on in intensity, in proportion to the enlargement of the liver. As the disease progresses, constipation also gets marked, when, in the last stages, this becomes an anxious problem for the doctor. The stools lose their colour and with the progress of the disease, become muddy and finally white, with a bad odour.

The liver is very much enlarged and may reach below the costal margin or even the umbilicus. It is firm with a smooth surface, with its lower margin sharply defined. Later the spleen enlarges to a slight extent.

During the contracting stage, fever shoots up to 102° F or more and an icteric tinge appears in the urine, skin and conjunctiva. The poor patient usually dies of cholemia or intercurrent lung disease or of weakness.

Differential Diagnosis of the disease, is rather easy. The age of the patient, the greater enlargement of the liver than the spleen, its insidious onset, its acute course and its failure to respond to quinine are pathognomonic of Infatile Liver. Successive children of the same mother are attacked and such an history might be useful. I have purposely omitted microscopical examination of blood, as this is not available for an average country physician.

Treatment: Prophylactic treatment consists in improving the quality and quantity of the mother's milk, by suitable ante-

natal care. Vegetarians might take more of the pulses, which contain proteins. Starchy foods should be restricted from the diets of children till they cut all their teeth.

Numerous medicinal agents have been heralded as therapeutic agents in the treatment of this disease and the prevalence of this disease is a rich harvest for the quacks. It is pitiable to see the poor parents, taking their beloved children to the quacks, who promise to cure this disease with three doses of a divine medicine and that for a few annas!

Treatment can be divided into Medicinal, Dietetic and Hygienic. The anxious problem before the doctor is the obstinate constipation. For this condition Vegetable cholagogues are preferable. Hyd-cum-cretae, in divided doses, might be given thrice daily; and Pulv Rhei co or Soda Sulphate weekly.

Kalmegh is supposed to be a specific in this condition. It may be given as a fluid extract in doses of 10 to 20 mm. I give below the treatment adopted by me in 18 cases. Some of these cases were not followed up, so that I cannot give the curative value of this treatment.

At 7 A.M., a teaspoonful of the juice of Mamordica charantic, (Pavaccai) or Raphamus Sativus (Radish) is given with a pinch of salt; Ext. Kalmegh Liquidum in doses of 10 to 20 mm. according to age, thrice a day. At 10 ' olock, night, Hydrgiri, the size of a pea is massaged over the liver region; the child then gets a bath in salt-water. Indian physicians use kalmegh and chiretia (and probably some other herbs) boiled in caster oil, for this condition.

When jaundice supervenes, salines and cholagogues. When, in the later stages the child passes blood in the urine, adrenalin, or the juice of the fruits of opuntii Dellinii (Nagathali).

It was customary to give Pot. Iodide and quinine. This combination gives no benefit.

Dietetic: The proper food of the child is the mother's milk. Whenever this is not possible, such as, when the mother is suffering from a debilitating disease, a healthy wet-nurse might be employed. Humanised cow's milk, ass's milk or goat's milk are also good substitutes. Goat's milk should be filtered through half dozen layers of clean cloth and given in an un-boiled state, with a pinch of pepper.

Hygienic treatment consists in sending the mother and child to a dry and elevated place, preferably near the sea. The child must not be over-burdened with clothes and allowed to have slight exercise. A daily bath in sea-water or water in which a handful of common-salt is dissolved, followed by a vigorous rub, is beneficial. The child must not be exposed after a bath. Lime-juice, orange juice or pomegranate juice should be given for their vitamin contents.

The treatment sketched above could not be designated as a specific one, but it has given me gratifying results, though some of the medicines suggested, might not be orthodox.

THE AFTER-CARE OF THE CONSUMPTIVES *

BY

S. K. BASU, M. B.

Chaukamba, Benares City.

The problem of the after-care of Consumptives, really concerns those that are in straitened pecuniary circumstances and consequently have to seek some employment or occupation for their livelihood, after they have been successfully treated in a Sanatorium, health resort or at home. For those lucky few who are in easy circumstances and hence are spared the struggle for bread in our present day economic conditions of life, proper medical guidance as well as a training about their future mode of life are all that is necessary to avoid a future break-down. But this problem of after-care does not concern the consumptives alone; for the man disabled by heart disease, arterio-sclorosis, emphysema etc. or by wounds received at the war or by accident needs the same care for his future well-being. In fact, it concerns all those disabled by disease or accident.

The frequency of relapses in the recovered consumptives, occurring among those living in an unsuitable atmosphere or home conditions or among those employed in unsuitable occupations, has added to our experiance, and the medical profession is now beginning to realize that the treatment of Pulmonary tuberculosis is in a sense incomplete without proper arrangements for the after care of such patients. Our duty does not end with the achievement of general improvement in the patients. In so far as we are unable to provide a suitable occupation in a suitable atmosphere

*Specially contributed to the Antiseptic.

or to restore the working efficiency of the poor patients, we fail to achieve a real cure in our treatment of the disease. The heavy expenses incurred by the treatment of the disease in a Sanatorium are not amply paid for, unless supplemented by the development of a tubercular Colony, which is calculated to add to the success of the Sanatorium treatment, by providing suitable employment in a healthy climate to the recovered consumptives, as well as to supplement the work of the anti-tuberculosis dispensaries by preventing the spread of the disease.

The ravages that the disease leaves behind on its victims, render them unfit to maintain health under certain conditions of life. They disable its victim for any work requiring severe exertion, render him unfit to undergo the strain involved in the present day struggle for bread, in the hot dusty atmosphere of congested cities. The degree of the resulting disability depends upon the stage at which the disease is treated. The greater the extent of the disease, the less the chances of restoring the normal working capacity of the individual. Thus it is, that the choice of occupation grows narrower with the degree of disability resulting from the disease. Moreover, the feelings of disdain and horror with which the disease and its victims, are looked upon by the public drive the recovered consumptive from pillar to post, in his effort to find a suitable employment. He is thus handicapped in more than one way for having unfortunately fallen a victim to the disease.

The future well-being of the needy consumptives will depend upon (*a*) the extent to which we are able to provide them with suitable employments, (*b*) the degree to woich we are able to restore their working efficiency and (*c*) the training we are able to impart regarding the mode of life they should lead in future and the things they should particularly avoid.

In trying to provide suitable employment we should remember that all occupations involving an open air life (particularly in rural areas) e. g. gardening, agriculture, nursery, farming etc. etc. are very suitable for consumptives, whereas those requiring hard or prolonged labour or exposure to the hot and dusty atmosphere of the congested cities are positively harmful.

Various schemes have been devised to solve the problem of the aftercare of Consumptives, which have for its aims: (1) the restortion of the working efficiency of the patients (2) to impart vocational training as well as training regarding their future mode of life.

A. *Physical Training*:—The introduction, by Marcus Patterson of Graduated exercise in the Frimley Sanatorium, with a view to restore normal working capacity of the selected few, marks a distinct advance in the treatment of the disease. Unfortunately only the very earliest cases are considered fit for such a training.

B. *Technical and Scientific Training*:—On such subjects as tailoring, Carpentry, Card-board craft, book-binding, clay modelling, Photography, painting, knitting, darning, haircutting, boot-making and repairing etc. etc. works have been started in some of the most modern American Sanatoria, in order to enable the patients to earn their livelihood after they leave the Sanatorium.

C. *Special Workshops*: providing suitable work to the patients are under trial.

D. *Health Colonies* have sprung up in the West, and a number of industries are carried on here by the convalascent consumptives. It may be urged that such expensive schemes for training and employing the disabled persons are admirable from a philanthrophic point of view but are not practicable and too expensive to be undertaken here (in India) at the present moment. But at the same time there is no gainsaying the fact that un-employment has led and is leading to physical inefficiency and moral degradation and that the absence of segregation of the consumptives is playing an important role in the spread of the disease. Hence unless adequate measures are taken to provide needy unemployed consumptives with suitable occupation as well as to check the spread of the disease the nation will be robbed of its strength by the enormous loss of lives and the entire potential worth of the unemployed consumptives. And it is probable that many a jewel among us may be carried away by the disease or lost in oblivion from want of employment or recognition of their talents.

In an agricultural country like India where the bulk of the population depends on land and cattle for their livelihood, the solution of the un-employment problem is to be sought in the utilisation of the fertile soil and its manifold natural products to their best advantage. The selection of an extensive area of arable land (a large village) in a healthy cool climate preferably adjoining a Sanatorium—with neat bright and airy huts, cottages and buildings built on it by the Government or the public to let on rent, with a view to colonise it with the convalascent consumptives, by granting every one the rights of a land-holder or tenant over the

piece of land alloted to each, is in my humble opinion, one of the practical solutions of the problem of a tubercular health Colony which will incidently provide graduated labor and training to the Sanatorium patients. Later on, as the inhabitants of the village swell in number, the demand for the necessary commodities of life, is likely to lead on to the development of shops, market schools, dispensaries and hospitals etc. etc. by the mutual effort and co-operation of the Government and the inhabitants of the colony. Among the inhabitants may be found sweepers, cobblers, barbers, tailors milkmen, washermen, servants, cooks, carpenters, brick-layers, cultivators, shop-keepers, gardeners, coolies, clerks, teachers, nurses, the mid-wives, doctors and other men and women—every one of whom will help in ministering to the needs of a society and at the same time find an occupation to earn his bread. From the flocking of the heterogenous people belonging to the numerous occupations in life will thus grow up an organized tubercular colony with its shops, markets, dairies, school hospital, and dispensary etc., Factories, workshops and various cottage industries may spiring up, in course of time with the aid and co-operation of the Govt. and the wealthy philanthrophists of the country provided a sufficient number of technically qualified consumptives are found among the inhabitants, to carry on the work of the cottage industries and factories. The lure of the enancy rights and lucrative employment in a healthy cool place enjoying the benefits of education, sanitation, commerce and industry on a small scale is calculated to induce the really needy among the convalascent consumptives to come and settle in this remote colony with wife and children. by deserting their homes even if necessary.

But the best solution of this problem of the after-care of consumptives lies I believe, in the early detection and treatment of the disease, whereby the percentage of disabled persons resulting from the disease will be much lessened and ultimately disappear. And I feel confident that it is only by our ability to detect the very onsets of all chronic diseases, that we can hope to banish in future all disabilities resulting from such diseases. But until measures are taken or newer and easier methods are forthcoming for the early detection of the disease, the only course left to the public is to look upon the consumptives with a more sympathetic eye and endeavour to provide them with suitable occupations in a good climate as far as practicable, in preference to other healthy persons.

CASES AND COMMENTS.

HEDYOTIS AURICULARIA Linn., N. O. RUBIACEAE.

IN

COLITIS with Special reference to HUMAN AMOEBIASIS.

BY

CAPTAIN P. R. BHANDARKAR, L. M. & S., MADRAS.

This plant has a local reputation in South Kanara as a therapeutic agent in bowel complaints. It is used as a household remedy, green leaves and roots being boiled in conjee and soup intended for invalids having bowel complaints. It is also used in the same form as a general prophylactic, being periodically served to the whole family during the South West Monsoon (June to September) when diarrhoea, dysentery and enteric prevail on the West Coast. It is also used by some practitioners of indigenous medicine as a decoction of fresh plants in which they dissolve their pills or powders for diarrhoea and dysentery.

Having for years known this use of the plant, I tried it in the crude state,—fresh green leaves ground fine with cummin seeds and omam into a thick paste and made into boluses in some chronic colitis cases with good results, where known pharmacopial remedies had failed to impress.This led me to take up the plant for a thorough investigation on scientific lines, regarding its chemical, bio-chemical, physiological and therapeutic properties. My thanks are due to Prof. M. O. Parthasarathy Aiyangar, M. A. L. T., of the Presidency College, Madras, for botanical identification and notes and Dr. B. B. Dey, M. A., D. Sc., (London), F. I. C., Professor of Chemistry, Presidency College has taken up the chemical investigation as collaborator.

The botanical name of this flowering plant is *Hedyotis auricularia* Linn., N. O. *Rubiaceae*. It grows wild in the wet lands of, mostly, the western slopes of the Western Ghats all along the Peninsula from the Konkan southwards to the Cape and same remarks apply as to its habitat in Ceylon. It is also met with in other parts of India, with a heavy rainfall. No mention of it has been made in Watt's Dictionary of the Economic Products of India, but it was introduced in the Calcutta Botanic Gardens as far back as 1815 by Mr. Smith. The only use referred to in Literature, so far, is that the inhabitants of Sikkim eat its leaves finely cut and boiled with rice. Its local names are:—Gookee

(Nepalese), Muttialata (Bengalee), Nela-Nekkare (Kanarese and Tulu), Bhuya Nankeri (Konkani), Geta-Kola (Singhalese). (Ref: Roxburgh, Ed. Garey and Wallich Vol. I. pp. 369–370; and Flora of Ceylon, by Trimen, Part II. Page 313).

Dr. Dey has so for succeeded in isolating an *alkaloid* in pure state and a *glucoside* (?) and he has already submitted a preliminary note on his work to the Indian Chemical Society. The further investigation of the chemical, physiological and therapeutic properties of the alkaloid and of the possible glucoside is proceeding.

Hedyotis Auricularia in the crude state as above mentioned (fresh green leaves made into a bolus with cummin seeds and omam) was tried in the following cases:—

1. A.B., age 51, was suffering from a chronic mucous colitis which was diagnosed by various physicians as chronic amoebiasis, sprue, polypus of the intestine etc., and the malady resisted various treatments. He was put on this ***Hedyotis auricularia*** treatment—a bolus taken thrice daily with his routine diet for about a month and he recovered completely and has had no relapse since then—a matter of nearly three years.

2. Mic., age 57—Chronic relapsing dysentery of a year's duration. Microscopic examination of stools showed living and active vegetative forms of *E. hystolytica*. He was given a course of emetine injections and stovarsol, bismuth, kurchi, bael and simaruba internally, also calcium permanganate well diluted as drink; anti-dysenteric serum injections were given with emetine and bismuth-iodide internally. Neo-salvarsan was also tried intravenously. The patient progressed well towards recovery, complaining of slight constipation whilst oedema of his legs persisted. All drugs were stopped and he was put on *Hedyotis auricularia* treatment for a fortnight. The oedema of his legs which had resisted the above mentioned pharmacopical remedies, completely disappeared. His motions became regular and healthy, digestion improved and he has been keeping good health ever since —nearly nine months since all treatment was stopped.

3. M. P., age 19, Anglo-Indian. An advanced case of chronic amoebiasis of more than a year's duration. Vegetative forms of *E. hystolytica* said to have been traced in stools by doctors treating previously. Ten to fifteen motions daily on an average, a sore tongue and gums inflamed, sub-petechial haemorrhages (spider-like) all over lower thoracic region, a tender liver and general anasarca. All treatment was stopped and he was given *Hedyotis auricularia* alone, one bolus thrice daily with his milk feeds. This controlled his diarrhoea, started a diuresis resulting in reduction of his anasarca to a great extent and he could sleep on his right side comfortably—all this with only ten doses of *Hedyotis auricularia*. Same treatment was continued, motions fully formed, oedema fully disappeared showing extreme emaciation. The new drug was stopped and he was put on dietetic treatment. His convalescence was tediously slow and prolonged and the patient died suddenly of cardiac failure (probable scurvy complication) fifty days after treatment was commenced.

4. Baby, age 18 months, had acute and severe dysentery which resulted in prolapse of the anus on the second day of onset of the disease. She was given small boluses of *Hedyotis auricularia* along with an astringent mixture and the child recovered completey in five days. Keeping well for the last eight months.

5. Baby N., age 2 years—Had acute dysentery previously. Cured but latterly a chronicity set in with poor digestion, irregu-

lar motions and marked marasmus. He was given *Hedyotis auricularia* for fifteen days with his feeds. Improved and keeping well since.

The following cases were treated with a special extract of Hedyotis auricularia prepared and standardised after repeated tests:—

6. Mr. S., age 25, employee, Ry. workshops, Kharagpur. Arrived in Madras with dysentery. Home remedies tried for 5 days. Condition became worse with about 60 motions per day. Was given four injections of emetine in 1-grain doses with an astringent mixture containing bismuth, chalk, bael, kurchi, simaruba etc. No improvement. Was given three injections of 20 C. C. each of anti-dysenteric serum. No amelioraton of any symptoms and hiccough set in. As a last resource, was given Ext. *Hedyotis auricularia*. The number of motions fell to 10 to 15 per day within first 24 hours, pain and tenesmus reduced, as also the quantity of each evacuation with less of blood and mucus. Was advised further emetine injections by consultant Doctor but he was kept on this alone and without emetine. The case ended in complete recovery in about twelve days from *Hedyotis auricularia* administration and he is keeping fit since.

7. Mr. S., age 42.—Had acute dysentery. More than 40 muco-sanguineous motions during previous 24 hours. Had been given one injection of emetine and bismuth mixture internally. Prior to the administration of Ext. *Hedyotis auricularia*, motions were examined—vegetative forms of *E. hystolytica* living and active, found. Was given 2 dram doses of Extract every three hours. Diarrhoea was controlled, had only 7 motions during next 24 hours, more faeculent evacuations with little of blood and mucus, griping and tenesmus had ceased entirely. Motions examined next day.—a few dead and dwindling amœhæ granular in appearance. This patient related that he was subject to attacks of dysentery once a year for three years previously the present one being a particularly severe one. On the third day he passed a fully formed motion which was examined, showing a few cystic forms of *E. hystolytica*, not traceable in an examination a week later. Cured and under observation.

8. Mrs. S. A.—Acute dysentery, with blood and mucus in stools, about 15 evacuations for 24 hours. Pregnant 8 months.

Ext. *Hedyotis auricularia* given for four days in dram doses. Cured. Delivered of a boy at full term. Keeping well since.

9. E., age 5 years,-Mild attack of dysentery,-mucus only in motions numbering 6 or 7 per day. Stools examined—Cysts of *E. hystolytica and* plenty of *Balantium coli* found. Put on dram doses of Ex. *Hedyotis auricularia* thrice daily for four days. Cured, keeping fit since.

10. Baby, age 3 months, daughter of—, Capt. I. M. S., Mucous colitis, acute of 20 days' duration, resisting treatment. Was given four 1-dram doses in 24 hours. Diarrhœa controlled. Motions reduced to about 3 per day and a slow recovery along with other remedial measures as anti-dysenteric serum, sodium sulphate.

11. Baby R, age 3 years.-Acute dysentery of nine days' duration, during which emetine, anti-dysenteric serum injections had been tried. Motions innumerable and almost continuous, muco-serous in character. Motions examined—prior to giving of Extract *Hedyotis auricularia*—vegetative forms of *E. hystolytica* found. Half dram doses given every 4 hours. Perceptible improvement in 24 hours. Motions reduced to about 50 per day, quantity lessened as also the distress of the child. Was advised emetine by consultant doctor but was withheld as no living amoebae were found in stools examined 24 hours later. Extract *Hedyotis auricularia* dose doubled and bismuth salicylate and pulvis creta aromaticus given as an additional measure. Steady improvement day by day and complete recovery in about twelve days.

12. Mr. P.-Had acute dysentery which was treated and cured with emetine injections and usual remedies internally. Went to Gujerat, his native place for a change where after some time he developed vague dyspeptic symptoms and irregular motions. Reported for treatment on return to Madras, Extract *Hedyotis auricularia* administered. Symptoms abated. He is keeping good health.

13. S. C.. age 42-Uncontrollable dysenteric motions about 30 per day on an average for nine days. Stools examined—amœbæ not found: culture,-negative for bacillary; urine-albumin present. Blood-malignant tertian malarial parasites found. Had been given quinine intramuscularly, after emetine and anti-dysenteric

serum injections, suspecting dysentery to be of malarial cause. No relief as to diarrhœa. Was advised by doctor treating him to try *Extract Hedyotis auricularia.* Was given 2 dram doses of Ext. *Hedyotis auricularia every* three hours, diarrhœa was controlled in 24 hours. Had another paroxysm of fever, was given quinine injection. Extract also continued, diarrhœa was cured and is well now.

14. R. N., age 47.—Had had acute dysentery in Augst 1928 which was treated with three injections of emetine and the usual remedies internally and cured. Reported for treatment in May 1929 for impaired digestion, irregularity of bowels and wasting with general debility. Was given Ext. *Hedyotis auricularia* with carminatives. Rapid amelioration of all symptoms and steady improvement in general health.

15. Mrs. B.—Acute dysentery with small, repeated motions muco-sanguineous, ranging between 30 to 40 per day with agonising tenesmus and griping pains. Was given Ext. *Hedyotis auricularia* 2 dram doses with Tr. Opii—three minims per dose every three hours. First dose administered at about 6 p.m. Failed to report next day with specimen of stools. Subsequent enquiries,—Marked improvement before next morning and cured with the eight doses prescribed.

16. Baby, 18 months, father Sweeper, attack of diarrhœa and vomiting of 24 hours duration with intense thirst. Given 4 drams of Ext. *Hedyotis auricularia* for six doses given every 3 hours. Reported next day, absolute relief from all symptoms with two doses in hand.

The following two cases are from a report from Civil Hospital, Trichur, where Ext. Hedyotis auricularia was tried:—

17. A case of typical acute amoebic dysentery. Motions showed large numbers of active *E. hystolytica.* Emetine was withheld and the patient given the Ext. *Hedyotis auricularia* only, one ounce for six doses. In about 24 hours, the griping abdominal pains had completely stopped and the stools had lost their dysenteric characters. The patient was discharged in a week's time without any complaint.

18. Case presented itself for treatment, only after having received three injection of emetine. The case was a chronic one. Motions reported to have shown vegetative forms of E. *Hystolytica.* Emetine was withheld and the patient put on Ext.

Hedyotis auricularia only. The improvement was marked and within 48 hours of administration of the drug, when griping pains had completely disappeared and motions become more faeculent. The paient was complaining of some tenesmus which was relieved in two or three days after boric enemata. The patient was discharged, cured, in about 12 days after being put on ordinary solid diet for two or three days.

The next case is a unique one where acute dysentery supervened in an enteric fever case during its acute stage and reported by capt. Grandhi, M. B. B. S., Hon. Surgeon, Government Royapuram Hospital; Madras.

19 A woman, aged 25,—Suffering from typhoid fever developed acute dysentery during the third week. She was passing both mucus and blood. Fifty motions on the first day of onset. She was immediately put on Ext. *Hedyotis auricularia* half dram doses three times a day. The very next day, the number of motions reduced to ten, tenesmus relieved. In the course of three days dysentery stopped clinically.

In conclusion, while I am fully conscious that the cases above narrated, may not be very accurate scientifically to survive even lenient criticism, I believe that I have made out a fair case for the beneficial effects of this drug and it is my earnest desire that a critically severe and fair trial be given to Hedyotis auricularia as a drug to prove its efficacy or otherwise. It is only prolonged trial and scientific observation that will confirm whether we have found in this drug a real *specific* for eradicating an infection of the bowel with *Entamœba hystolytica* or other *pathogenic organisms.*

A CASE OF SCORPION STING

BY

K. KALYANA SUNDARAM, MEDICAL PRACTITIONER

Vaduvur, Tanjore Dt.

A female child, aged about 5 months, was lying on the floor of a house on the morning of 2nd. April at about 8 a. m, when a big scorpion dropped down from the roof near the child. The child playfully handled it when it stung the child in the left palm.

At about 10, 30. A.M. I was called on to see the child in its house. On examination I found the child in the following condition :—

The child was in an extreme restless condition semi-conscious, with perspiration profusely dripping from all over the body. The entire surface of the child was livid and ice cold. Nausea was frequently distressing with occasional vomiting of mucus and froth. Temparature was 97·5° F.

Heart was weak and rapid with a scarcely felt pulse at the wrists.

Breathing was extremely difficult and attended with the working of the Alæ nasi. The exact place of the sting could not be located.

The perspiration was wiped off and warmth was applied by way of friction with turpentine and application of fomentation with heated husks of paddy. Internally the following mixture was administered.

R/
Tr. nucis vomici m vi.
Tr. Digitalis m vi.
Liq. Adrenali Hydrochloride m vi.
Syrup aurantii ʒi.
Aqua ad ℥ss.
Ft. mist.
Sig : one teaspoonful every ½ hr.

At 11-30 A. M. The condition was the same.

Perspiration still continued. The child was no better. 2 m. Liq. Adrenalin Hydrochloride (1 in 1000) was injected subcutaneously in addition to the mixture.

At 1. P. M. There was a slight improvement. But abdomen was distended. Motion and urine were not passed. A glycerine enema was given. Bowels moved and urine was voided.

At 4. P. M. Heart became strong and the pulse improved. Recovered consciousness. Warmth appeared over the chest and limbs. The mixture was again repeated for another 4 doses.

At 6. P. M. Temperature 99° F. Warmth reappeared all over the body. Natural colour of the skin resumed. Heart and pulse were normal.

At 8. P. M. The improved condition was maintained except for a temperature of 100° F. and a disturbed sleep. Motion and urine passed.

3rd April, 7 A. M. Temparature normal. The child recovered.

Every one of us must have had occasions to treat cases of scorpion stings but only a few of us could have had opportunity to see such cases in infants. Fatal cases in elderly people might have occured but cases occurring in children must have been rare. As a whole the symptoms were more in favour of phenomena of Anaphylaxis of vaso motor types than of actual poisoning by the injection of the venom of the scorpion. It is a pity that the treatment for scorpion sting, though very common, is not specific.

"AN INTERESTING CASE FOR DIAGNOSIS"

BY

A. K. GHOSE.

M. O. Ambari Tea Estate Carron P. O., Jalpaiguri District (Bengal).

In the month of January 1929, one day I was knocked up from my bed at about 1 A. M. to attend a case. The place was very near at hand, so I lost no time in reaching there. Previous history :—

The patient, Barber by caste, aged about 27 years was very healthy and muscular. He, himself cooked his evening meal, that day at 9 P. M. At about 10 P. M. after finishing his meal, he was talking with his companion, sitting on his bed. He, all of a sudden, fell down from his bed and became unconscious. His companion thinking that he was seized by some evil spirits, did not send for me till 1 A. M. He worked the whole day as usual.

Present condition :—

He was lying flat on his bed, completely unconscious, eyes were closed and pupils, dilated ; he vomited several times—the vomit consisting of undigested rice and vegetables, taken during

his evening meal; pulse 68. p. m. and of good tension and volume; temp 99°. F; respiration 18 per minute and quite normal. Spleen 2" below the costal margin; he did not respond when spoken to; To all intents and purposes he was in deep coma. No other abnormality was noticed.

Diagnosis:—The probable diagnosis falls under the following heads:—

(1) Opium poisoning
(2) Alcohol poisoning
(3) Apoplexy
(4) Epilepsy
(5) Heat-stroke
(6) Cerebral type of malaria.

(1) & (2) The close examination of vomited matter revealed no smell of opium or Alcohol. The condition of pupils was against opium poisoning.

(3) His age and condition of his pulse were against it.

(4) Previous history was not suggestive.

(5) Was not possible under the present circumstances.

(6) He suffered from malaria on 2 or 3 previous occasions and was treated by me. So the previous history and presence of spleen were greatly in favour of malaria, but the absence of temperature was unusual in a case of cerebral type of malaria Blood examination was out of the question.

Treatment:—At last I made up my mind to try quinine upon this patient, though quite reluctantly. So at 3 A. M. I injected 10 grs. of quinine Bihydrochlor along with 5 c. c. sol. adrenalin (1 in 1000) intramuscularly. No medicine could be given by mouth. In the next morning at 8 A. M. the patient opened his eyes when sharply knocked but could not speak. Temp was 99.4°F.

At 9 A. M. a second injection of quinine was given.

At 3 P.M. The condition was much better. He opened his eyes and wanted some water to drink. He seemed to have waked up from a very deep sleep; When asked, he only replied that he could not say what was the matter with him.

At 4 P.M. a third injection of quinine was given.

After evening he was much better and took some liquid diet.

Next morning when I went to see him, he sat up on his bed, saluted me and told me that he was all right. I questioned him regarding the onset of his present illness but he could not tell anything about it.

Discussion: The rapid and unexpected response of this case to quinine therapy lends support to its being of malarial origin, but the peculiar point is the absence of high temperature. My idea is that the malaria-toxin was so virulent in this case that it paralysed the Heatcentre, so there was no rise of high temperature.

I invite discussions from my brother practitioners on this interesting case; any other particulars regarding the case will be gladly supplied.

The great difficulty that an ordinary practitioner experiences in his daily practice in a tropical country is the absence of a microscope in his possession. Sometimes malaria presents so very untoward symptoms, not described in any text-book, that one is puzzled as to what to do. The previous history and local condition help us to some extent. Sometimes it exactly resembles a case of Tetanus or meningitis. It is only blood examination that can settle the diagnosis.

AN INTERESTING CASE.

BY

DR. J. C. BAGCHI, L.M.F.

Medical officer, Durgaganj Charitable Dispensary, Purnea.

On the 15th April last I was called in to see a patient at Kumaroa about 4 miles off from this place.

The patient was a girl of 3 years of age. In what condition I saw her is given below:—

(*a*) The girl was unconscious.

(*b*) The eyes were closed.

(*c*) Temperature 104° F.

(*d*) Pulse—uncountable.

(*e*) Spleen—enlarged and hard.

(*f*) The girl had an attack of Dysentry from the beginning of illness. At first she passed stools (Blood and mucus) in 24 hours about 12 to 13 times which rose up to 50 to 60. Then there was continuous flow of stools like gruel. When I saw her, there was nothing except breathing. I observed her condition very minutely but found no movement of any part of the body. She was lying on the bed like a dead-body.

(*g*) Lungs were clear.

Treatment:—The girl was the victim since 12 days. During this period, many indigenous drugs were administered but to no effect.

Cold water was poured on the head for half an hour. But there was no movement of the body. Thinking it to be a case of cerebral type of malaria I injected Acid Quinine Hydrochlor 4 grains in 1 c.c. and Emetine Hydrochlor ¼ grain intramuscularly

6 doses of Diaphoretic mixture were given to be continued every 2 hours and 3 powders of Betanephthal gr ii dose to be given alternately. Seeing the condition I also gave up hope of her life.

16-4-29. Condition same as before. I continued the same injection and medicine. On enquiry I came to learn that there was remission of fever in the night but fever rose again in the morning.

17-4-25. Fever remissioned the previous night and rose again in the morning. There was no change of Dysentery. I went there and advised her father to pour water on her head. The girl opened her eyes but could not speak and wanted water to drink showing glass. About a glass of water was given to drink. Fever—100 F. This day I was astonished to see that the girl had an attack of lock jaw which made her unable to speak. There was no abrasion or any other injury. I could not find out any cause of Lockjaw. Medicine and injection were continued as before. Besides these, Santonin gr i and calomel gr i with a pinch of Sugar were given in the night.

18-4-29. The girl had a big motion in the morning with three round worms. Fever 99.4 F°. The girl was able to open her mouth slightly. Again Santonin gr i with calomel gr i and Sugar was given in the night. The same medicine was continued. I did not inject her this day. Condition of the patient slightly improved.

19-4-29. In the morning three other round worms came out with motion. The patient opend almost fully her mouth and began to cry for rice. Same medicine was continued. Condition better. There was still fever 99·4°. F.

20-4-29. Three round worms were expelled. This day the patient was able to sit. There were no other complaints, except fever.

22-4-29. Fever continued and all other complaints subsided. The guardian of the patient was advised to continue the mixture and the powders (Betanephthal). Spleen was reduced. At first it was hard but this day it was of soft nature. I suspected that there might be an infection of Kalaazar. I took blood for examination. Three worms were expelled this day also.

23-4-29. Blood was examined for kalaazar and found positive by both the tests of Formalin and Urea Stibamine respectively. One injection of Urea Stibamine 0,025 gm. was given intravenously with great difficulty. She had got a reaction and fever rose high and renounced. Three more round worms were expelled. In all the girl had an expulsion of 12 worms.

26-4-29. The vein was not visible. So I injected 1 gm of Stibosan intramuscularly. There was no reaction on this day. The girl was cured fully from four infections-viz-malarial fever, Dysentary, Lockjaw and Kala-azar.

The main object in writing this little article is that I have never seen a similar case before and many lockjaw cases have been treated by me but causes were different. In this case it was due to worms (Round).

A CASE FOR DIAGNOSIS

BY

J. C. BAGCHI, L. M. F.

M. O. Durgaganj Charitable Dispensary, Purnea.

3-5-29. I went to see a patient at Mahammadpur attached to this place.

Patient's name—Subai mandal.

Age	about 56
Caste	Hindu
Sex	male.

The patient was well up to 2-5-29. In the later part of the night of 2nd May 1929 he passed three motions which were of pure blood and vomited twice of the same nature. Just after passing stools (meloma) and vomiting (Haematemis) he collapsed When I saw him, he was in the following stage.—

(*a*) Profuse perspiration.

(*b*) Pulse imperceptible.

On examining him I found no enlargement of spleen and liver. There was no other abnormality in any organ.

Treatment:—Thinking it to be a case of Pernicious type of malaria (Haemorrhagic type) I injected Acid Quinine Hydrochlor 7½ grs in 1½ c.c. with 1 c.c. Adrenalin Hydrochlor intraveneously and a second injection of Emetine Hydrochlor ½ in 1 c.c. was given subcutaneously.

The following mixture was given to continue every 3 hours:—

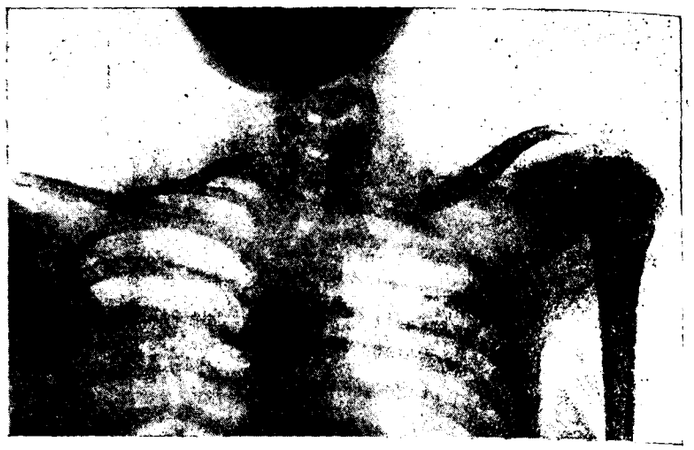
Tr.	Digitalis	m x
Tr.	Belladonna	m iv
Tr.	Moschi (musk)	m xv
Tr.	Carminative	m X
Aqua		a ℥i

Mf. mist. 6 doses. One mark to be given every 3 hours.

Just after injection restlessness was checked. This routine of treatment was able to cure the patient.

Was my diagnosis correct? If any fellow brethren have seen such a case, I hope they will kindly let me know through the journal, "The Antiseptic".

Skiagram No. I.



Skiagram referred to on p. 728.

AN INTERESTING CASE OF DEXTROCARDIA

BY

P. RAMA RAU

Medical Practitioner

Unique X-Ray Institute, 56 Thambu Chetty St., Madras

15th June.—5/254. Mr. P. B. 23 years. A young man, fairly well nourished, slightly pigeonbreasted, a graduate of the Madras University, was discovered to have the apical beat of the heart on the right side when undergoing a physical examination only a week ago. The physician Dr. K. V. Pai brought the patient to me for skiagram suspecting dextrocardia. As seen from the skiagram (No. 1) the heart is on the right side, the liver dome on the left and the gas in the fundus (cardia) of the stomach on the right side. I gave the patient a barium emulsion and took a skiagram (No. 2). I found a hypertonic stomach, the fundus on the right side, pyloric end on the left, positions of all the organs reversed, those normally on the right being on the left and vice versa. The patient physically does not feel in any way abnormal.

The Skiagrams No. I & II were taken from behind (Posterio-anterior).

CONGENITAL HIGH SCAPULA LEFT SIDE AND CERVICAL RIB

BY

P. RAMA RAU

Medical Practitioner, Unique X-Ray Institute, 56, Thambu Chetty St., Madras.

10th April.—Case No. 5/136. Miss. J. 16 years. I was called out at night to see this girl and I found her in bed with the chin well bent on the chest complaining of inability to swallow even a small mouthful of water. She had fever for two days prior to that and she had not taken anything for 24 hours before I called. Physical examination revealed only that the left scapula was abnormally high and so the shoulder on that side. She had no fever, good pulse and was otherwise alright. I gently manipulated and raised her chin and just felt as if something was released from about the sterno clavicular joint on the left side of the jugular fossa. With the chin raised manually I was able to feed her and she freely drank a whole

cup of milk in my presence. I gave them instructions to feed her with the chin well up and bring her next morning for the skiagram which is shown. Congenital high scapula left side and cervical rib. The lower end of the cervical rib had probably stuck between the clavicle and the first rib at the sterno-clavicular joint and the occlusion of the Oesophagus caused by the acute bending forward of the neck had caused the difficulty in swallowing. I referred the case to the surgeon.

COMBINED INJECTION OF QUININE AND EMETINE IN A TYPICAL CASE OF MALARIA WITH DYSENTERY.

BY

M. N. PALADHI, L. M. F.

M. O. Taporan R. K. Hospital, The Himalayas.

The other day I was called on for consultation of a case of high malarial fever accompanied by an obstinate type of Dysentery.

The attending physician told me that the patient got high fever 10 days ago with cold, rigor, sweat—the leading signs of malaria. The temperature rose up to 104°Fah. at 3 o'clock in the day time and it came down to 99°Fah. with profuse sweat at 5 o'clock at night. For two days an obstinate type of amæbiasis with intense tenesmus and blood in the mucus stools occured. The number of mucus stools in a day being 80 to 90 times. The temperature gone up to 104·4°Fah. Pulse slow and feeble. The patient was bed-ridden and of a drained physic. Intense thirst and insomnia added to the restlessness of the patient.

The attending physician gave 30 grains of Quinine sulph. orally and gr. ii. injection of Emetine hydrochlor subcutaneously but there was no marked abatement of the symptoms. Hearing this I was rather puzzled and was at a loss what more to do.

It occurred to me to try an injection of Quinine and Emetine conjointly intramuscularly. Having settled this I injected 1cc. of Quinine Bi-hydrochlor and 1cc. of Emetine hydrochlor intramuscularly in the Gluteal region. In the evening a man from the patient's house informed me that the patient's condition is markedly better. Next day I injected the same thing and gave mist oil Recini with m x of Tr. digitalis orally. Having administered in this way for 4 days the patient got almost cured. Next I omitted the injection and went on with the oil Recini mixture. The patient got cured in 10 days. Now I ask my brother practitioners to try this method of treatment and report the result in this Journal.

AN UNUSUAL REACTION AFTER IODINE INJECTION

BY

R. NARAYANA RAO, L.M.P.,

Sub-Assistant Surgeon, Pudukkottai.

A female patient aged about forty years an inpatient in our Hospital for Pyaemic abscesses was running an irregular temperature ranging between 100° and 103°. On the evening of 6-6-29 she had a rise of temperature 103° and an intravenous injection of Iodine solution ½ c. c. diluted with 5 c. c. of distilled water was given on the same evening. At about 7 P. M. the patient grew restless, passed two motions very offensive but not broad and vomited once about three ounces of fluid which was tinted light blue. On examination I found her unconscious, having nausea, eyes congested, fingers of the hands clenched, profusely perspiring, body cold to touch, temperature 96·5° (axillary) pulse imperceptible and respiration shallow.

I gave her hypodermic injection of Adrenaline chloride solution (1 in 1000) 1 c. c. and after about 10 minutes an injection of Atropine Sulphate 1/100 gr. Continuous inhalation of Spts. Ammonia Aromaticus was g iven for about an hour. At about 8 P. M. the pulse was perceptible but was very thready. Another injection of Adrenaline Chloride 1 c. c. was repeated and a dose of stimulant mixture was given. The pulse began to improve steadily and at about 9 P. M. the volume was fair, patient conscious but still restless. She was carefully watched throughout the night, slept well after 12 P.M. and was quite alright when seen early next morning.

(The Iodine Solution was freshly prepared, 1 c. c. of the solution containing ½ gr. of Iodum. The same solution was injected to two other patients on the same day but none of them showed any reaction).

I have not till now heard of or seen such a reaction after an injection of Intravenous Iodine, hence I call it an unusual reaction and publish these notes.

I am very much thankful to Doctor M. G. Ramachandra Rao, M.B. & C.M., Chief Medical and Sanitary Officer, Pudkottah for permitting me to publish the same.

TREATMENT OF ERYSIPELAS WITH MAG-SULPH.

BY

B. L. SHARMA L.M.P.

M.O. Chunar, U.P. E:I.R.

In my practice I have found the saturated solution of mag-sulph. very efficacious in the treatment of Erysipelas, and Eczema, by local application.

The following is the account of a case of Erysipelas treated by me with this solution :—

The patient was aged 40 years, and on my visit he had the disease on the face. His entire face was badly affected and swollen. Eyes were closed on account of swelling, he was unable to speak, had high fever-105 F and was delerious.

Pulse was very weak, bowels constipated, and he had no sleep. In addition to Erysipelas he had rodent ulcers on both the cheeks for the last 6 years.

Before coming under my treatment the patient remained under the treatment of his Railway Doctor for two days.

In addition to a full dose of Calomel to start with, and cardiac-tonics t.i.d. the local treatment done by me was as follows :—

Twenty pieces of gauze-equal to the size of the affected area were dipped in the saturated solution of mag-Sulph and placed on the part layer upou layer.

The under most piece of the gauze-direct in touch with the skin was removed and thrown every hour, and the remaining pieces again dipped in the solution and applied on the face.

On the second day the swelling was half gone, and the general condition improved much and fever came down by two degrees.

The same treatment was repeated the second day.

Third day the swelling totally disappeared, the patient was feeling much better, temperature came down to 99 F. and the general condition improved further.

Third day I simply applied on the face i. in 7. Ichthyol and Rect-ified-Spirit on a piece of gauze, to be changed twice only in 24 hours. Fourth day the patient was quite free from the ailments.

The most striking and surprising result of this treatment was that the Rodent Ulcers-which were defying all the treatment for the last 6 years, were aiso totally cured, and the face of the patient was quite clear as if he never had these Ulcers.

The patient remained with me at that station for about 12 months and during this period he never had the reappearance of the ulcers on his face.

I think Mag-Sulph. is worth giving a fair trial in such cases.

The Antiseptic

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POST-NATAL MATERNAL CARE—ITS IMPORTANCE

It is perhaps within the experience of most of those who work with diseases peculiar to women to find that parturition is responsible for a considerable number of Gynæcological diseases. It therefore naturally means that a woman's well-being in later life to a great degree depends on the skill and care with which childbirth is conducted. It also depends greatly on a careful supervision of the patient's convalescence and a proper attention to the process of involution and repair so as to restore a maximum degree of bodily efficiency.

The encouragement of the convalescent period immediately following labour has become so standardised that it is only necessary to re-emphasize certain important principles. The maintenance of asepsis, the establishment of lactation and an insistence on an adequate period of rest, an investigation of the condition of the perineum, cervix, uterus and appendages and the giving of advice in regard to the immediate future of herself and her infant are duties which are too well known to require any special stress. We shall next consider those troubles which are often the result of labour and which if neglected often result in serious gynaecological troubles later on. Retroversion is probably the commonest and most important of the conditions encountered. Subinvolution is probably the commonest cause of this condition. It is probably also true that retroversion itself adversely influences

involution for it is found that in most cases that correction of the displacement is followed by diminution in the size of the uterus and a disappearance of the persistent red vaginal discharge. It has also been found that where the lower uterine supports were relaxed, multiparity and difficult labour were also etiologic factors for retroversion which in these cases, is usually accompanied by partial prolapse of the uterus. Early rise and hard work too soon after confinement also probably act in the same way. The symptoms which result are sometimes difficult to define. Low sacral backache, general pelvic discomfort and prolonged red lochia are present in most of the cases. When the displacement is first noted early it can be corrected and retained in position by means of a Hodge pessary. After an interval of six weeks the pessary should be removed. If the uterus has remained in good position the patient should be given advice and asked to come again if symptoms recur. If the displacement has recurred, pessary treatment is continued for six months. But one great difficulty is, that symptoms in the early stages are so slight and indefinite, that the condition is undiagnosed until such time as its cure by non-operative methods becomes useless.

Laceration of the cervix is a common legacy of the "failed forceps" type of case, and of all cases where either because of maternal or fætal distress forceps had to be applied before complete dilatation. In a small number of normal cases also lacerations of the cervix do occur. Here the membranes rupture prematurely and as a consequence the hard head, which takes the place of the bag of waters, dilates the cervix, with a resultant long dry first stage of labour. The immediate symptoms are hæmorrhage and if severe those of the resultant inflammation of pelvic cellular tissue. The best treatment is obviously to immediately repair the laceration. Other methods in vogue include douching, tamponage, local application of Silver Nitrate and the application of a cautery. In a few cases of extensive injury a plastic repair with excision of infected tissue has been recommended.

Subinvolution is another condition frequently met with. Persistent red lochia was present even up to the eighth week after delivery. In most of these cases labour had been difficult or instrumental and associated retroversion and cervical infection were common. Occasionally, this also results from constipation and resultant pelvic congestion. In a few cases retention of fragments of placanta or membranes was the cause. It will not be out of

place to point out the importance of lactation in promoting involution. The treatment of subinvolution is directed in the first place to the correction of such accompaning conditions as retroversion, cervicitis, constipation or retained products of conception. Where the condition is associated with a residual pelvic infection a course of douching and vaginal tamponage is commonly employed. Ergot and Quinine in some form will act as an adjuvant in stimulating involution. Curettage in obstinate cases may be necessary.

Backache is another common complaint which usually follows confinement. Where uterine displacement, cervicitis or other pelvic trouble is the cause, the pain is invariably directed to the sacral region. In a very small proportion of cases the backache can be related to a visceral lesion. In the majority of these cases of backache the disability is more often orthopoedic than gynaecological and is the result of postnatal defects due to the exaggerated lordosis incident to the later months of pregnancy.

Apart from the above mentioned common obstetrical sequæle there are other cases which require a prolonged period of supervision and treatment after delivery. Such are those in which pregnancy has been complicated by heart disease, venereal disease, albuminuric toxaemia, anaemia, etc.

THE SILVER JUBILEE OF THE ANTISEPTIC (APRIL 1929)—A FEW MORE REVIEWS

The British Medical Journal, London (29 June '29).—As previously mentioned in these columns, the monthly medical Journal known as 'The Antiseptic' recently completed twenty-five years of existence having been founded by Dr. U. Rama Rau, with the late Dr. T. M. Nair as its first editor. Dr. Nair continued as editor until his death in 1919. The April issue of this periodical takes the form of a Silver Jubilee number, and Dr. U. Rama Rau, the present editor, contributes an account of its history with special reference to the interest that has been taken in the welfare of assistant medical officers. At its inception there was no considerable scientific medical Journal in South India, and, consequently, it carried a heavy load of responsibility as regards the publication of Medical research and the championing of various causes; one of the first of these was a defence of vaccination against an attack based on a case of death due to the subsequent infection by tetanus of a vaccination wound. Other matters of public interest with which "The Antiseptic" has concerned itself are: medical education in India and the establishment of a register; sanitary conditions in large towns; hospital

abuse; and various medical problems in the Madras Presidency. The Silver Jubilee issue contains messages of congratulation from prominent medical practitioners in Great Britain as well as in India.

The Indian and Eastern Druggist, London (July '29).—For twenty-five years *The Antiseptic*, now one of the most widely read and appreciated medical journals published in India, has played an important part in the advancement of medical and surgical science in that country. The April number of the journal constitutes its Silver Jubilee Issue, and to celebrate the occasion the editorial and publishing organisation has produced a volume which is in every respect a "bumper" one.

The Antiseptic was founded by the late Dr. T. M. Nair, and the present joint editor, the Honourable Dr. U. Rama Rau, is represented in this issue by a most interesting contribution entitled "*The Antiseptic* through a Quarter of a Century," in which the origin, progress and development of the journal is reviewed.

An appreciation of the life-work and qualities of Dr. Rama Rau is contributed by his friend, Dr. S. A. Jegaraya Mudaliar, who describes and pays tribute to Dr. Rau's activities in medical journalism, ambulance work, health propaganda and in the legislature. In addition, the issue contains an unusually large number of original contributions of medical, surgical and scientific interest, and a sheaf of messages of congratulation from men eminent in medicine and surgery in all parts of the world as well as from the medical press. These features combine to make the Silver Jubilee Number of *The Antiseptic* an outstanding achievement and a most admirable souvenir of an important landmark in its history.

Patna Medical Journal, Patna (July '29): —We have received the Silver Jubilee Number of *The Antiseptic* in April and are glad to note the immense work it has done during its 25 years' service in India.

It contains a brief resume of the work done in a quarter of a century, messages of congratulations from eminent people, greetings from the press throughout the world, good wishes from the advertisers and original articles on the history and development of of the various branches of Medicine. "Recent Advance in Practical Obstetrics" by P. C. Dutta, "Progress in Psychiatry" by Frank Noronha, "Some Newer Conceptions in Organotherapy" by Dr. H. C. Menkel, "Recent Advances in Vitaminology" by R. K. Paul, "Prognosis in Rectal cancer" by Lockhart Mummery are some of them.

The number contains many illustrations as well as portraits of the founders and contributors.

We heartily congratulate Dr. Rama Rau on his untiring work, and the nice get-up of the Journal. As it is a mine of information we suggest that every medical man in India should possess a copy which costs Rs. 2 only.

Indian Medical Journal, Calcutta (July 29):—Antiseptic Silver Jubilee Number:—We must congratulate our contemporary for the 25th Anniversary which it has just completed because successful journalism in this country for such a length of time is not very frequent. The number deals with the history of the Journal since its foundation till the present times. It deals with the life sketches of Hon'ble Dr. Rama Rau and Late Dr. Nair. Many eminent medical men, official and non-official have sent their benedictions for the Journl which find place in it. All credit for the successful management of the Journal goes to Hon'ble Dr. Rau and Dr. Krishna Rau his son and we wish them and their Journal a further progressive career.

CURRENT TOPICS

SURGERY

Diagnostic significance of Abdominal Pain.—William M. Bailey, M. D., Forney, Texas. Texas State Journal of Medicine May 29.

The writer derives the following conclusions after discussing in detail the diagnostic significances of abdominal Pain:—

(1) The embryologic development of organs in the mid line accounts for the mid line character of the pain.

(2) Abdominal pain is of two classes (1) the pain of irritation, causing deranged function, and (2) the pain of inflammatory exudate, causing suspended function.

(3) Pain impulse is absent in organs containing no muscle fibres, and is present in those containing non striated muscle

fibres when balance between contraction and relaxation is disturbed.

(4) The pain of irritation is characterised by hyper motility, hyper secretion, and hyper toxicity.

(5) The pain of inflammatory exudate is characterised by segregation, localization, spasticity, and permeation of anatomical barriers.

(6) Confusion of symptomatology is principally caused by coincidence of two or more conditions.

(7) Gastroduodenal ulceration is characterised by pain with a definite relationship to the intake of food, periodicity and chronicity, and the time interval depending upon the position of the ulcer.

(8) Signs of biliary disease of infective origin are divided into three types, according to the sites of occurrence: (1) reflex gastric symptoms, when the disease is confined to the gall-bladder; (2) colic, when in the cystic duct, and (3) colic, plus jaundice, plus fever, when in the common duct.

(9) Appendicitis in the first stage, an irritation within the non striated muscle tube, is characterized by the three "hypers", above the point of irrritation; in the second stage, by localised tenderness, rigidity and cessation of the three "hypers". Because of its mobility, inflammation of the appendix may cause conflicting symptoms by extensions of irritation to the ureters, right upper quadrant, fallopian tubes, and so forth.

(10) Pancreatitis is probably a frequent cause of reflex biliary and gastro-intestinal disturbances. The symptomatology of acute hæmorrhagic pancreatitis is caused by the activation of its secretions on and impingement upon, the solar plexus.—V.C.S.

Chronic otorrrhoea its treatment witk calot's solution.—I. Harric, M. D. (Tor.) C. M. A. J. May 1929.

The writer discusses in full the value of calot's solution in the treatment of chronic otorrhoea, and its usefulness in the carefully selected cases.

Perhaps the best medicament ever employed in the treatment of chronic otorrhoea is a mixture known as calot's. The composition of this mixture is as follows.

Guaiacol	1·0
creosote	5·0
Sulphuric ether	30·0

Iodoform	10·0
Olive oil	70·0

The action of the various ingredients is explained as follows: that guaiacol and creosote have a caustic action on the exuberant granulations in addition to their antiseptic properties, Iodoform besides being an antiseptic acts also as a very good cicatrizant. Ether serves to dissolve the fatty components of the discharge thus allowing the more active constituents a more intimate contact with the diseased tissue. The instillation of this mixture produces active diapedesis of the polymorpho-nuclear leucocytes. Under the influence of this mixture the character of the discharge undergoes marked changes; from a thick mucoid secretion it becomes, thin, serous and brownish in colour. Before this treatment is given the ear is thoroughly cleaned of all secretions. Five to ten drops of Calot's solution are instilled into the affected ear. To get the disinfecting fluid into the Eustachian tube, the well known expedient of tragus massage is given. This method consists in closing the external canal by presssing the tragus well over it and bringing alternate pressure to bear upon it so as to effect a pumping action on the mixture.

This procedure is carried out every night for a week by which time the secretion changes to a thin serous nature. When this thin secretion diminishes in amount, the calot's solution is discontinued and boric Acid insufflation is used.

Very good results have been recorded by the writer by the use of this solution.

The writer concludes by saying.

(1) Calot's solution, while not a panacea, is exceedingly efficient when employed in properly selected cases of Otorrhoea.

(2) This solution should be tried in cases of chronic osteitis before deciding on radical mastoid operation.

(3) The basis of its efficiency in the treatment of chronic otorrhoea, as described in Fotiada's original article, makes one believe that it deserves at least a fair trial in most cases of prolonged aural discharge.

(4) It is of very little value in those cases complicated by cholesteatoma.

(5) Its use must be intermittent, insulfflation of Boric or Zinc oxide powder being used to round off the treatment.

(6) Most cases of otorrhœa, not due to cholesteatoma and not on the basis of lues, diabetes, local malignancy, or actino-mycosis, respond readily to its use.—*V. C. S.*

Hematuria:—O. R. Gregg. M. D. Enid, J. O. G. M. A Maysey lays stress on the importance of hematuria as a cardinal symptom. The frequency of hematuria is most common in adult life, yet it is frequently found in nursing infants. It is more common in males than in females. Hematuria may arise from the Kidneys, ureters, bladder, or from the urethra.

The most common cause of hematuria arising from the kidney, is tuberculosis. The writer's keynote symptom is the frequent painful urination particularly at night, with a very acid urine. The following five points are considered by the writer as confirmatory in diagnosing tubercular affection of the Kidneys.

(i) Frequent painful urination at nights with acid urine.

(ii) Hematuria and pyuria.

(iii) Microscopical evidences of the bacilli.

(iv) Urological examination (cystoscopy, uretral sounding &c.)

(5) Inoculation experiments on guinea pigs. Stones are described as the second common cause of hematuria, which are diagnosed easily by X. Ray aided by pyelogrames and opaque catheter to confirm the locality.

Neoplasms and pyelitis also very often produce hematuria.

Nephritis due to irritants as phosphorous, turpentine and exanthema, like scarlet fever, typhoid, small pox are frequently accompanied by hematuria. The presence of albumin, casts, and constitutional symptoms make the diagnosis easy.

The two principal causes of hematuria arising from ureters are stones, Kniks or strictures. Diognosis is made by uretrogramus and the X-Ray Catheter.

Malignant diseases of the bladder are quite a common occurrence, which promote hematuria, and such growths may be diagnosed easily by a careful cystoscopic examination.

Hypertrophie adenomata, carcinomata, tuberculosis are the chief causes of bloody urine arising from the prostate. Little difficulty is encounterd in making a diagnosis with the finger in the rectum and a sound or cystourethroscope in place.

The hard, bony, stony prostate with nodules particularly at the lower angle of the prostate in an old man means cancer, while nodules in this locality in the young man should be held suspicious of tuberculosis, until absolutely proven otherwise.

Hematuria from the urethra usually follow gonorrhoeal infection of the urethra or its sequelæ namely strictures, ulcers and various other soft growths.

Blood from the gummata in this region is not an uncommon occurrence:—*V.C.S.*

The Prognosis in Mastoid Disease.—E. Watson Williams, Practitioner **112**: 36 (Jan.) 1929.

1. Primary mastoid disease is especially prevalent during early life and is not rare even in nurslings.

2. The mortality in mastoid disease is largely the result of delay in treatment, and is therefore preventable. Sigmoid sinus thrombosis is the most frequent of fatal complications.

3. **Apart from existing complications, practically the only operative risk is that of the anesthetic.**

4. **A dry ear and good or at least fair hearing should result from operation in almost every case of primary acute mastoid disease suitable for the Schwartze operation.**

5. Operation should result in a dry ear in 80 per cent of the cases of chronic mastoid disease. When the Schwartze operation is suitable, the same proportion of patients should have at least fair hearing.

6. After the radical operation, good hearing is the exception; 80 per cent of the patients should have dry ears, while actual otorrhea is unusual. In many cases, one can expect a material gain in general heaith as well as relief of local symptoms.

7. Associated disease of the nose and nasopharynx is frequent and requires treatment.—*A. J. D. C.*

Urethritis not Due to Gonorrhoea.—According to J. Wendlberger (*Wien. klin. Woch.*, March 21st, 1929, p. 368) non-gonorrhoeal urethritis is not very rare. He has recently seen three cases in young men who denied any previous venereal in-

fection. Bacteriological examination of smears and cultures showed the presence of staphylococci and streptococci, pneumococci, and *B. coli*, as well as other bacteria which occurred occasionally. Less uncommon were pseudo-diphtheria bacilli, accompanied by a greyishwhite discharge. In the first case diphtheria bacilli were associated with staphylococci and pseudo-diphtheria bacilli. No gonococci could be found on repeated examination of smears and cultures. In every case the urethritis was very intractable, and each patient exhibited similar symptoms and bacteriological findings. The author considers that the discovery of true diphtheria bacilli in the male urethra is deserving of attention, and the possibility of this infection should not be overlooked. He refers to the analogous cases of diphtherial conjunctivitis and of diphtherial vulvo-vaginitis in little girls.—*B. M. J.*

Early Diagnosis and Early Radical Operation in Tuberculous Lymph Glands of the Neck.—John Hanford, New York State J. Med. 29: 1159 (Oct. 1) 1928.

For the past twenty years, surgery has been giving way to more conservative forms of treatment for tuberculous adenitis. While heliotherapy, removal of foci of infection, diet, rest, fresh air and other therapeutic measures are of value, surgery is now becoming recognized as the best method of treatment. Diagnosis must be made early and the patients given skilful surgical treatment. At the same time rest, fresh air and other measures commonly used may be carried on. More than 400 cases of tuberculous adenitis have been studied in the special clinic of the Presbyterian Hospital (New York City); in about 74 per cent the condition was beyond the early favorable stage. In the study presented of 69 children, aged 15 years and under 62. 4 per cent were found beyond the favorable stage. Only five were in an ideal stage for clean successful operation.

Early diagnosis is made possible by considering glands from 1. 5 to 2 cm. in diameter suggestive if they have persisted from six to eight weeks without evidence of much acute inflammation. Sterile cultures of "pus," examinations of sections of removed tonsils, roentgen examination and biopsy, especially, are of great value. Biopsy should usually consist of a complete redical excison. Tuberculin skin tests cannot be relied on in these cases.

This study confirms the evidence that radical excision in patients with localized tuberculous cervical adenitis gives

apparently permanent cures in 90 per cent so treated. The earlier the diagnosis, the better is the result. Iodine and other local irritants induce and hasten the spread of the disease.

The operation should be done as soon after the diagnosis is made as possible, in order to avoid possible extensive liquefaction which may occur in two or three days and which will interfere with the good results.

The Diagnosis of Renal Tuberculosis.—E. Z. Shapiro. M.D. (*Minnesota Medicine*, May, 1928), begins with the statement, "The development of a tubercle is the same in all tissue whether it be in lung, gland, bone, meninges or kidney. The tubercle is the tissue reaction to the Koch bacillus." The article describes the active procedure of the bacillus in general tissue invasion and deals especially with the subject of renal tuberculosis. Interesting figures are given, symptoms and methods of diagnosis are described relative to the renal type of tuberculosis and the following conclusions are set forth:

1. Tuberculosis of the kidney is a bloodborne infection following ingestion of food contaminated with the Koch bacillus or following the inhalation of air laden with tuberculosis germs.

2. Medical cure may possibly occur in favorable circumstances but the majority of cases require nephrectomy.

3. The disease occurs for the most part in the third and fourth decade. Men are twice as often affected as women and the mortality in the male is much higher, due, no doubt, to the involvement of the genitalia in the male.

4. Although guinea pig inoculation may be falsely negative in 10 per cent. of cases, the test is extremely valuable.

5. Cystoscopy shows a typical picture of congestion, edema, ulceration and tubercle formation.

6. Smear 78 per cent, and guinea pigs 7 per cent.

7. Autonephrectomy is a closed, but not cured, kidney. Danger from a perinephritic abscess and infection of the healthy kidney, as well still exist.—*A. M.*

The Status of the Treatment of Gonorrhea.—by George A. Holliday, Atlantic Med. Jour. (August, 1928).

This refers particularly to the acute stage of the disease. If the infection is thoroughly treated as soon as it appears, it lasts a few weeks only and does not become chronic. Diagnosis should

always be made by microscope, and occasionally be confirmed by culture. Nonspecific urethritis may be rendered worse by measures intended for the treatment of gonorrhea. The method of treatment will depend upon the disappearance of the gonococcus as the disease progresses. There is no chemotherapeutic or specific remedy with which to combat the gonococcus. The measures found to relieve the symptoms must be applied with a nicety of technic, lest harm be done and infection becomes worse. The gonococcus and its toxins may spread to the blood and lymph streams, and produce a systemic infection, with fever and metastasis in other parts of the body. Oral medication must not be relied upon to cure gonorrhea. Balsam and resins produce gastric and renal irritation and have no bacterial action. They are not to be used as routine remedies in all cases. Diuretics are of value only as flushers of the canal. Sedatives allay the irritability of the urethra and bladder and sexual excitement. Urotropin is irritating to the mucous membrane during the acute stage. Local treatment is the procedure indicated. The action is partly mechanical, partly bacterial, and the result ing mild hyperemia assists the curative process. Warm irrigations with weak antiseptic solutions are indicated from the start, either of the anterior urethra only or of the whole, according to the extent of involvement. It is not proper to relieve a patient from the distressing symptom of discharge by the use of astringent remedies, as lessening or disappearance of the discharge does not mean death of the gonococci. Silver nitrate solution is the best remedy for bringing forth gonococci dormant in the tissues. Massage must never be done until the urethritis has subsided and the urine is clear. Sounds and dilators are not indicated in an acute infection:—*J. P. I. M. A.*

MEDICINE AND THERAPEUTICS.

Vomiting in Infancy:—Ling (B.M.J.) is of opinion that vomiting is a very common symptom during first few months of life and one about which mothers are very anxious. He considers vomiting in this age under five headings. (1) Vomiting from birth. This should be regarded seriously as a congenital obstruction of duodenum is a possible cause. Surgical interference is indicated. Some cases of congenital malformations of oesophagus produce intractable regurgitation. In these cases treatment is of no avail (2) Vomiting of acute onset. This accompanied by diarrhoea suggests infection in gastro-intestinal tract. Parenteral infections like pyelitis, bronchitis and otitis media produce exactly similar symptoms. If gastro intestinal in origin a preliminary

dose of Castor oil—a drachm for a baby of six months--followed by starvation for eight to twelve hours with salines is indicated. Diet should be corrected and must have a low sugar and fat contтent. Acute Intussusception may give rise to vomiting. The suddenness of attack and periodicity of pain and blood on examing finger in rectum will settle the diagnosis (3) Vomiting with a chronic onset. Overfeeding or under feeding is the commonest cause. (4) Congenital pyloric stenosis. The vomiting starts about third week of life and becomes progressively severe. The child loses weight and gastric peristalsis can be seen during an attack of vomiting. The best method of treating is to re-establish breast feeding, washing stomach daily with Sodium Bicarbonate (a teaspoonful to a pint) and subcutaneous saline. If these fail, Rammstedt's opera is the best method of treatment. (5) Habitual vomiting. These cases have a nemopathic family history. The best method is to thicken the feed with flour (half ounce to pint of milk mixture). Other cases improve with a chin strap used after a feed and from the use of atropine Sulpate (m. 2) and Sodium Bromide (gr. T) given in 1 drachm of water half an our before feed.—*U. K. R.*

Tuberculosis Theses.—1. An appearance of ruddy health does not exclude tuberculosis.

2. Prolonged and intimate exposure at any time of life, but especially in childhood, is vastly more important in diagnosis than "unassociated" or "noncontact" heredity.

3. Constitutional or general symptoms lead toward the diagnosis of tuberculosis, while the localizing symptoms point out the organs involved.

4. The history or presence of certain complications, as fistula in ano, pleurisy, adenitis, a discharging ear coming on painlessly, are all strongly suggestive of tuberculosis.

5. Pleurisy with effusion, not attributable to other causes, should be treated for a time as due to tuberculosis.

6. A diagnosis, tentative at least, must be made whenever an individual spits a dram or more of blood that cannot be proved to be due to other causes (e. g., mitral stenosis).

7. Symptoms indicate that a patient is sick, while physical signs point out only the mischief that has been done.

8. Symptoms without physical signs demand treatment, while physical signs without symptoms require often only careful watching.

9. Absence of tubercle bacilli in the sputum means only that bronchial ulceration has not occurred.

10. Auscultation is more important than inspection, and the detection of rales by the auscultation of the inspiration following cough is the most important procedure in the detection of physical signs of early pulmonary tuberculosis.

11. Localized rales at the apex are second in importance only to tubercle baccilli in the sputum.

12. The disease is practically always more extensive than the physical signs indicate.

13. Abnormal physical signs in one apex should be considered as due to pulmonary tuberculosis until proved not to be, while those at the base should be looked on as nontuberculous until definitely proved so.

14. The fluoroscope, the roentgenogram, and particularly stereograms, may reveal and locate pathological pulmonary changes to be detected by no other means.

15. Extensive "peribronchial" changes in stereograms may occur with slight or no physical signs, while parenchymatous changes are usually accompanied by abnormal pulmonary sounds.

Prognostic Theses:—1. Puberty and the menopause have less bearing upon the disease than pregnancy; especially repeated, frequent pregnancies. and hence marriage for women increases the uncertainties.

2. The mentality and characteristics of the patient's family, their ability and willingness to help in his recovery by self-sacrifice over long periods of time, are most important.

3. He who returns to his former occupation when congenial and not complicated by sudden great effort and so makes his living with least exertion and worry, avoids relapse most often.

4. Recovery in a climate in which a patient is to live, especially if accomplished at home, bespeaks greater longevity than immediate change of climate on arrest of disease. Climate may be only a minor factor in this effect.

5. An acute onset with extensive physical signs or with severe and protracted symptoms points to a prolonged illness or an early fatal termination.

6. The continuous gain of weight on an ordinary diet is the best indication of favorable progress, but can occur with advancing disease.

7. Digestion is the keystone of the prognostic arch.

8. Fever is the best sign of progressive disease, and its chances of disappearance are inversely proportional to the length of time it has persisted.

9. Persistent high temperature under appropriate treatment, with slight physical signs, is grave.

10. The pulse rate, together with the temperature and weight, forms the prognostic triad.

11. Uncontrollable excessive cough is the worst form of overexercise and favors a quick deterioration of the bodily resistance.

12. Physical signs tell by inference what has happened in the lungs, symptoms what is happening. The general condition is more important than the physical signs or the history.

13. Extent of disease marks the time element; intensity the acuteness.

14. Improvement, and even arrest, may occur without change in physical signs.

15. Tubercle bacilli in the sputum indicate bronchial ulceration, and the larger the number possibly the greater or more acute the ulceration, but enormous masses may occur in favorable cases.

16. Duration of treatment of less than three months is of little permanent help, while three or four years of treatment may complete an arrest.

Therapeutic Theses. 1. The treatment of pulmonary tuberculosis demands little knowledge of drugs but much about the immediate and prolonged education of the patient.

2. The marked tendency to temporary arrest or quiescence, even in advanced stages, rests upon the brow of the tuberculous evildoer like the curse of Cain.

3. The danger time in tuberculosis, the periods of the "false convalescence" of Lænnec, cannot be overemphasized.

4. The time allotted to treatment is usually too short, for recovery is ever longer than onset. The value (possibly the results) of treatment increases as the square of the time; that is, two years are four times as valuable as one.

5. At home and abroad, in the desert or on the ocean, in the lowlands or upon the mountains, patients may recover anywhere and everywhere, for it matters less where than how they live.

6. The sanatorium, the best place in which to treat patients in large numbers, has shown that permanent arrest may follow effectual treatment; the hospital has afforded evidence that direct contagion may in part be controlled, while the dispensary has become the advanced attacking line, so to speak, that carries the warfare into the enemy's camp.

7. The length of stay in these institutions depends upon the object to be attained: for permanent recovery, two or three years; for quiescence at least three months; for prevention of infection from far advanced cases, as much as possible of the time between admission and death.

8. Remember that too much food may, in the end, prove as disastrous as too litttle food.

9. Exercise should be regarded as a powerful and dangerous medicine.

10. Since the vast majority of patients must seek treatment only in the climate in which they contract the disease, the so-called climate treatment is of importance to hardly more than 5 per cent of all patients.—C. *W. M.*

Anoxemia in Peneumonia.—Arthur E. Guedel, Los Angeles, Will Shimer and John M. Cunningham, Indianopolis (*Journal A. M. A.*, 6, 1929), assert that the common-error in the application of oxygen in pneumonia has been the delay in waiting for the full development of an anoxemic acidosis with dyspnea. cyanosis with dyspnea, cyanosis and a failing heart before beginning its administration. Oxygen to be of value in pneumonia must be applied early. The time to begin oxygen in pneumonia is as soon as its application will reduce the heart or respiratory rate or will provide increased rest and comfort for the patient. An atmosphera containing from 30 to 50 per cent of oxygen is adequate to eliminate the anoxemic factor in pneumonia. It should be administered as nearly constantly as possible until well after the crisis or until its removal does not produee any sign of anoxemie

The tension or dose is regulated to meet the increased metabolic requirements and the reduced pulmonary absorption activity in each case. When the application of oxygen is begun, the patient should be assured that it is not a method of last resort but a rational therapeutic measure, whether the condition is serious or not. Oxygen therapy in pneumonia to the abolition of anoxemia accomplishes the following: It provides a higher oxygen saturation of the blood and thus lessens the heart load. It supports the functions of waste combustion and cell nutrition. It supports the aerobic stage of muscle work (reconversion of lactic acid into dextrose) and thus conserves food resources.—*N. W. M.*

Control of Diabetes Insipidus by Pituitrin, by L. E. Schwartz, Illinois Med. Jour. (1929) 55, No. 3 (March). Dr. Schwartz reports a case of Diabetes insipidus which was successfully treated by the application of pituitrin to the nasal mucosa. The technique employed is as follows: Moisten with ten or twelve drops of pituitrin a flat piece of cotton the size and double the thickness of a nickel. Take up the same with a nasal forceps or similar applicator and carry up and slightly backward of the anterior surface of either one of the middle turbinate bodies, pressing the cotton gently and firmly against the turbinate and adjacent mucosa. Withdraw the applicator, taking the precaution not to dislodge the moist cotton, and allow to remain until the time decided upon for the next application, when the procedure is repeated on the opposite side and in the same manner. Applied in this way there is no discomfort aside from a slight stinging sensation and on rare occasions a slight irritation like a mild coryza which disappears after a temporary removal of the cotton for an hour or two.

Removal of the cotton is effected by the careful use of a nasal forceps; care must be exercised not to injure the mucous membrane, and the necessary skill on the part of the patient should be only a question of practice.—*J. P. I. M. A.*

Calcium Chloride in Pleuritis.—Fresh therapeutic employment for calcium chloride is being discovered daily, and while some deny its virtues, declaring that its influence is merely depressive, A. Krummenacher insists that

this must naturally lessen any tendency to transudations. His clinical observations suggest it as a specific for any serous inflammation especially that of the pleura. He describes ten cases of acute pleuritis in all of which its administration was followed by a rapid fall of the temperature with profuse diuresis, while in some the clinical conditions approached normal within a single day. Krummenacher gives as much as 1/2 oz. of the drug daily until the temperature falls, when he reduces the amount by a half, he employs a 30 per cent. solution, the taste being disguised by the sipping of a little coffee before, during, and after it. In one of his patients the intravenous injection of calcium chloride produced a remarkable, rapid effect, but this is not always the case, and unless the effusion is very large Krummenacher advises invariable oral administration to avoid the occurrence of local irritation from the injections. (*Paris: Annales de Medecine.* xiii.)—*Med. World.*

The Antitoxin Treatment of Diptheritic Paralysis.—Ginestous and Pasturaud (*Gaz. Hebdom. des Sciences Med. de Bordeaux*, p. 40).—Comby, Netter and others have shown the value of serotherapy in diphtheritic paralysis. Yet a recent paper was published by Cantonnet reducing the treatment of the paralysis of accommodation to instillations of pilocarpine. The following is the last case among many others to the contrary.

A girl, aged 8, was brought to hospital on Nov. 14, 1928 complaining of having almost lost her sight. The trouble began 25 days after an attack of diphtheria which supervened on October 15 and was cured in 4 days by three injections of antitoxin, amounting to 130 c. c. There was hypermetropia of 2D and near vision required a lens of 5D. The pupils were normal.

With precautions against anaphylaxis daily injections of antitoxin totalling 70 c.c. were given for 4 days. On Nov. 21 the paralysis of accommodation was completsly cured.

This case shows the value of antitoxin in diphtheritic paralysis. It might be objected that the prognosis of the paralysis is favourable and the recovery is frequent in the absence of treatment. But in old cases it is found that recovery begins from the moment of instituting antitoxic treatment. The value of antitoxin was shown experimentally by Prof. Ferre in birds. He produced paralysis by injection of the toxin of diphtheria, from

which recovery took place under antitoxin. In birds killed before recovery was complete he found signs of repair in the anterior cornua. In ocular paralyses antitoxin is particularly efficacious. In 1902 one of the writers published the case of a child suffering from paralysis of accommodation and convergence since an attack of diphtheria 2 years before, who was cured by two injections of 10 c.c. of antitoxin.—*Med. Review.*

Anaemia in Sprue.—N. H. Fairley, F. P. Mackie, and H. S. Billimoria (*Indian Journ. Med. Res.*, January, 1929, p. 831) record an analysis of the blood conditions in 67 cases of sprue, in which, in addition to the routine hæmatological investigations the van den Bergh reaction was employed to estimate the bilirubin content of the serum, and efforts were made to determine the hæmolytic or non-hæmolytic nature of the anæmia. Sprue and pernicious anæmia have certain common features, and the salient points of difference between the two diseases are given. At onset sprue anæmia is rarely if ever found to be as severe as in corresponding stages of pernicious anæmia, and during its course a grave grade of anæmia less frequently develops. The red corpuscles averaged 3,242,000, the hæmoglobin 65·5 per cent., and the colour index 1·0 for the whole series. The blood picture proved remarkably constant. Anisocytosis was the outstanding feature, especially as regards increase in size, and microcytes were much less in evidence than the larger forms. Poikilocytosis and polychromasia occur, but not so markedly as in pernicious anæmia; nucleated red cells were only rarely seen. In uncomplicated sprue the leucocyte counts were either normal, or there was a leucopenia which was sometimes associated with a relative lymphocytosis. A blood crisis characterized by a rapid and critical fall in the hæmoglobin and erythrocytes occurred in certain cases. This condition is generally associated with severe diarrhœa; it terminates fatally without remissions and without the corpuscular regeneration so typical of pernicious anæmia. Price-Jones curves were investigated in 11 cases and closely resembled those in pernicious anæmia. Essentially the anæmia is of the megalocytic type. The van den Bergh readings were low, the mean for the whole series being 0·66 unit. These results, compared with those found in malaria and active pernicious anæmia, show that hyperbilirubinæmia is far more frequent in the two latter diseases. The results also indicate that the anæmia is of the non-hæmolytic type. Three stages occur in the evolution of bone-marrow lesions. At the ontset the changes are minimal

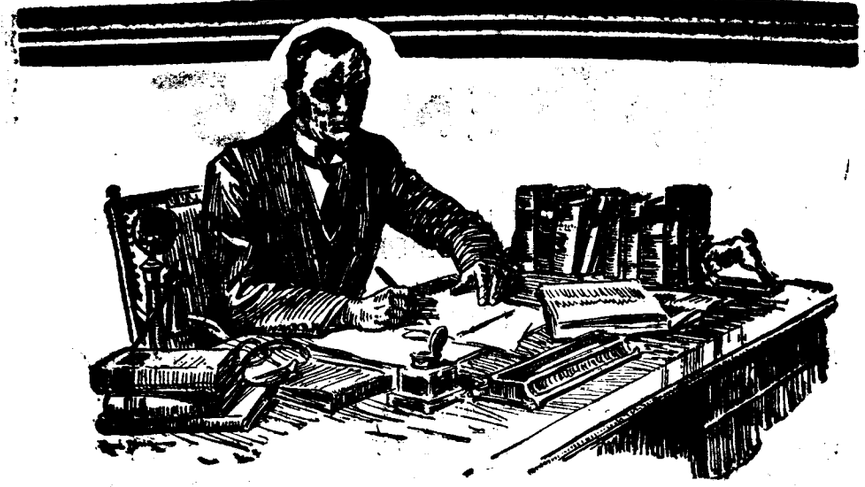
and the anæmia is slight. An intermediate stage, characterized by erythroblastic hyperplasia of the red morrow, ensues; and finally a late phase of hypoplasia or actual aplasia of the marrow is seen. These changes are fully described in a paper on the morbid anatomy of sprue by Mackie and Fairley (ibid., p. 799). Deficient blood production rather than excessive blood loss constitutes the basis of sprue anæmia. The authors consider that the trouble originates in an ill-nourished bone marrow which, poisoned by sprue toxin of alimentary origin, undergoes primary hypertrophy and secondary atrophy. In the causation of the latter state, toxins produced by a changed intestinal flora and secondary bacterial invaders may play a part.

Prophylaxis against Nocturnal Cramps.—G. Gaertner (*Wien. klin. Woch.*, February, 1929, p. 211) believes that the nocturnal cramps in the calves and feet of persons who appear to be otherwise healthy, except that some suffer also from varicose veins, are similar in their etiology to the cramps occurring in cholera, severe diarrhœa, and vomiting, and in persons whose occupation entails much sweating; they are attributed to loss of water and the consequent concentration of the blood. Various workers have suggested intravenous injections of isotonic or hypertonic saline for the treatment of the latter kinds of cramp. Gærtner has been able to cure a number of cases of nocturnal cramp by ordering the sufferers to drink a glass of water (or mineral water, lemonade, tea, or milk) at bedtime. If any other liquid is substituted for water it must not have a diuretic, diaphoretic or aperient action, since the diluent effect on the blood would thereby be neutralized.

RADIOLOGY.

Roentgen Treatment of Acute Cervical Lymphadenitis. L. Charles Rosenberg. Am. J. Dis. Child., 37: 529-540, March, '29.

Roentgen therapy has been used with good results in a variety of acute infections as histologic evidence has demonstrated. Its use is warranted, therefore, in the treatment of acute cervical lymphadenitis. Eighty patients were treated; sixty-eight recovered without suppuration. Acute cervical lymphadenitis is almost of prolonged duration. Roentgenization acclerates the inflammatory process, so that there is either rapid resolution or rapid breaking down. Following the exposure, there is relief of pain, and discomfort and, improvement in the constitutional symptoms. Unfavorable effects do-



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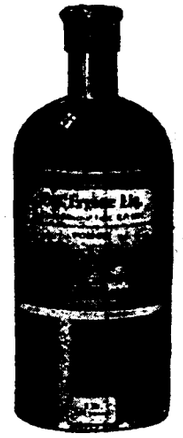

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not result from irradiation. Roentgen therapy although it reduces the need for surgical intervention to a minimum, cannot supplant it.

Ultraviolet Theraphy. E. P. Cumberbatch. Birt. Med. J., July 14, 28,

Dr. E. P. Cumberbatch, London, Eng., in *Brit. Med. J.*, July 14, 1928, points out that when the practitioner exposes his patients to the ultraviolet lamp he administers some phototherapy and thermotherapy as well as ultraviolet therapy.

The ultraviolet rays with the longest wave-lengths ara believed to have no chemical action on the tissues and are probably thermogenetic.

It is mainly by indirect action that the ultraviolet rays bring about therapeutic action, and this is obvious when the disease is deep-seated.

The plain carbon arc lamp emits much heat and light but the proportion of ultraviolet rays is small. The lamp which the author recommends is the mercury vapor lamp which is rich in ultraviolet but poor in heat rays.

Ultraviolet treatment may be said to be a specific for rickets, and tetany and laryngismus stridulus are said to respond equally well.

Ultraviolet treatment, either alone or in combination with other treatments, will generally effect a cure in the following diseases: marasmus, post-febrile weakness, nasal and bronchial catarrh, aural discharges, post-influenzal debility, surgical tuberculosis, lupus vulgaris, impetigo contagiosa, acne vulgaris, boils and carbuncles. The treatment should receive a trial in seborrhea, non-specific indolent ulcer, erythema pernio and pruritus ani or vulvae.

There is a large group of diseases which resist other treatments, for which ultraviolet treatment is now being tried with more or less success. These include chronic fibrositis and arthritis, pelvic infections hyperiesi, chronic bronchitis, bronchial asthma, Raynaud's disease, etc.

Patients with general pyrexia should not receive ultraviolet therapy. In acute local infections the rays should not be applied locally, nor until pus. if prosent, has been evacuated. In all cases the treatment should be under the direction of a physician.

CORRESPONDENCE.

HEALTH CERTIFICATES.

It is laid down in the Civil Medical Code prescribed by Goverment for the guidance of the civil Medical Department that " Medical Officers and Subordinates will grant Health Certificates to students seeking admission into the Goverment Training Institutions when they can show proper authority for appearing for such Certificates ". These certificates are issued by all grades of Medical Officers, and mostly by Medical Subordinates of Sub Assistant Surgeon's cadre in service as well as on Private Medical Practice who are available in remote corner of the district, and they are accepted. This was the case even last year. Curiously enough there is a distinct change of outlook on the part of the Educational Authorities in Malabar this year. One circular issued to students seeking admission into the Training Schools states that they should produce Certificates of physical fitness from Registered Medical Practitioner of M. B. or L. M. S grade, and another mentions that these are to be from those of Assistant Surgeon grade. It will be observed from these circulars that Certificates from Sub Assistant Surgeons either in Service or on Private Practice will not be sufficient, nor those from those Assistant Surgeons promoted from the grade of Sub Assistant Surgeons will answer the purpose according to the other circular. Post Mortem and other important certificates involving life and death are recognised and acted upon, and such being the case it is left to the Educational luminaries of Malabar by a stroke of the pen to deprive a Sub Assistant Surgeon of his professional right of certifying physical fitness to students into the Training Schools. Annual Inspections of High Schools are entrusted to Sub Assistant Surgeons, and here there is no question of M. B. or L. M. S. When the question of payment comes and that too from the Department it is no body's concern as to who does the bullock work. In the case of Medical Inspection it is the department that pays, and so a tight hold is kept on the purse, and as for the health certificate it is the students that have to pay and how much they have to pay and how far they have to go to get certificates are not the concern of the ordering authorities. A Medical Man has to pay to get his name registered, and the previlege of a Registered Medical Man worth mentioning is the granting of Certificates, and if this concession cannot be allowed in such simple cases as Health Certificates to Training School Students with their poor prospect of turning out

to be lowpaid Schoolmasters, Medical Registration is after all a farce, and the sonner the Sub Assistant class is abolished the happier and better will the world be. It is worth while for Medical Men coming out of the Medical Schools to pause well and think twice before seeking Registration. Any one and every one can perform operations, give injections and treat patients provided one takes scientific care in the work, and that is all what is required from a professional man. There are eminent Hakims and Vydians without Registration, and they are not a bit less successful in their life. This matter is placed before you trusting that it will be brought to the notice of the Government for early consideration.

English Medical Hall
Perintalmunna.

C. P. K. Nair.

TO

THE EDITORS " *The Antiseptic* " MADRAS.

SIRS,

Will you or some of your readers inform me through your esteemed paper the more practical details of 'Plombier' published in your June issue? What was the Original Yogi's Dhotikriya? What instruments, apparatus and fluid are used in Plombiering? The idea of plombiering is only Colon lavage for which ordinary warm water and an enema can be fitted with rubber catheter may suffice. The vibratory massage is important. No doubt colon lavage is very useful as it washes out the large amount of toxins from the colon. But the question is if it can be done as a habit for a long time? What is the best method of colon lavage which will not irritate the soft tissues as well as wash out the bowel effectively?

Purnea,
29-7-'29.

Yours truly,
S. M. SHARIFF M.S.

BOOK REVIEWS.

Aids to Medicine.—by James. L. Livingstone M.D., M.R.C.P. 1929, Pages XX 414. Price 5sh./- Bailliere, Tindall & Cox. 7 & 8 Henreitta Street, Covent Garden, London.

In this, the fourth edition, the subject matter has been rearranged and brought up-to-date. The infectious diseases have been subdivided according to their etiology. Diseases due to physical agents and intoxications, diseases of metabolism, deficiency, blood and ductless glands have each been given a chapter. Certain diseases such as yaws, leishmaniasis, encephilitis lethongrice, acidosis and alkalois, pellagra have been specially described. The main object of the author—to supply the student

with a little book for revision purposes—has been completely achieved.—*U.K.R.*

King Edward VII Memorial Hospital Pharmacoepia.—Com., piled by Abraham S. Erulkar M. D. (Lond). Price Rs. 2 (1929.) (Butterworth & Co., Ltd. Calcutta).

We have much pleasure in reviewing this little volume which Dr. Erulkar has compiled with the assistance of the Pharmacoepia Committee of the K. E. M. Hospital, Parel, Bombay. It is books like this which are very useful to the general practitioner or to medical men in charge of rural dispensaries who want to prepare stock mixture for use of the masses. A section on children's pharmacoepia is a useful addition and contains very valuable prescriptions. The section on poisons and their antidotes is also good. The appendix deals with dentition and obstetrical tables, Caloric requirements of body, food value of articles of food in common use in Bombay and a posological table. It is a very handy and useful pocket book.—*U.K.R.*

Eyesight and its defects: ailments caused and their prevention. is the name of a book written by Dr. B. R. Dewan, Opt. D., D.C., M.N.A.O., eyesight specialist of Lahore in the Punjab. Several ailments such as headache, granulations, watering of the eyes, itching in or around the eyes, pus discharges from the eyes, sunlight appearing very unbearing to the eyes, and several nervous troubles are caused by eye strain. Dr. Dewan describes the causes and symptoms of these ailments and how they can be prevented.

The price of the book is Re. 1 and it can be had from Dr. B. R. Dewan & Sons, Lahore.—*U.K.R.*

On Nephritis (For Students and Practitioners).—By A. Cecil Alport, M. D. London. William Heinemann (Medical Books) Ltd. 20, Bedford St, London.—*W.C.* 2. 1929 P. p. 175 Price sh. 7-6. net.

This little hand book on Nephritis gives a comprehensive yet concise review of every phase of the disease within the covers of a relatively small volume. The various advances which have been made both on clinical and laboratory sides in recent years on Nephritis are very well described. Some of the obscure points in the classifications of the disease, its physiology, pathology and treatment have been well brought out. It also contains a full chapter on the opthalmology of Nephritis describing vividly the various changes that are likely to occur within the fundus occuli.

The inclusion of the latest biochemical tests makes it up to date and very useful.

The importance of basing the diagnosis, prognosis and treatment of Nephritis upon a comprehensive survey not only of the laboratory tests but also of the clinical findings and ophthalmological examination of the eye has been well emphasised.

A useful appendix containing various prescriptions for use in Renal diseases and the list of references greatly enhance the Value of the book both to the students and general practitioners.—*V.C.S.*

Clinical Observations on Infant Feeding and Nutrition. —By Howard B. Gladstone, M. D. Edin. P. p. 113. London: William Heinemann (Medical books) Ltd., Price Sh. 7-6. net.

This little hand book, an outcome of the author's long experience at an Infant Welfare centre, is sure to serve as a practical guide for all practitioners, child Welfare associations, nurses and mothers.

It contains very descriptive and clear methods of feeding the infants,—of methods found very useful and applicable to varieties of infants enjoying good health, while a good account of the feeding of the diseased children is also given, which is bound to be of value not only to mothers but also to practitioners who are often called in to treat babies.

The language of the book is so simple that it could be understood even by the ladies—a procedure that is sure to increase the popularity of the book. It is full of valuable hints, and practical suggestions on infant feeding. It can be well recommended as a useful 'aid' on infant feeding and Nutrition:—V. C. S.

Tropical Nursing.—By A. L. Gregg, M. A., M. D., M. Ch., B. A. O. (Dublin) D. T. M. H. (London), L. M. (Rotunda) London: Cassel & Co., La Belle Sauvage, Ludgate Hill London 1929. P. P. 199 Price Sh. 6 net.

In this hand book the author has brought out all that is most useful both to nurses going abroad to take up duty in the tropics and to others who may in emergencies have to undertake nursing duties.

It begins by pointing out the differences which even the most experienced nurse will find between the conditions to which she is accustomed at home and those prevailing in tropical countries. There is also much practical advice on personal habits, food and drink, clothes and kit. The principal tropical diseases are dealt with in a systematic way, giving sufficient explanation of causes, symptoms, treatment, etc., to ensure efficient and intelligent nursing.

A section is devoted to nursing technic, another to care of the eyes—a matter of particular importance in the tropics—and the whole is rounded off with a useful glossary.—V. C. S.

Introduction to a Psychoanalytic Psychiatry by Paul Schilder M. D. Published by the Nervous and Mental Disease Publishing Co. 3617, 10th Street, N. W. Washington D. C. 1st Edition Price $ 3·50.

This is one of the recent additions to the rapidly growing literature on Psycho-analysis. The book presupposes a prelimi-

nary knowledge of psycho-analytic doctrine and technique which hitherto has been mostly applied to the investigation of "borderline" cases. The chief handicap to the application of the technique to advanced cases of psychosis is the lack of insight into his condition and the consequent lack of co-operation in treatment, on the part of the patient.

The author however attempts to draw some conclusions by observing the reactions of the patient in cases of psychosis. His conclusions however should be taken to be tentative and capable of further elucidation. For, the author himself admits that he "rather seeks to set forth problems than to solve them". But throughout the book the author displays a mechanistic tendency in discussing psychological problems, e.g. "that the Egoideal constructions show a vertical stratification" and symbolic or symbol-like constructions arise at the point of intersection of 2 spheres". The reader who is wont to regard the mind as a functioning condition, having no spatial relationship, will find it difficult to reconcile himself to the descriptions of mental phenomena on a mechanical or structural basis.

Psychoanalysis has so far furnished us with no clue to the therapy of psychosis. What it has done is to enable us to understand the meaning of insane reactions, and thus help us to a "more humane management of the individual case."

Even in a case of organic psychosis, whose cause is beyond question e. g. G. P. I. the mental symptoms need an explanation without which they appear bizarre and meaningless.

The book should stimulate further research in psychiatry along psycho-analytic lines and will prove of interest to those psychiatrits who are not confirmed materialists.—*F. N.*

The conquest of life.—By Dr. Serge Voronoff, M. D. Translated by G. Gibier Rambaud, M. D.

Published by: Brentano's Ltd., 31 Gower Street, London, W. C., 1928 p. p. 201, with 24 illustrations: Price Sh. 15/- net.

This book is the outcome of Dr. Voronoff's discoveries in the prolongation of life and the vital powers of man. The book is specially written in plain style to be read by the lay man.

The author has very vividly written his results of experiments on lower animals for the rejuvenation of life. The functions of the various ductless glands have been well described, together with their influence on longevity and a full chapter is given on the author's method of glandular grafting. The chapters on application of grafting to old animals, and its amazing results are worth reading.

The section dealing with the grafting of men is very attractive and lucidly written. In our opinion it is an exposition of a subject of universal interest, and will be read with surpassing interest by all.—V.C.S.

Indian Therapeutics for Medical Students and Practitioners.—By. Dr. D. V. Sandu, Published by D. K. Sandu Bros, Bombay 1928 2nd edition p. p. 147 Price As. 7.

The secend edition of this book has been thoroughly revised and enlarged. New sections on diagnosis in Ayurveda, Vitamins and diet have been included.

The various preparations in Indian Materia Medica are given in a detailed way together with their actions, and therapeutic uses. The chapter on diet is very effectively written and most of these diets could be prescribed with much benefit to the patients.

The book is handy and may be profitably read by all.—*V.C.S.*

Introduction to the Technic of child analysis:—By Anna Freud; published by the Nervous and Mental Disease Publishing Co., 3617, 10th Street, N. W. Washington D. C. Price $ 1·50.

With the development of new thought in the formation of character and the conduct of life, the rearing of children has assumed a new aspect. The conventional methods based on the principle of sparing the rod and spoiling the child, are no longer accepted, at least by those who have imbibed the new ideas. The outstanding fact disclosed by psycho-analysis, that the neurotic disorders of adult life are due to experiences of childhood, has brought into relief the question of upbringing of children and the prevention of neurosis later on, in their life. In other words, it has changed the angle of vision, regarding education of children.

A child's tastes, inclinations, friends, plays and toys are as much a matter of concern as its nervousness, waywardness, naughtiness and tantrums.

The author of this book records her observations and conclusions of the analytic study of ten neurotic children.

Psycho analysts who have treated only adults will find in the book a great divergence from the usual methods, which the author has adopted in her analysis of children and which she thinks is necessary on account of the special circumstances of the child—life.

The adult plays his part alone, but the child is the dependent of the parents and is inseparable from them as long as the childhood continues. When the analyst comes in between the child and its parents, a critical situation is created for the child.

On this account many a psycho-analyst who has dealt exclusively with adults, will be chary of accepting the views set forth in this book.

But child-study can be undertaken without resorting to child analysis and much useful information could be obtained by a perusal of this book, by educators and others interested in the training of children.—*F.N.*

NOTICE.

It will be of interest to the Medical Profession to know that Messrs, Boots Pure Drug Co. Ltd. of Nottingham have opened their own Depot at Mercantile Buildings, 10, Lal Bazar, Calcutta. Large stocks of their well-known Specialities, Tablets and Pastilles etc. are maintained under ideal conditions and it will be readily appreciated by the Medical Profession that in keeping such preparations as Stabilarsan, Gonococcal Vaccines, Liver Extract and Insulin in cold storage the highest therapeutic results may be expected from these preparations.

The resident representative is Mr. Ralph Paxton, Mercantile Buildings, 10, Lall Bazar, Calcutta, from whom literature on any preparation may be obtained.

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In the above mentioned new preparation, the. well known firm of Knoll, A. G. Ludwigshafen, Germany, are presenting to the medical profession a fundamentally new, rapidly acting analeptic, wtih a wide field of indication.

This preparation, which marks a decided advance in cardiac therapy, is similar to camphor in its action, but far superior to the latter as regards efficacy. It can be administered orally, subcutaneously, intramuscularly, intravenously, or intracardially contrary to camphor and the majority of camphor substitutes. It is very readily soluble in water. There is a total lack of irritation. Extremely harmless as the noxious dose is so high that in clinical practice it would be quite out of the question, no taste or smell of camphor, no fatty emboli as with camphor in oil injections, no danger of abscesses or necroses at the site of injection, and oily syringes.

One of the principal differences between this preparation and camphor is to be found in its direct action on the normal heart, which has been demonstrated pharmacologically and confirmed clinically; the action of the heart is not only stimulated but also regulated. In addition to its action on the heart Cardiazol displays an elective action on the respiratory centre, and is of special value in pneumonia and pulmonary edema.

Cardiazol is supplied in Powder, Tablets Liquid, and Ampoules: samples may be obtained from the agents in India, Martin and Harris, Ltd, Rowlette Building, Prinsep Street, Calcutta.

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THE HON'BLE U. RAMA RAU
AND
U. KRISHNA RAU M.B., B.S.

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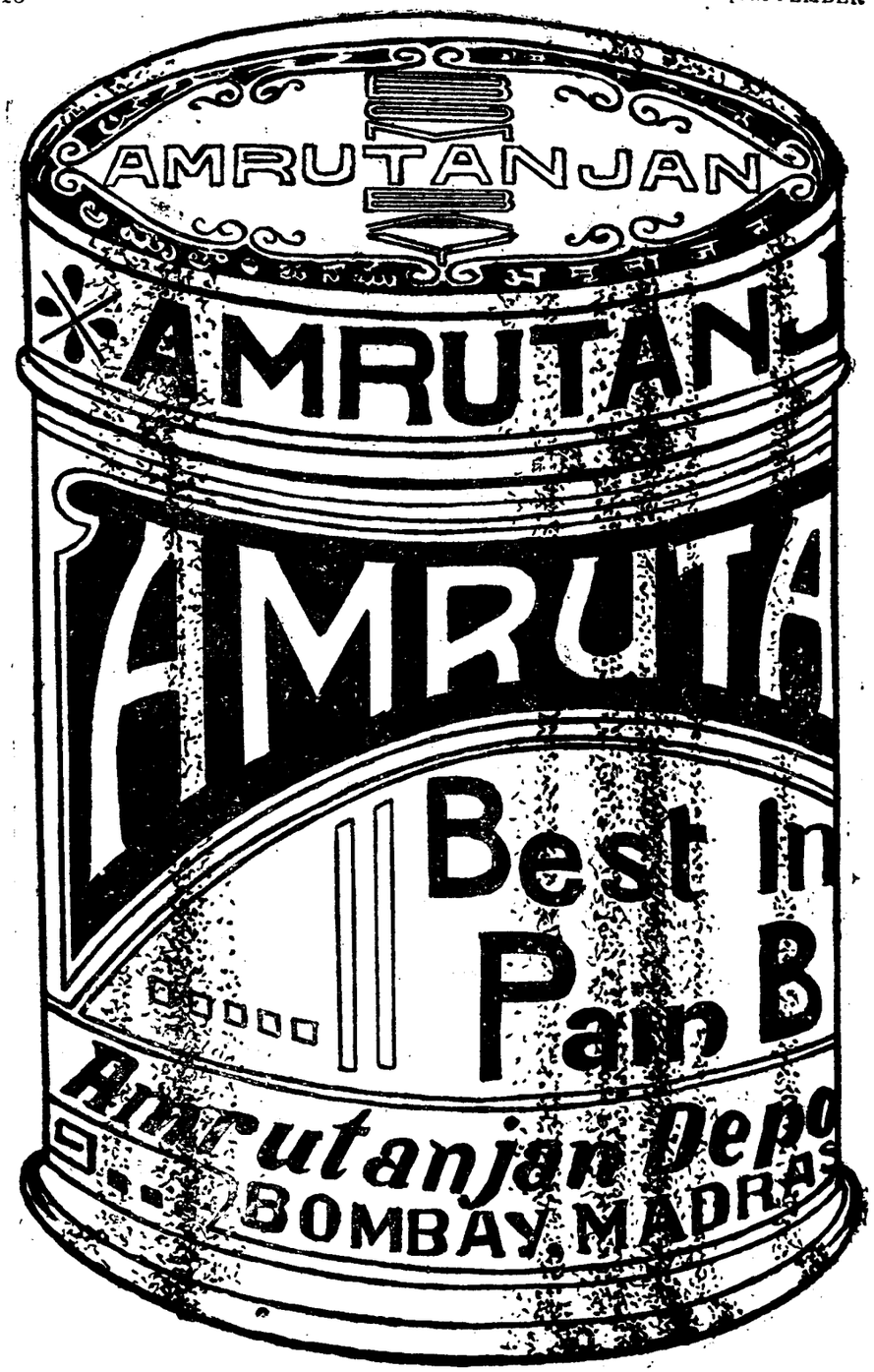
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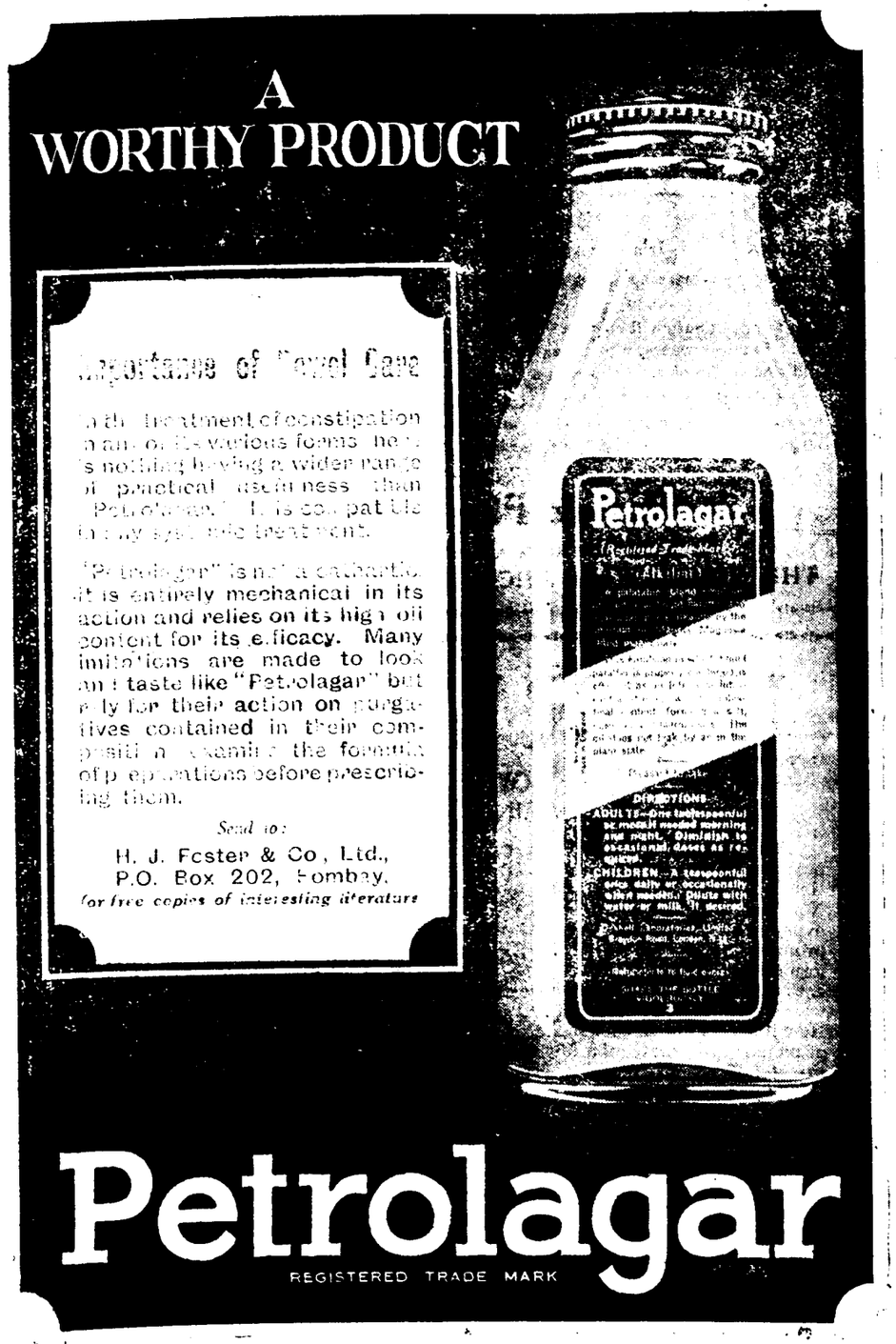
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ORIGINAL ARTICLES.

* VITAMINS IN INFANCY.

BY

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The huge mortality amongst children in India is simply shocking to all thinking minds. 246 per one thousand i.e., close upon 25 per cent of them die within twelve months of their birth, in one year. If we take into account the condition of England and Wales, we find the corresponding death rate is only 70 per thousand! How enormous is the rate of infant mortality in this country can be easily deduced from the following table showing death rates of children in some of the principal towns of India.

Towns or Cities	Infant mortality rates per 1000 live births (1926).
Calcutta	372
Bombay City	255
Madras	282
Rangoon	320

* Specially contributed to the Antiseptic.

Ahmedabad	...	...	...	438
Cawnpore	...	...	...	484
Allahabad	...	...	...	244
Benares	...	...	...	314
Lucknow	...	...	...	287
Nagpur	...	...	...	302
Poona	...	...	...	733 (!)
Puri	...	...	...	510
Delhi	...	...	...	238

The causes leading to so many valuable lives being cut off at the early years of life are numerous. The most important ones are (1) Lack of Antenatal care of the expectant mothers (2) Insufficient post natal care of the babies (3) Various infectious and debilitating diseases (4) Unhygienic surroundings. (5) and last but not the least important—improper dieting.

If we scrutinise thoroughly we shall surely find more than 50% of cases of death are caused in infancy by inadequate and improper dieting, especially owing to deficiency of Vitamins.

Vitamins, as we all know to-day must form an essential and prominent part in everybody's food; if not, a catastrophe is sure to follow sooner or later. The growing child requires them all the more absolutely and essentially so much so that, if these important food factors are absent or deficient in the daily food, it cannot but fall a victim to one of the many ruthless deficiency diseases. Avitaminosis is the name given to such a condition by McCarrison and may lead to any or permutations and combinations of the following conditions.

1. Maldevelopment—(*a*) Infantilism.
   (*b*) Delayed Dentition.
   (*c*) Undescended Testis.
2. Wasting— (*a*) Marasmus.
   (*b*) Constipation.
   (*c*) Vomiting.
   (*d*) Dry skin.
3. Green diarrhoea.
4. Infantile Liver.
5. Eye Diseases.
6. Gastro Intestinal Troubles.
   (*a*) Indigestion.
   (*b*) Atony of stomach.
   (*c*) Colitis.
   (*d*) Hirschsprung Disease.

7. Ricket.
8. Infantile Scurvy.
9. Spasmophilia.

Let us consider all these conditions one by one.

Maldevelopment.—This condition comes as a result of food being deficient in Vit. A content or the growth producing factor. The growing young cells of the body do not get healthy stimulus for development and the child becomes stunted in growth. A condition of infantilism results, teeth do not grow in normal time, testes remain undescended above the scrotum and eyesight also becomes affected. The child cannot resist against any severe infection and generally succumbs to it. Tonsils and adenoids also become markedly enlarged.

The cause of this condition very often comes into play when the child cannot get mother's milk properly owing to death or disease of the mother or when she is unwilling to suckle her baby lest she should lose her own health or whenever the child is prematurely weaned and put to various sorts of patent foods sold in the market or even to milk that comes from a cow that is sickly or lives entirely on dry grass without grazing in the field.

The condition can be successfully treated by giving the babies proper food in the form of mothers' milk if the child is below ten months of age or suitably humanized cow's or goat's milk (skimmed) fed on green grass and if possible from a herd instead of any single animal. Eggs and fresh butter are of value as well. Cod Liver oil also does good in some cases but should not be pushed on indiscriminately, as injudiciously given, it may lead to indigestion and diarrhoea and thus aggravate the condition.

Wasting.—This is a condition that comes very often as a companion of the first condition, the etiological factor being the deficiency of the same Vit A and partly of B as well. The child inspite of so called proper nourishment goes downhill in health every day and shows symptoms of constipation, vomiting, dry skin etc. Marasmus is an extreme stage of such a condition. Other causal factors save that of vitamin deficiency are rather obscure and all sorts of suggestions are discarded sooner than they are put forward. According to one school thyroid and adrenal deficiency also contributes something to the causal factor.

Treatment lies in regulating the diet as in the case of maldevelopment and also preventing the onset of any other complication. Small doses of thyroid extract are also beneficial.

Green Diarrhoea.—70% of the cases are due to excessive amounts of carbohydrates and fats in food and 25% of cases are due to protein excess. But the deficiency of Vitamins A and B in food plays an essential role in the onset of the disease as is shown clearly by the fact that majority of the children that are weaned untimely and cast to the mercy of the proprietary foods, get it so easily.

The treatment in the case of breastfed infants lies in the cleanly habit of the mother as regards her breasts and child's mouth after each feeding which must never be more than five minutes on each breast at a time, and should be continued every three hours at 6 and 9 A.M. 12 noon. and 3, 6, and 9 P.M. preceded by 5 grs. of Sodi bi Carb in solution in boiled water. In the interval between the feeds Sodi bi Carb in saline and Saccharine must be given as much as the child likes, but the salt must be stopped if signs of œdema appear.

Children above one year must be put to humanised skimmed cow's milk regularly.

All these children must be weighed before and after food. If they are taking too much at a time the number of feeds may be reduced; if less, some quantity of whey water must be added to the skimmed milk.

Infantile Liver.—This disease is by no means an infrequent one amongst children in India. According to Lt. Col. Green Armytage the chief etiological factors are the following:

(1) Deficiency of vitamins in mother's food leading to deficiency of the same contents in mother's milk.

(2) Anaemia, constipation, pyorrhoea and other diseases of mother, resulting in the absence of hormone, Iron, Calcium, Phosphorus and Iodine in mother's milk.

(3) Patent foods which are all deficient in vitamins are rich in carbohydrates.

(4) Milk of cows or goats that cannot graze in the green fields.

(5) Indiscriminate indulgence in sweets or chocolates in order to pacify the weeping child.

The symptoms are mainly enlargement of liver—painful and tender, the conjunctiva becomes greyish, complexion jaundiced, skin becomes dry and wrinkled, oedema of legs and feet and in the extreme cases ascitis and general anasarca may set in.

The treatment depends on the care of mother's diet during both antenatal and suckling periods so that she may get plenty of vitamins in the form of eggs, milk, butter, green vegetables and fruit juices. If children are cow or goat-fed, care must be taken as regards the proper feeding of those animals.

The child must have as little fat as possible in food; so skimmed milk properly diluted is the most suitable diet. As much water as the child wants must be given in the interval of two feeds and fresh fruit juices should be freely given every now and then. Mouth and teeth must be cleaned and bowel must be cleared everyday by liquid Paraffin. Exposure to Sunlight in the morning is very good and after a fortnight's treatment small doses of Thyroid extract should be commenced to stimulate the dormant body nutrition.

Eye Disease.—Though this disease is not detected very often in infancy still the defect out of deficiency diet comes very early in life. Xerophthalmia, keratomalacia and all defects of vision such as myopia, hypermetropia and astigmatism are some of the most visible manifestations. The writer knows of a particular instance in a convent, where practically all children, all at once, complained of blurred vision. On investigation it was found that their foods were all deficient in vitamins and so as soon as plenty of eggs, milk, green vegetables and fruits were added to their regular diets, the temporary condition disappeared altogether.

The condition is rather a preventable than a curative one. If proper care is taken as regards the diet of children so that whatever food they get, they get it fresh and unadulterated in the form of milk, butter, eggs, green vegetables and fruits, there is practically no chance for the condition to develop.

Gastro-intestinal Troubles,—Various conditions such as indigestion, diarrhoea vomiting, constipation etc. come on very often as a result of deficiency of vit B in the diet. Rowlands and Browning in the columns of the Lancet have shown clearly how deficiency of vit B in diet leads to atonic dilatation of stomach and sometimes downwards displacement as well. So also the etiological factor in Hirschsprung's disease or the idiopathic dilatation of colon may also be traced to the deficiency of the same vitamin in the food. McCarrison thinks mucous colitis also results owing to insufficiency of vit B in the diet.

The treatment lies in giving plenty of green vegetables, fruitjuices, detoxicated embryo of cereals, malt extracts and Yeast vit etc.

Ricket.—The disease which is rightly reckoned as the scourge amongst children is characterised by beautiful clinical picture of Square shaped head, frontal bosses, nonclosure of fontanelles, delayed dentition, bending of long bones, enlargement of their epiphyses, rickety Rosary, Harrison's sulcus etc. etc. is mainly due to lack of vitamin D in food, owing to disease or unwillingness of the mother to suckle the child or ill fed cow's or goat's milk or Patent foods. Absence of sun-rays is also a potent factor in the causation of the disease.

The treatment consists in giving breast milk to the child as long as possible, green-fed cow's or goat's milk (should not be boiled more than once) from a herd rather than a single animal. Fruit juice must be given as much as possible. Fresh emulsion of Cod liver oil must be continued regularly after food for months. The rickety child should be allowed to run in the Sun for at least an hour daily. Bowels should be cleared daily by drachm doses of Liquid Paraffin. All these diets must be helped by 5 grs doses of activated cholesterol by Sun rays or in the irradiated form, Vigantol (from yeast) and fractional doses of Thyroid extract daily.

Infantile Scurvy,—Infantile scurvy is a rare disease in India. Still sporadic cases are met with. The disease is characterised by spongy and bleeding gums, peticheal haemorrhages in loose cellular tissue and sub-periosteal regions, extreme tenderness all over the body and sometimes by the separation of epiphyses of bones.

The disease is caused by the deficiency of Vitamin C in diet and may be successfully treated by stopping all proprietary or preserved foods and giving instead unboiled pure milk, orange, lemon, lime or grape juice or raw meat juice in plenty daily. All sorts of fresh fruits and green vegetablas (not boiled for more than 15 minutes or excessively spiced) also do immense good. Potato peelings boiled with sugar and milk form a very delicious and suitable diet.

The above is a general picture of the various deficiency diseases that are at the root of enormous infantile mortality in this country. They are all preventable conditions and the huge mortality caused by them may be reduced to a minimum if sufficient care is taken as regards proper dieting of the children as well as the mothers and cows, from whichever source the former are deriving their food. So long as the body cells have got the power of growth, they require vitamins essentially and absolutely, for their health, nutrition and growth. But once the limit of growth

is reached one may afford to do with much less quantity which is required for the maintenance of health only. The importance of Sunlight as well, should not be ignored, both for mothers and children because it is an absolute necessity for the production of vitamin in food as well as body (e.g. Ergosterol an antirachitic substance). So the writer considers vitamin or the life of food, which is life so to say, to the growing cells of the body must be given plenty to the infant—a means combined with other suitable dietetic and hygienic measures can alone prevent millions of young lives being nipped in the bud and thus add to the onward progress of the nation.

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Medical Annual—1928:

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*COMMON COMPLICATIONS AND THEIR TREATMENT OF THE ANTI-SYPHILITIC TREATMENT.

BY

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The common complications of the present day anti-syphilitic treatment which consists mainly of intravenous injections of arsenical compounds and intramuscular injections of Bismuth or Mercury—the former almost replacing the latter—are so various and varying in their degree from a mere passing incident to one wich almost endangers the life of the patient, that they should well merit the attention of every medical practitioner. The following article is written from a study of over 3,000 cases that attended the venereal clinic in the General Hospital, Madras,

* Specially contributed to the Antiseptic.

during 1929. The prominent fact that I want to bring before the readers is that the frequency of occurrence of these complications as found here is not the same as is mentioned in text books written in other countries and that almost all these complications can be avoided if the following 3 golden rules are strictly observed:—

(*a*) Prepare the patient carefully for the injection.

(*b*) Don't be too over anxious to cure the patient soon.

(*c*) Avoid giving the dosage given in text-books, which are almost heroic doses for the generality of our people here.

Considering these complications, they can be classified under 3 headings according to Harrison.

1. Those that occur either during or immediately after the injection,
2. Those that occur within the next 24 hours.
3. Still later complications.

1. Those that occur either during or immediately after the arsenical injection:—

Many of these are vasomotor phenomena. The common ones are (a) Nausea and vomiting (b) Giddiness (c) Fainting (d) Palpitation. Of these the first two are very common, though they are not usually severe, passing away in a short time. Occasionally a patient may faint as soon as the injection is given and the usual resuscitating measures such as throwing cold water on the face, giving ammonia or ether to smell, stimulant mixtures if the patient will drink and subcutaneous injections of ½-1 c.c. of a 1 in 1000 adrenalin, will have to be resorted to. Palpitation is more common in women and in high strung neurotic men. It is usually transitory. In almost every case as soon as the arsenical preparation reaches the blood the patient feels a peculiar smell which some people compare to the smell of sulphur and others again compare it to the smell of the drug, though the drug has practically very little smell. Similarly, when a strong dose of mercury or bismuth is injected, a peculiar metallic taste or 'the taste of garlick' is complained of. Almost all the vasomotor phenomena consequent on the injection are usually transitory, as stated above, but if ever they persist the main treatment for all of them is an injection of adrenalin. But these can be appreciably minimised if the patient is properly prepared.

Preparation of the patient for the injection of arsenical compounds.—The patient is given a simple saline purgative the day

before the injection and next day morning the patient is allowed to take some carbohydroate food, say rice, about an hour or two before the injection. It is not essential that glucose should be given as such, for, in all our cases where rice was given previous to the injection no special untoward complication occurred. The weight of the patient is recorded bfore every injection, to see later on how the drug affects the individual, for if it is an overdose the patient goes down in weight but if it is the proper dose, it acts as a general tonic too improving the weight. Next, the urine is examined for albumin. Albuminuria is a contra-indication for the administration of arsenic except when it is due to syphilis. Lastly, the heart is examined, any sign of degeneration of the myocardium being a sufficiently fair warning to be very careful in the dosage.

2. Of the complications that occur within the twenty-four hours after the injection.—(a) fever ushered in by rigor starting usually in the afternoon or evening if the patient had the injection in the forenoon, lasting for a variable period of 2-24 hours or even more is the commonest, so much so that it may be considered as an usual incident with which the patient need not get terrified at all. It is often accompanied by headache and some digestive disturbances, but (b) headache alone, sometimes severe and distressing, may be a complication. The nausea and vomiting first occurring during the injection may continue for some time or (c) vomiting and diarrhoea may occur some time after. The usual treatment for these conditions need be given. (d) Delayed collapse sometimes occurs especially in old people with poor health, characterised by cold, clammy, perspiration, rapid, feeble pulse and a feeling of extreme weakness and exhaustion. There may or may not be a rise in temperature. More often than not there is no rise, nay it may even tend to be subnormal. Treatment for this condition will be along stimulaut line. (e) Herpes labialis was observed in a few cases. but herpes zoster did not occur even in a single case. Local application of glycerinum boracis with rest from injections cures the condition. (f) Jarisch-Herxheimer reaction-Sometimes after an arsenic injection patient complains of aggravation of his previous symptoms especially about vague pains all over the body rendering him even sleepless. Similarly, cases of sec. syphilis with papulosquamous syphilides have been observed to show an aggravation after one or two arsenic injections, the syphilides becoming larger in size and angry-looking. In these cases treatment can be safely continued with benefit to the patient later on. But in cases of cardiac and neuro-syphilis, the same sort of aggravation of symptoms may occur after the injec-

tion. The result in such cases may then be disastrous. A slight cardiac affection may temporarily be flared up to such an extent that the heart is not able to carry on its function properly or a cerebral vascular lesion might be so aggravated as to completely cut off the blood supply to a particular portion of the brain for a sufficiently long time as to result in its softening and consequent permanent impairment of that part of the body which was controlled by that softened area, in either case positive harm resulting to the patient. To avoid these disagreeable results, the starting dose in cardiovascular and neuro-syphilis should be very carefully moderated. The less the dose the less the harm, and a slow and steady course of treatment will give a uniformly good result rather than a hurried course with heroic doses which in many cases may positively endanger the life of a patient. I cannot pass over this group of complications without mentioning a single, singular case in which the patient developed hyperpyrexia with petechial haemorrhages in all the the finger tips which were markedly painful and tender after a provocative dose of .3 N. S. The palms and soles were also painful. The condition, however, responded nicely to an adrenalin and sod-thiosulph injections.

3. Later Complications—(*a*) Among the later complications, those which deserve the first and foremost mention are the skin complications. From a study of the vast number of cases, it has struck me that no other complication is so common as these among our people here except perhaps fever with rigor. Most probably, this is accounted for by the unhealthy condition of the skin in the majority of cases, scabies being more or less "physiological" in the working classess in Madras. These complications may be of varying degrees. Usually how it starts is, when the patient is having the course of treatment, he feels his skin very itchy. If, at this stage, the possibility of the skin getting involved is remembered, the injection discontinued, a smart purge given and sulphur ointment rubbed well on the body, the patient becomes fit for injections again a few days later. But if this is overlooked, the general itchiness becomes intolerable and a crop of vesicles appear all over the body, which invariably becomes septic in various places by the scratching of the patient. At this stage, in addition to what was done before, the patient may require a few injections of sodium thiosulphate (6-1 gm, dissolved in 10 c. c. of distilled water) intravenously to make him alright. If this stage also be overlooked, it leads on to the severe grade of arsenical dermatitis in which the whole surface of the body of the patient is either peeling off or covered with scabs from head to foot including the hairy regions such as the scalp and brows. Fissures

and ulceration are present in all the joint creases or folds such as the elbow and the groin. Eyes are usually red and congested so much so the patient as a whole has a hideous appearance. This condition is not always brought on by such a slow course. Sometimes, it happens that either due to the earnest appeals of the patient to get cured quickly or due to the anxiety of the practitioner himself to display the wonderfully quick healing power of arsenic in syphilitic manifestations, heroic doses are pushed in too frequently with practically very little interval to culminate in the end, like a conflagration, just the reverse of what was expected, a severe form of generalised dermatitis. I know of a case in which one injection of 9 gm. of N.S. (Neosalvarsan) brought on this condition in an elderly woman and another case in which about 42 N. S. injections were given almost daily—statements hardly credible but facts in themselves-and finally gave rise to a very bad form of dermatitis. These cases require prompt and careful treatment. It is wise to start the treatment by doing a venesection and letting out about 8 or 10 ozs. of blood with the idea of getting rid of the toxins and to replace this loss of blood by a larger quantity of glucose saline solution to which a little sod-bicarb, is added to combat the consequent acidosis. Bowels are kept open by purgatives or liquid paraffin. Arsenic injections are, of course, stopped. Sulphur is administered either as intravenous medication in the form of sod. thiosulph or intramine (intramuscularly) or by mouth as collosol sulphur or confectio-sulphuris. Very often in bad cases it will be found that intravenous medication is difficult and dangerous, because of the condition of the skin and oral administration of sulphur has to be resorted to with equally gratifying results. As local applications, calamine lotion should be used to clean the skin, and bran poultices to the face and scalp will be quite soothing. All moist areas should be kept dry by dusting with a mild astringent and antiseptic powder like zinc oxide and starch. A bland diet is the best. The one complication that has to be dreaded in this condition is pneumonia to which the patient is frequently exposed because of the necessity to change his sheets and coverings constantly whereby the patient is likely to be exposed, and also during sponging. Very often pneumonia seems to carry away the patient. Hence all precautions should be taken to avoid it and when it occurs it should be vigorously treated.

(*b*) The next common complication met with in these cases was albuminuria. No special predisposing cause could be pointed out. It occurred in a young student of 17 after three arsenic injections and in a man as old as 45 after three or four injections.

Adults are also not free from it. Some of the cases that developed albuminuria were receiving both arsenic and bismuth injections on the same day once a week. Whether the administration of both these drugs at the same time, each one of which by itself has a destructive effect on the renal epithelium, might have contributed to the condition is a suggestion which awaits further experimental observations. In pregnancy, of course, there is a greater chance of this complication occurring as the kidneys are below par. Hence, arsenic and bismuth should not be given at the same time for a course. The pregnant woman gets four weekly injections of arsenic followed by four weekly injections of bismuth. Then a pause for three weeks. The condition of the kidneys has to be carefully noted before every injection, by the examination of the urine. Treatment consists in stopping the injections at once, giving the patient a diuretic mixture and plenty of water to drink and sod. thiosulph injections on alternate days or twice a week, depending upon the severity of the condition. With this treatment the condition usually clears up in a short period (1—3 weeks.) But there has been once a case which was getting arsenic and bismuth injections on the same day once a week and developed albuminuria after the fifth injection and which was very resistant to the usual treatment of this condition. The wassermann result of the blood remained positive moderate for three consecutive examinations. To exclude the possibility of syphilitic albuminuria (though it is quite unusual for this manifestation to occur especially during the course of treatment) a quantitative estimation of the albumen content was made every week after a '3 N. S. injection. It remained steady at ½% for 6 weeks. No casts could be found in the urine. The condition would resemble a leaky kidney.

(*c*) Stomatitis is more to be attributed to bismuth or mercury, than arsenic. It is a fairly common complication. Here again I have to emphasise the fact that some of our patients may not even stand biweekly injections of bismuth. I have had the sad experience of witnessing the sudden development of a very severe grade of stomatitis in a man with tertiary syphilitic manifestations and strong positive wassermann, for whom I gave biweekly bismuth injections. After 3 weeks, the condition developed with an acute onset, the whole interior of the mouth badly inflamed, even ulcerated along the sides and under surface of the tongue and the interior of the cheeks. The whole face was swollen. Patient could not talk or take any food. Saliva was dribbling constantly from the mouth. However, this clinical picture does not always result from the indiscriminate use of bismuth or mercury so suddenly. Milder forms are much more common in which the patient

complains of pain along the gums, excessive salivation and inability to swallow food especially that which is pungent and hot. Pressure along the gums causes pain and the buccal mucous membrane is red and angry-looking. Fissures especially on the dorsum of the tongue and angles of the mouth are fairly frequent. The condition becomes rapidly worse if neglected. Treatment of this condition is quite satisfactory. Injections are discontinued. A smart saline purge is given. Mouth is cleaned by a gargle, condy's or pot. chloras, every four hours and after gargling, the interior of the mouth is painted with glycerin. boracis. Sod. thiosulph (.6 gm. -1 gm. in 10 c.c. of distilled water) by the intravenous route is given every alternate day or even daily in bad cases. A satisfactory cure results in a short time. In the bad case cited above, the condition cleared up marvellously in about a fortnight's time.

(*d*) Regarding jaundice as a later complication of arsenic therapy, I have to mention that it is very rare here. Out of the 3,000 cases that attended this clinic for the last nine months, there were only two cases of jaundice and even of these two, other causes of jaundice were not clearly excluded in one. This low percentage of incidence of jaundice here is quite different from that in other countries of the world where this complication seems to be much more common. Evidently, therefore, in our country the liver seems to be better equipped to withstand the toxicity of arsenical compounds than in other places. This I attribute to the rich carbohydrate diet of the patients and the consequent high glycogen-content of the liver. This fact would seem to show that in the etiology of jaundice complicating arsenic therapy, low glycogen content of the liver is much more important than many of other hypothetical reasons such as infection, etc., adduced as possible causes in the daily-growing literature about this topic. The Jaundice that occured in these cases was of the mild type and the treatment given was more or less the same as for the other complications together with a bland diet and mixture to stimulate the flow of bile, containing ammonchloride and sod. salicylas. Sod. thiosulph injections were given as usual and the condition lasted for only about 2 to 3 weeks.

(*e*) In some cases, loss of appetite and weight and general malaise have been found to occur after a few injections. These are due to improper preparation of the patient and want of discrimination in choosing the correct dose, for when arsenic is given in proper doses to syphilitics it definitely acts as a tonic so that the weight of the patient increases, his appetite improves, he eats and assimliates more and he is cheerful and sprightly.

(*f*) Cases of neurosyphilis sometimes benefit much with tryparsamide injections. Its administration is exactly similar to that of Neosalvarsan. One important complication as a result of tryparsamide injections is optic atrophy and it has to be carefully guarded against. Routine examination of the optic disc during the treatment is essential and affords valuable information and timely warning regarding the time to stop the injections.

Complications due to impurity of the drug need not be mentioned here.

My thanks are due to Dr. W. Happer, M. D., M. R. C. P. E. Venereal Specialist, for having allowed me to make use of the notes of the cases referred to in this article.

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* COMPARATIVE VALUE OF AMOEBICIDES

BY

S. U. TRIVEDI (SAVLI)

Baroda State.

Scanning the latest literature on the treatment of Amœbiasis, one is drawn to an irresistible conclusion, that, though great progress has been made, during recent years, in the pathology and the treatment of this intractable condition, there still remains that knotty problem of permanent cure—sterilisation from amœbic infection—unsolved. When Emetine was passed into service by Sir Leonard Rogers, it was then believed that, Emetine, supplied the open Sesame which would solve one of the most difficult problems of Tropical medicine but it belied the expectation. Since then many new drugs have been introduced, but, so far as scientifie cure is concerned, all of them fall far short of a true specific. It is a question whether an ideal specific—the therapia magna sterilaus—will ever be discovered. We do not know the effects of environments on the life and activities of the Amœbet? When this is understood, it may supply the gap which divides success from failure. Cure of a disease is a complex process. It is generally believed and probably with good reasons, that the deciding factor, which provides a scientific cure, does not depend on drug therapy solely, but also partially on the vital elements of the patient. The successful treatment of this disease, then, depends upon the co-operation of the natural powers of the patient with

* Specially contributed to the Silver Jubilee issue of the Antiseptic.

the amoebicides. Unaided natural powers are not able to cope with a large quantity of infection. The body of the patient will dispose off the residual infection only, if a large quantity is destroyed by outside agencies. The outside agencies thus play an essential part. The effects of these outside agencies vary widely. To get the maximum advantages out of their use, it is desirable to know precisely, what useful part, each is capable of playing in this struggle with the infection. Efforts are here made to present relative values of different Amoebicides in common use.

Ipecacuanha.—Since the introduction of Emetine, the use of this useful drug has become obsolete in city practice but in Rural India, it is still used as freely as it was in pre-emetine days and its use is likely to be continued till it will be replaced by a drug which combines in it the qualities of cheapness and efficacy. It cannot bear comparison with Emetine, which produces lightning effects in the acute phase of the disease, but, it certainly serves a useful purpose. It slowly but surely mitigates the acute symptoms of the disease and if a sufficient quantity is pushed in with persistence, it will effect a permanent cure in a certain percentage of cases. It is the impression of many medical men that this drug brings about the result stated above. Mere impression has no scientific value but when the same impression is formed by many medical men, it means a certain body of opinion, which is not to be slighted. At any rate, it is well suited for patients, who are too poor to pay for more effective but costly drugs.

Emetine.—The utility of Emetine in the treatment of amoebic dysentery can be summed up in two words—Acute phase. Here it has proved superior to any other drug yet found. It gives strikingly good results in a very short time. Under its use, the Vegetative Forms of Amœbet disappear like dew before the dawn. It has little or no effect on the cysts which keep the fire of infection smouldering. A small percentage of cases do get completely cured, but, in a large majority of cases, it proves ineffective. It is now unanimously agreed that, it does not give the desired result, no matter in what quantity it is given, in what combination it is administered, what number of courses are given, through what route it is used and under what ideal conditions it is given. Under some device, it yields better results, but, it does not appreciably increase the percentage of cures. In hepatic abscess of Amoebic origin, Emetine and its combination save the patient from Surgeon's knife. It is not quite a safe drug and its use demands a careful handling. If used unskilfully, it damages the heart, liver. kidney, nervous system and the mucous membrane

of the stomach and intestines. It causes Emetine diarrhœa. Its immediate effects are so marked that the patients are lulled into a belief that it will free them from the infection, but, in a large majority of cases, it only proves deceptive. Had it not been for the capital advantage, it has got in showing such marvellous effects in the acute stage of the disease, probably, we would not have been using it to an extent as we do now.

Emetine Bismuthi Iodide.—The usefulness of this combination can be summed up in two words—chronic stage. It is an improvement on Emetine. Its place now can be definitely defined. It is less useful in acute stage and more useful in subacute and chronic stages of the disease. It has a marked effect on cysts and therefore specially indicated for patients who harbour cysts. Though not positively harmful, it is not a suitable drug for the acute stage, as, it irritates the mucous membrane of the intestines. It has some serious drawbacks. It causes nausea, vomiting and diarrœa. All devices to avoid these concomitant evils have so far failed. All patients do not tolerate it well, but, those who do not give poor results. It is admitted that it gives a greater percentage than the mother product Emetine.

Yatren.—The sphere of usefulness of yatren can be defined in two words—All stages. It has proved superior to Emetine in many respects. Unlike Emetine it is effective in all stages of infection—acute; subacute; chronic and latent. It is claimed that it is also useful in mixed infections. It does not require to be given in the form of injections, which method is a serious handicap in rural India, more especially in case of Emetine, because, it causes œdema and capillary bleeding, even under best aseptic conditions. It is free from toxicity and can be given to children. It sometimes causes diarrhœa. It does not require any dietetic restriction. To obtain best results, it requires to be used both orally and per rectum. Rectal method is objectionable for more than one reason. It is inconvenient and abhorrent to Indian sense of decency. It is too early to assign its right place among amœbicides, but it is generally believed that it is suited more for chronic cases and carriers than for the acute stage. It is difficult to put down its effects in percentages but it is not inferior to Emetine B. Iodide, which is also meant for the acute stage of the disease.

Stovarsol.—Its usefulness can be summed up in two words—all stages. Though less effective than either Emetine or Yatren in the acute phase of the disease, it has proved decidedly superior in chronic cases. It is specially useful in cases which are

resistant or intolerant to Emetine and its compounds and in cases which harbour cysts. It is free from the objectionable features of Emetine, Emetine B, Iodide and Yatren. Like Emetine, it does not require to be given in the form of injections and it does not adversely affect the heart, liver, kidney and nervous system when given in moderate doses. Like Yatren it does not require to be given per rectum to insure better results. Like Emetine B. Iodide, it does not cause nausea, vomiting and purging. So it can be given to patients with cardiac symptoms, pregnant women and children, who do not stand Emetine. It can be given to fastidious patients who do not submit to irrigations of Yatren. It can also be conveniently given to patients who are unsteady and impatient. It is convenient for all sorts of patients and for all stages. As it contains about 27% of Arsenic in organic combination it acts as a general tonic and well suited for convalescence. It gives a higher percentage of cures than either Emetine B. Iodide or Yatren. If used carelessly, it causes measles like eruptions and exfoliative dermatitis. It is a drug of choice for the chronic cases.

Kurchi Bark.—Since time out of mind, Ayurvedic physicians are using this drug in the treatment of a group of symptoms which were passed as dysentery. It is a matter for surprise, that such a useful drug was neglected till it was served in attractive forms—Tabloid Ext. Kurchi Corticis, Liq. Ext of Kurchi Bark—by European commercial firms. In Western practice, so early as 1563, Gracia De Grta, wrote of its good effects in Dysentery, Had it not been confused with another plant of the same species and had it not been used indiscriminately in Bacillary as well as Amœbic dysentery, its good effects would not have been passed unnoticed and it would have been since long introduced in the British Pharmacopea. Major Brown who first used this drug in Amœbic dysentery, spoke of its effects in very glowing terms. He said in one case it was "very striking" and in the other it was "dramatic." Recent writers who have made a detailed observation on the effects of the Drug write "In the treatment of actual dysentery, the improvement is less rapid than with Emetine, but cure appears to be much more permanent." But the drug is still under trial. If the results will be confirmed by other workers, it will soon replace Emetine. It has got so many advantages over other amœbicides. It is cheap, efficacious, safe, easily available and easy of use. If it had one more merit—unfailing effect, it would be an ideal drug.

Conessine.—It is an alkaloid of Kurchi Bark. It was isolated since a century but it was left to Major Brown to make a detailed study of its effects on the free living amœba. He believed that it

was more lethal and less toxic than Emetine. More recently Major Chopra and others who have made a detailed study of the pharmacological action of Conessine, confirm the opinion of Major Brown. They suggested the use by subcutaneous method of conessine Hyorochloride. This suggestion has been acted upon and the drug has been used intramuscularly by Lieut. Col. Knowles and others; but the results were not satisfactory. It is still under trial but it does not hold out hopes that it will prove as effective as, if not superior, to Bark. It no longer remains a mystery why Bark proves superior to its Alkaloid—conessine. It is observed that tannin of the bark, also has a lethal action on the Amœba. When the Bark is used orally the tannins as well as the Alkaloid work conjointly and so give better results.

From the above short review, it will be seen that we have got a number of Amœbicides of more or less value but a really efficacious drug has yet to be found. None of the drugs used at present, hits the mark.

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*"MODERN SURGICAL TECHNIQUE IN THE TREATMENT OF ABDOMINAL WOUND"

BY

S. B. SURTI F. R. C. S. D. P. H. (IREL) L. M. & S. (BOMBAY)

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(*Continued from p. 696 of the August 29 issue of the Antiseptic*)

For operations above the Umbilicus—In the case of operations on the pylorus or for gastio-enterostomy, the incision chosen is one made a little to the left of the middle line, so as to avoid the falciform ligament of the liver. When the anterior portion of the rectus sheath has been divided, the muscle is drawn outwards with the handle of the scalpel; the posterior portion of the rectus sheath and the parietal peritoneum are then divided simultaneously, first to a small extent between two pairs of forceps, and when an opening has been made the incision is extended with the same precautions as before, using two fingers of one hand as a director. For operations on the gallbladder or bile ducts the incision followed is that recommended by Mayo Robson through the right rectus muscle, which may be extended if necessary.

***The** Intraperitoneal portion of the operation*—This must be carried out in a manner suitable to the nature of the case. In all operations on the gastro-intestinal tract involving the risk of

* Specially contributed to the Silver Jubilee issue of the Antiseptic.

infection, special care must be taken to isolate the seat of operation as far as possible with gauze packing. For ligature material Pagensticher's celluloid thread is about the best for all practical purposes. The introduction of this thread is a decided advance in operative surgery, especially in abdominal surgery, The fine thread is the ideal suture for peritoneum as in the operation of Gastro—Enterostomy: it does not slip, is easily threaded, and it is easy and supple to stitch with. The tensile strength of the thread in proportion to its calibre is astounding, the strength is if anything increased by the process of sterilization. There is only a slightly appreciable swelling of the thread after boiling it; any water absorbed by it can be withdrawn by preserving the thread in alcohol. Some months of experience with the thread have not given rise to any anxiety or complication. There is every reason to believe that although the thread is not absorbed yet it soon gets organised over and buried with an aseptic burial by the neighbouring tissues. The thicker thread is useful for ligating a large blood vessel or a pedicle, for instance in the operations of hysterectomy, ovariotomy, and radical cure of hernia. The thread may be boiled many times without undergoing any deterioration and should entirely supersede silk as it is cheaper, more reliable, stronger and more easily worked with. The following method of sterilisation is recommended: from the hank obtained cut suitable lengths of thread and wind them on a glass reel. Boil for 20 minutes. Take the reel out with sterilised forceps and drop it into a wide mouthed bottle containing 5 per cent of carbolic acid in methylated spirit. Then the thread can be preserved indefinitely.

It is not within the scope of this article to deal with the special treatment of adhesions, or of the various complications that may arise in the course of an abdominal section. The abdomen now being opened, we shall assume that the various intra abdominal steps have been successfully accomplished and the time has come to close or partially close the wound. as the case may indicate.

Drainage—Before closing the wound, the question of drainage must be considered. Although drainage is used much less at the present time than in former years and although the form of drainage is growing simpler and less bulky, yet the general rule is as potent to-day as ever-that in case of doubt it is safer to drain, if only for a day or two. The purposes of drainage are in the main twofold: (1) to encourage focalizing temporary septic material at a point whence it can be deflected from invading the

general abdominal cavity, and thence the general lymphatic system : (2) secondly to establish an impermeable barrier about a point of infection, thereby preventing indefinitely the transportation into the lymphatics of a persistent infection, The first is accomplished within 24 to 48 hours, the second may require weeks or months. Since the convincing experiments by German and American observers have shown that the most active and rapid absorption into the lymphatics takes place from the diaphragmatic and omental peritoneum, while the pelvic peritoneum is very slow to absorb, posture has become a very important adjunct negatively as well as positively, in the treatment of peritoneal sepsis. The "pelvis—low" or as it is known in America, the Fowler position is used by surgeons almost universally where the danger of general sepsis from peritoneal sepsis is possible, On this basis patients are put to bed after operation in a half or even a complete sitting position, which is maintained for several days at least. Cardiac weakness in patients of this class is dependent on cardiac changes secondary to general septic absorption. If the latter is minimised, rather than increased, by the position of the body, there is less to bo feared as regards circulatory collapse. The peritoneum is doubtless able to dispose of very large amounts of septic material and it is assumed by many that drainage is consequently unnecessary in a large proportion of septic cases. The tendency to dispense with drainage is a practice that is justifiable as a reaction against the exeessive and bulky methods of past years. But there are three factors that must be considered in carrying this practice to the extreme: (1) first the individual equation as regards susceptibility to infection. This factor cannot be determined by any known reliable methods of examination. Judgment that eomes with personal experience counts for much in estimating its value. (ii) Second, the virulence of the infection. The species and the presence of the organism may be quickly and quite accurately determined by coverslip examination. But this does dot differentiate the virulence of the individual case. (iii) Third, the presence or absence of distant foci of infection. This cannot always be determined with safety or accuracy at the time of operation. Consequently if there is a reasonable doubt as to one of these factors it is advisable to resort to some form of drainage or other. Absorbent gauze is the basis of most drainage material. It may be plain or medicated. For temporary drainage thin rubber or guttapercba tissue may be wrapped loosely about one or two strands of gauze (cigarette drain) The rubber prevents adhesions to the viscera and the parietes, and facilitates withdrawl. The

socalled *stab wound drain* especially in cases requiring temporary drainage is of great value. A small punctured wound is made at some distance from the main incision at a convenient point for drainage, the trespassed muscles are forcibly divulsed, and the drain is brought out through the opening, preventing infection of the operation wound, and minimizing the chances of hernia.

In using *gauze packing*, especially in cases of haemorrhage, it must be borne in mind that it becomes practically impermeable to fluids at the end of 48 hours and that it may form a stopper like obturator beneath which blood and pus may accumulate. Reinfection may take place rapidly. and it will be necessary to remove the packing early when the pulse or temperature indicates trouble.

Late suture of granulating wounds after long continued drainage is useful to prevent hernia or a wide scar. If hernia results it is best repaired at the end of several months, when the tissues are no longer thick and inflamed, and when approximation can be made with anatomic accuracy.

Closing the abdominal Incision.—The methods of closing the abdominal wound vary with the individual practice of the operator. Many surgeons still employ interrupted sutures of silk worm gut or silk passing through the entire thickness of the abdominal wall, while others in addition, use deep relaxation sutures carried through the recti muscles at a distance of nearly an inch from the margins of the incision, with the object of forcing the recti together and preventing ventral hernia. A little reflection will convince most people that this method is not calculated to bring about the desired result ; the lateral margins of the muscles even if brought together, will not unite, and owing to the want of perfect coaptation the scar is likely to be defective in strength in certain parts. It is a matter of observation that ventral hernia is by no means uncommon, when this method of suturing has been adopted ; while the transverse scars which frequently result from the pressure on the skin produced by the sutures are by no means creditable to the surgical art. In closing the abdominal wound our object should be to restore the parts as nearly as possible to their original condition. This can only be accomplished by uniting the successive strata in tiers.

The following method is the one which seems to meet the required conditions. A thin flat sponge or pad of greater length than the wound is placed upon the intestines and Omentum beneath the opening. The parietal peritoneum and adjoining

layer of aponeuroses of the opposite sides are approximated and held together at several points by means of fine tissue forceps and are then sutured from above downwards by a continuous suture of no, (i) catgut, each pair of forceps is removed in turn when reached in the process of suturing, and as the lower part of the wound is approached, the sponge is gradually withdrawn, care being taken that no omentum is drawn into the opening. If a sponge on holder is left in Doughas's pouch it is also removed at this stage. *Any air* remaining in the peritoneal cavity is expelled *by pressure and* the suturing of the inner layer is completed. The aponeuroses superficial to the recti is now carefully united with a continuous suture of strong Formalin catgut; no 2 or no 3 is used according to the degree of tension to which the wound is likely to be subjected during recovery, which depends to a considerable extent on the muscular development of the patient. This suture may be introduced as an ordinary continuous suture, but additional strength and security are obtained by using a double continuous or "bootlace" suture. There is no occasion to include any fibres of the recti muscles in this suture, since the approximation of the margins of the aponeurosis will draw the muscles into their natural position. The closure of the wound is completed; when the parts have been carefully sponged, by the introduction of a subcuticular suture of fine silk worm gut.

Before tying the sutures be sure that all haemorrhage has ceased. Otherwise there will be haematoma, with subsequent suppuration, if the blood is not evacuated or absorbed.

A few technical points belong to hæmostasis in abdominal surgery. Where it is possible to use torsin instead of ligatures —and this covers very much of the field-we can avoid ligatures, the presence of which causes the peritoneum to throw out plastic lymph in the vicinity for its protection. Where it is necessary to use ligatures we avoid including much mass in the ligature, because the larger the mass, the greater the tendency for the peritoneum to throw out reparative lymph which will lead to adhesion formation subsequently. We have also to remember that the efforts of vomiting after an abdominal operation have a tendency to pull off certain ligatures, and consequently we must leave a considerable mass of tissue outside of the knot such mass of tissue is not likely to slough as some operators fear, because it is kept alive by lymph circulation in the vicinity, and has a tendency to gradually become absorbed in a very benign way, because of the fact that it is tissue belonging to the individual. Haemostasis of the cut margins of the alimentary tract cannot

readily be obtained by ligating, and consequently we employ the suture here instead, for the most part, and snugly drawn running sutures suffice for the purpose.

Dressing:—After the ordinary wound is closed very little in the way of dressing is required. A simple layer of Gauze and collodion (Cocoon dressing) is ordinarily sufficient. To prevent the patient from disturbing the seal it is well to apply a swathe for a few days. Instead of a cocoon dressing, the gauze may be held in place with adhesive straps, but it is important that the gauze next the line of incision does not slip nor irritate by constant friction. If the wound be drained, the dressing over the drain and wound consists of several layers of sterile gauze and absorbent cotton extending well beyond in all directions, and is kept in position by means of a many tailed bandage extending from the lower portion of the thorax down as far as the trochanteric regions.

How long a wound should remain sealed before inspection is necessary will depend upon the nature of the case. If it is a drained case, the dressing is changed whenever saturated or in any event after 48 hours.

In non-drained cases, it is my custom to remove the dressings on the 2nd day and carefully inspect the stiches if there has been no soakage. I re-dress and wait till the fifth day when again if the dressings are dry I re-dress every alternate days till the stitches are removed on about the 9th day; the scar then is wiped clean with cotton wool soaked in rectified spirit dusted with boracic acid and a light dressing put on. If stitch trouble or infection in the line of incision is going to occur, it will probably take place between the 6th and tenth days, so that careful observation of temperature and pulse should be noted during this time, and the patient interrogated as to pain or unusual soreness in the line of incision.

Primary as well as secondary wound trouble should be carefully watched for, though it is of very rare occurence, and is due to very septic suture material or virulent infection of the wound from other causes. In these cases there is a rise of several degrees in temperature during the first twenty four hours, and upon removing the stitches, murky serum or forming pus will be found—in such cases I thoroughly disinfect the wound with a freshly made solution of stabilized bleaching powder (one table spoonful to a pint), and keep on dressing it every day till it cicatrizes. In pulling open these wounds within the first forty eight hours, very firm union will be found to exist in the non-

infected parts. Indeed I have been surprised to find that after removing all sutures the wound not only remains firmly adherent but quite decided force is necessary to break it apart. It would seem from this that sutures are left in as a rule longer than necessary, and that in a perfectly aseptic case, they could be removed after 9 days without fear of trouble and we all know that they cannot be dispensed with too early when once their work is done. Though suppuration of stitches, or in the line of incision, is generally ushered in by rising pulse and temperature, such is not always the case, especially if hæmatoma has occurred, for in cases in which the dressing has not been removed for ten days because every-thing apparently was going well, the wound has been found separated and bathed in pus upon its final removal. In consequence of this fact I make it an invariable rule to remove the dressing on the 2nd day and then again on the 5th day and if all goes well, re-dress every 48 hours till the stitches are removed, and it is evident no wound trouble is likely to occur.

Assuming, however, that stich hole abscess or suppuration in the line of incision is going to occur in a given case, we shall probably find a rise of two or three degrees in the temperature and the pulse will run up to 100 or 120, pain in the region of the wound is complained of, and upon removing the dressing hard, brawny areas will be felt on one or both sides of the wound, which are sore upon pressure, and may or may not be red according to the depth of the septic focus. The wound should be separated at once at the nearest point to the focus, provided the induration extends fully to its edges, and, pus will be found to exude.

If the focus is around a stitch removed from the line of incision, the stitch is removed, being cut on the non—infected side and pulled through towards the infected side, thus avoiding carrying septic matter across to the healthy side. This rule should be observed in removing all sutures that look tainted on one side or the other.

The septic stitch having been removed, and pus found freely flowing, the hole should be well opened with the knife, and the abscess cavity evacuated and washed out. These abscesses usually form in the superficial layers of the fat from skin suture infection, though they may occur in the muscular layers, and present a genuine abscess of the belly walls. These latter cases require free incision, ample drainage and frequent flushings with antiseptic solutions, such as solution of chlorinated Lime (one table spoonful to a pint), or condy's solution (one grain of Potass

permanganate to a pint of sterile water). Peritonitis resulting from wound abscess is exceedingly rare, even in the most virulent mural forms, owing to the simple fact that the peritoneum unites very quickly and firmly and forms a highly resistant shield before pus is generated.

Kelly gives the following causes of post operative wound complications:—

i. unnecessary handling of the wound.

ii. rough retraction of its edges.

iii. prolonged pressure with metal retractors.

iv. Carelessness in checking bleeding in the incision.

v. strangulation of large bits of tissue by ligatures.

and vi. the use of sutures penetrating the skin in closing the incisions."

To these causes must be added the normal presence of many pyogenic germs in the skin, which are likely to take on active genesis in contact with air.

Remlinger states that many of these germs are found in the the deep layers and has demonstrated in these layers the staphylococci albus, aureus and citrens, that streptococcus pyogenes and the coli bacillus.

When the wound is firmly healed, whether by primary or secondary union the question of its ultimate support demands consideration. In patients with fat abdomens, where the weight of the wall drags laterally from the scar, it is important to overcome the dragging by a snug bandage, or adhesive strapping for about 3 weeks, when the scar tissue on the skin should be strong enough to prevent stretching.

Extensive wounds eight inches or more in length, need support for about three weeks, after which it may be discarded, Where muscles have been cut and sutured, external support is necessary for about three weeks. So also in wounds involving loss of tissue and requiring tension sutures.

Except in obese patients, following the ordinary operations, any reasonable amount of exercise, or strain should have no effect on the scar after three weeks, provided healing has been aseptic. Long lateral wounds with destruction of motor nerves impel the subsequent use of abdominal supporters to aid the paralysed muscles in resisting the pressure from within.

Drained wounds that develop hernia should be supported until all evidences of inflammation have subsided, when they should be closed by secondary suture.

Treatment after abdominal operations—At the West London Hospital Mr. Mc.Adam Eccles reading a paper on treatment after abdominal operations to the West London Medico Chirurgical Society, said that it had been contended that it was only the surgeon or practitioner who had experienced an abdominal operation on himself who could adequately treat a fellow sufferer: he would speak from personal experience of appendicectomy. Post operative vomiting was partly due to the general anaesthesia, but not entirely, for Mr. Eccles had seen it occur after spinal anaesthesia. The treatment he recommended for *post operative emesis was* :—

(1) To allow the patient a pint of hot water to drink with half a drachm of sodium bicarbonate dissolved in it, (2) saline enema of half a pint was slowly given to relieve thirst, and this, if retained, was repeated in a few hours. (3) to prop the patient up with pillows, as this position stopped vomiting.

Flatulence after laparotomy might be due to at least four causes :—

(i) Purge and enema previous to operation.

(ii) a preliminary dose of morphine and atropine.

(iii) Excessive manipulation of bowel, causing paresis.

(iv) too rigid confinement of abdominal patients to the dorsal position.

Early flatulence was best relieved by a pituitrin enema. Of great service was a hot fomentation placed over the whole abdomen; it was superior to a layer of cotton wool.

Solid food should be given as soon as possible.

For late flatulence there was nothing superior to a good dose of castor oil.

Pain after abdominal operations, was best relieved by a rectal injection of aspirin gr. X and sodium bromide grs. xx.

As for diet, except where the intestine had been actually interfered with, the sooner the patient had semisolid and solid food the better.

When a drainage tube had been inserted it should be removed as soon as possible. A tube pressing against the intestine might cause a fistula within 48 hours of its insertion.

Medical Men's Success in their Career.

"Lancet" endorses the following outlook on the part of the Editors of the "Antiseptic" as practical;—

"The medical profession in their dealings with the lay public, have a hard time in convincing them of the benefits of fresh air, pure water, nutritious food, good exercise, sound sleep and a host of other things which are indispensable not only to cure them of their maladies but also to prevent them from contracting fresh ailments. The lay public consequently require to be educated too in matters of health and hygiene if the medical profession should claim absolute success in their career."

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Short articles of about 2000 words from you are also welcome.

For retention of urine, after operation a catheter should never be passed if it could be possibly avoided. Finally it should be remembered that under the strain of coughing or Vomiting abdominal sutures might give way; the actual line of sutures, should therefore be inspected every day.

CASES AND COMMENTS

A CASE OF ECLAMPSIA.

BY

DR. VIRIJLAL M. MEHTA M.B.B.S.

Medical officer I/c State Dispensary Upbta (Kathiawar.)

The patient was a young lady named Khatija aged about 19 years, primipara, of a well developed constitution.

Previous History—Nothing except severe headache two days preceding this illness.

Present illness—On the eleventh of May in the morning, she developed sudden blindness with severe headache and fits. Bowels constipated.

She was treated by a quack for 36 hours during which time her condition grew worse. Fits were frequent, and breathing stretorous, on the morning of 13th when I saw the case. I had not the least difficulty in making the diagnosis of the case, as all the prominent symptoms of Eclampsia developed fully in her. Fits were coming every 2 minutes. I lost no time and at once began the treatment, though I had little hope of saving the life of the patient. I injected Morphine Hydrochloride gr ¼ subcutaneously at 12 noon and advised the patient's relation if possible to remove her to some suitable hospital but they were too poor and ignorant to do this. I went to see her again, at 2 P. M. and found her under the influence of Morphia, and fits little controlled. I prepared one pint of Normal saline with one dr. of sodii bicarb in it and injected the fluid in the submammary region. I catheterised the patient and removed the urine. I made a vaginal examination and to my surprise I found the cervix dilated to admit two fingers. I took a plain white strip of cloth 6" wide and 6 yards long sterilized it in boiling water and plugged the cervix and vagina and left the patient. At 6 P. M. I went there again and examined her. Her fits were less in number and jaw well relaxed.

I prescribed the following mixture to be given, a teaspoonful every ¼ hour.

℞

Chloral Hydras	gr. 30
Sodii Bicarb	ʒ i
Spts. ammonia	ʒ i
Liq. hydrargerii perchlor	ʒ i
Aqua camphor ad	ʒ iii

M. F. T. One teaspoonful to be taken.

Again I gave one pint of rectal Saline with one dr. of Sodii Bicarb put into it. I examined the lower abdomen and found the fundus low. I applied an abdominal bandage and gave 1 c c of pitutrin, combined with 1 c c of 5gr. Quinine Bi-hydrochloride in the gluteal region. At 1-30 A. M. the patient's relative informed me that the petient delivered a child, and was unconscious. 14-5-29. I saw her at 10-30 A. M. She was still unconscious. I examined her and decided to treat her in the following way.

I. I gave about 2 pints of soap and water enema,—with an ounce of castor oil. Patient passed a good motion.

II. I douched the uterus and vagina with Lysol sol. (ʒ i to a pint)

III. Gave one pint of Saline with Sodii Bicarb one dr. (submammary) and prescribed the following:

℞

Liq ammoni acetas	ʒ iv
Pot citras	gr. 100
Sodii Bicarb	ʒ ii
Ammonii chloride	gr 40
Ext. Ergot Liq	m. 80
Chloral Hydras	gr. 40
Tinct Nux Vomica	m 20
Liq hydrargerii perchlor	ʒ i
Mag Sulphas	ʒ iv
Spts. aetheris Nitrosi	ʒ ii
Caffein citras	gr. viii
Tinct digitalis	m 20
Aqua Chloroform ad	ʒ iv

F. M. One tea spoonful to be given and completed within 24 hours.

I injected Ergotin citras 1/200 gr. hypodermically. In the evening, patient opened her eyes and the number of fits were very few. She could not recognize anybody. I asked her relations to continue the mixture and inform me next morning.

15-5-29—I was informed by the relatives of the patient that she was restless in the night and did not sleep. I became anxious and went there and found that she sometimes laughed, sometimes

wept and spoke incoherently. I at once confirmed she was developing puerperal septicaemia and Insanity. I gave her injections of morphine gr. ¼ and Ergotine citras gr. $\frac{1}{200}$ hypodermically. Lochia was not abnormal but uterus when palpated was flabby. I prescribed the same mixture as on 14-5-29. In the evening I found the patient extremaly boisterous and there was a distinct rise of temeprature and she was unmanagable.

The bowels were not moved and so I prescribed.

℞

Calomel	gr. iv
Sodii bicarb	gr. vi
T pulvis	i

to be given at 6 P. M.

and another powder

℞

Aspirin	gr. x
Chloral hydras	gr. xx
Sodii bicarb	gr. x
Fiat pulvis	i

I asked the relations to inform me if the bowels did not move by 9 P. M.

At 9 P. M. I gave a soap and water enema about 2 pints. I prepared about, ½ gallon of Soda Bicarb solution (one dr. pint) and lavaged the colon. I also gave her one pint of submammry saline. She passed a better night and had six good motions and passed urine 6 times.

16-5-29. I saw her in the same condition, and she was so much out of her senses that she used threatening language. I injected ¼ gr. morphin Sulphate with 1/200 gr. of Hyosine Hydrobromide and one does of 10 c.c of spretoserin German (Streptococcal serum of M. L. B. preparation) and left the patient. She slept for 7 hours very quietly. I went to see her in the evening, when she was coming out from the influence of morphia, and I prescribed the following mixture.

℞

Tr. Opii	m 30
Chlor hydras	gr. 30
Pot. Bromide	gr. 30
Tr. Hyosyanes	ʒ ½
Spts. aetheris nitrosi	ʒ ii
Magsulph	ʒ iii
Aqua ad	ʒ iv

M. F. T. one teaspoonful to be given with water.

17-5-29. I went there and found the patient a little better. Her temperature was much less, she was delerious.

As the relations of the patient were not willing to have her treated by injections, I gave the following.

℞

Calomel	gr. iv
Sodi bicarb	gr. vi

to be given with water.

After one hour-she was given another powder of.

Aspirin	gr. x
Chloral hydras	gr. xx
Caffein citras	gr. iii

to be given with water.

The following mixture was prescribed.

℞

Quine Sulph	gr, xii
Acid hydrobromic (dil)	m 30
Ex. Ergot Liq	m. 40
Ammonii chloride	gr. 30
Liq hydrageri perchl	ʒ 1
Mag Sulph	ʒ iii
Aqua ad	ʒ iii

mft. ⅓ part to be given every 4th hour.

18-5-29. The patient was better. She passed two motions and urinated freely. She was unconscious still. It was with difficulty that the patient's relations were persuaded to administer medicine regularly but no medicine was being allowed to be given. The whole day passed in the same condition.

Since this day no medicine was being allowed to the patient, and I was not being given calls, All the while I was feeling for the poor lady, who was, as I was hearing, going from bad to worse and who was becoming a prey to the ignorance and superstition of these class of people. On the morning of 24-5-29. after six days I was again called. I went there and the condition I found her in was extremely bad. She was feverish, unconscious and her breathing was of Cheyne-stoke's type. I examined and found that she had right sided pneumonia, and was fast sinking. I was extremely sorry and thought of no medicine to save the poor woman at this stage, still, to satisfy the eagerness of the relations I prescribed stimulant and expectorant mixture but the poor lady succumbed at 10 P. M. The death was due to pneumonia type of septicæmia. If the lady had been allowed to be treated perhaps, her life would have been saved but hundreds of such lives are becoming victims to the ignorance of such people every year. May the Almightly give wisdom to such people so that hundreds of such lives may in future be saved.

The above case is sent to the journal simply with a view to point out that a case of Eclampsia, if rightly diagnosed and efficiently treated, can be cured even as a private patient if circumstances more favourable than I had, are present. Any suggestion or comment on this article will be thankfully acknowledged by me.

A SURE RELIEF FOR THREAD-WORM.

BY

J. H. VYDIER L. H. M. S.

Chamraj Estate, Katary P. O. (Nilgiris)

Trouble from Thread-worm, Vermicularis Oxyuris is a common complaint met with in one's practice. As the worm harbours in the rectal folds it is generally known as seat-worm ; and many remedies both local and internal has been suggested in the B. P, for its expulsion from the rectum, but I had been using a remedy in a few cases with marked results and I venture to mention it here for trial and observation by interested physicians. The remedy is known to many native physicians and it is a vegitable creeper thriving well in Malabar, the fruit of which is very bitter but extensively used by the natives as a vegetable dish. It is the bitter-gourd plant, known as "Kaippa-Valli" in Malayalam and as "Pava-Koti" in Tamil. I think its Hindustani term is karla-ke-Bel.

About a tablespoonful of juice from the fresh leaves of this creeper mixed in an ounce of castor oil and taken early morning over an empty stomach forms an adult dose which in the course of purgation expells the worms in swarms or clusters. In all cases I administered this remedy excellent relief from the trouble has been obtained in one single dose and no untoward symptoms found after its use. I regard this a safe and efficient agent for the relief of thread worm in those who are much annoyed by it, and would suggest its trial and investigation by Allopathic physicians and pharmacists.

I would therefore request you to consider if this is worth publication in the "Antiseptic"

AN INTERESTING CASE OF SYMPATHETIC MASTITIS

BY

DR. P. CHATTERJEE

I./C. Kalapani T. E's Hospital. Mijikajan P.O.. Dt. Darrang, Assam

Below is given a case of sympathetic bilateral Mastitis, the object of reporting the case for publication being to show some features of interest found in the case.

A primipara lady, aged 19, had Mastitis (of the left breast) the resulting abscess being a post mammary one. The abscess was opened when the suppuration was evident, and a large quantity of thick pus was let out and the cavity was daily washed and dressed antiseptically. Two days after the abscess was opened the opposite breast showed signs of inflammation. Three doses of antistreptococcus serum (polyvalent) were therefore injected (one dose every six hours) specially because both streptococcus and staphylococcus were found in the film made from the pus of the first abscess. There was no amelioration in the inflammation of the right breast, inspite of the serum treatmen.t The temperature now was of hectic type varying between 95° and 106° F. The abscess of the right breast was opened when it showed signs of suppuration and the patient recovered within 3 weeks.

The following are some of the interesting features in this case:—

(1) abscess first in the left breast and then in the right breast inspite of the patient lying on the left side to facilitate free drainage from the left breast.

(2) The interspace between the two breasts was not involved in the inflammatory process although there were two big abscesses in the two breasts.

(3) No Metastatic abscess in any other place but abscess in the opposite breast.

(4) Unusually low (95° F.) temperature.

ANTI-SYPHILITIC TREATMENT OF EPILEPSY

BY

M. BAROOA, L. M. P. F.T.S.

Sahityabhushan, Mancotta T.E. Hospital, Dibrugarh, Assam.

When treating an epileptic the physician must not lose sight of the probability of the disease as a complication of syphilis—inherited or acquired. The following obstinate case will illustrate my point:—

On the 16th March, 1928 an adult male, Mandari by caste was admitted into my hospital with an epileptic fit. Duration of disease—about 12 years. A preliminary dose of calomel followed by Saline was given. Afterwards a mixture containing Sodium, Potassium and Ammonium bromides was continued up to the 27th March, 1928 when he was discharged at his own request. However, it came to my knowledge that he had recurrence of fits at least twice a month as before.

He was re-admitted with gummatous ulcers on the 17th October of the same year. This time anti-syphilitic measures were adopted and it struck my mind that a course of Neo-Salvarsan injections might do him a lot of good. So the same evening Neo-Salvarsan 0.45 grms was injected interavenously. It was repeated on the 24th and 31st October and on the 7th November the dose was increased to 0·6 grms. From the 8th November until the day of his discharge mercury and Pot. Iodide mixture was administered.

The patient got no more fits in the hospital. Unfortunately Neo-Salvarsan could not be pushed any further as he refused point blank to have any more intravenous injections. He was discharged on 23-11-28 when all the ulcers were healed up. But lo! there were more troubles in store for him. Just after a month, i.e. on the 26th December, the man was readmitted with deep corneal ulcers of the left eye. I apprehended that he was going to lose his eye-sight for good. Every possible care of the eye was taken and 2 injections of Neo-Salvarsan 0.75 grms each were given. This time I was thinking of a specific which could be given either subcutaneously or intramuscularly with great advantage.

In the mean time Dr. E. A. Goldie M. B., B. S. (Lond), Medical Officer, suggested "Bismuthoidol" (Robin) injections and very kindly sent me a sample box of the same. Twelve injections of Bismuthoidol were given intramuscularly every other day.

He was discharged on the 16th April, 1929 on his regaining normal vision. Since then he is enjoying a sound health and getting no more fits.

I am thankful to Dr. Goldie for his kind suggestions.

TAPE WORM SUSPECTED AS PREGNANCY.

BY

DR. M. L. BAGH.

Registered Medical Practitioner, Gunj Medical Hall, Ajmer.

A female 26 years of age, Mohammadan by caste when pregnant of six months sufferd from œdema all over the body, pale yellow face, palpitation, incraeased thirst and was very much emaciated. She was given an abortive, delivered seven months foetus and got quite alright.

Now for the last three months she had no menses. œdema over the lower extremity and abdomen; laboured breathing, increased thirst, no rest during night, loss of appetite, sluggish bowels. For this she went to General Hospital and took medicine for 15 days but to no use and then came to me.

Physical Exmn.—Pale yellow body, much emaciated Œdema over lower extremity and abdomen, and some flabbiness over the face.

Dig. System.—No pyorrhoea, buccal mucus membrane nearly bloodless, pharynx normal but bloodless, abdomen distended.

Respiratory System.—Slight cough without expectoration otherwise normal.

Heart.—Heart beat increased, palpitation present, dysphonia present. (Temp. evening from 100 to 101F) otherwise no Temperature.

Spleen.—Much enlarged reaching down below Umbilicus.

Liver.—Tender and slightly enlarged reaching just below costal margin.

Kidney.—Almost normal.

Generative System.—No menses for 3 months; was regular before this; uterus flabby.

(She was diagnosed pregnant in Hospital and was advised admission but refused and so medicine was given for fifteen days but to no effect.) She came to me and as previously stated she was in the same condition as when pregnant; an ecbolic was administered but to no use and medicine aggravated the symptoms. She was then given a Heart Tonic with a Laxative which brought out to my astonishment one Tape worm. Then the diagnosis was settled and she was given Santonin and then Fern which brought the patient to perfect health and she is now hale and hearty.

N. B.—After the administration of Santonin and Fern she passed only one worm more i.e., a total of two. But she has got no complaint of any type since and is quite hearty.

A CASE OF DYSENTERIC AND HAEMORRHAGIC FORM OF MALARIA.

BY

DR. VIRJILAL MOHANLAL MEHTA M.B.B.S.,

Medical Officer I/c State Hospital, Upleta.

A Mahomedan boy named Jakar Jusab aged five years, was brought to me in the Hospital on 1st July. He had high fever, temperature being 103·5, his abdomen was tense, tongue was coated and dry and he was drowsy. There was no specific history of rigors and sweating. It was the fourth day of his fever. I put him on Diaphoretic mixture adding Mag. sulphas in it in purgative doses. Next day I continued the mixture. On the 3rd, I found him in the same condition and I thought of round worms, as round worm cases are very common in this place and so I gave calomel powder. I did not

give Santonin as there was high fever. Next day about four round worms came out. His tongue was a little cleared. There was slight fall in fever. I found slight bluish tinge on the coated tongue, which sign is invariably found in malarial fever cases in this place. On the 4th, I put him under quinine mixture. I continued this mixture for three days. I examined the child on the morning of 6th when there was no fever, and as the condition was better, the same mixture was continued. On the afternoon of 6th July, at 4 o'clock, the patient's father came and informed me that the child was attacked with fever and rigor since 2 hours and patient passed pure blood as motion. He was very anxious that I should accompany him and see the case. I went there and examined the child. Fever was 102°, pulse was feeble and the child was very weak. Blood was oozing from the anus. I began to examine his abdomen and by my palpation of the abdomen, the boy got the inclination to pass motion and to my surprise he passed about 6 oz of pure blood in motion and was getting tenesmus all the while. I instructed the parents of the child to take him to bed and strictly warned them that the boy should be given absolute rest. I was a little perplexed about my diagnosis and I could not make myself believe to take his case for bacillary Dysentery or typhoid or tubercular ulceration of intestine as there were not any other corroborative symptoms of those diseases. Anyhow I treated the case symptomatically by giving the following mixture,'—

℞

Acid Tannic	gr. xvi.
Acid Sulphuric dil	m. xxiv
Liq. Morphine	m xxiv
Tinct Belladona	m. xii.
Tr. Hamamelidis	ʒ i
Liq Hydarar Perchlor.	ʒ i
Tinct. Katechu	m. 48
Aqua	ʒ iii

Mft to be divided into 12 parts and each part to be given every hour until blood ceases and then to be discontinued.

I went to see the boy in the evening of 6th after two hours, and found that the child did not pass any more blood motion. There was fever and the abdomen was tender. I did not disturb the child by my examination. No food except plain iced-water was allowed and I asked the relatives to continue the mixture as instructed till the boy sleeps; about six doses of the above mixture were given when dribbling of blood ceased and child began to sleep. Next day on the 7th I gave the following mixture:—

℞

Castoroil	m. xxx.
Mucilage	gr. 3.
Tinct Nux Vomica	m. vi.
Tinct opii	m. ix.
Liq Hydrar Perchl	m. xx.
Tinct Katechu	m. xxi.
Tinct Hamamelidis	m. xxi.
Aqua	ʒ ii,

Mixture, 4 times every 4th hour.

In the afternoon of 4th, I thought over the case and imagined that some sort of this type of hæmohrrage in motion may be a complication of malaria or some distinct type of that disease. I referred to the book on tropical disease by Dr. Manson edition 7th which book, I was given to read by my revered superior Chief, Medical Officer, Kumarshree Bhupatsinhijibhai Sahib L.R.C.P. & S. M.R.C.P. & S. and to whom I am much indebted for this obligation and but for which, I would have been in ignorance of this case. Dr. Manson in his book on page 46, describes a distinct variety called "Dysenteric and hæmorrhagic form of malaria" and he writes "The possibility of a suddenly developed hæmorrhage of this nature, being of malarial origin must therefore be kept in view.....possibility of the symptoms being an expression of malarial disease must never be overlooked." I at once concluded this case to be of the said variety of malaria, and infection by subtertian type of parasites. From the 8th, child was being treated by quinine mixture and intramuscular quinine bihydrochloric injections one of which was given on 8th and another on 10th. I put the child on mild quinine mixture, giving 8 to 10 grs. of Quinine Sulphas per-day; Besides gr. powder of Calomel was being given per day. During following 6 days fever became intermittent, and temperature never went more than 101°. No blood was passed in motion. Child was given liquid food. During these six days child used to pass semi-solid motion of natural colours. On 14th there was again rigor and fever, and hæmorrhage about 1½ to 2 ozs. passed in motion. I put the child on astringent mixture adding a little castor-oil. On the 15th he was better. Quinine mixture again was given and the child began to improve steadily. The fever was checked. No more worms were passed.

There was simply diurnal rise of temperature for two hours with rigor and perspiration. Quinine Bihydrochloride 5 gr. was given intramuscularly and fever was checked. Tho boy began to improve. He was better for six days, i.e., from 15th to 21st. There was absolutely no fever and child began to demand for food. I instructed the parents not to give any solid food without my consent but these ignorant people, mistaking this demand for natural appetite, gave the boy wheat bread. There was rise of little temp. on 21st. The boy was given diaphoretic mixture with calomel powder. The boy became better. He is absolutely free from fever and steadily improving. Easton's Syrup is advised. Full details of the case are sent wih a view to have the opinion of my brother physicians for the diagnosis of this case. I cannot classify this case as bacillary dysentry or typho-malaria from above symptoms. I considered this case as what I have put at the top of the article.

PSORIASIS

BY

B. L. SHARMA,

M. O. Chunar, U. P.

Seeing an interesting article on Psoriasis by Dr. Daleppa, in the Antiseptic of July 29, I am also inclined to give my experience on the treatment of this disease.

In my practice I have met with little success in the treatment of this disease with external medicines like Ichthyol, Acid Salicylic, Chrysophanic, etc.

Whatever success I obtained was with the intravenous injections of Liqr. Arsen. Hydrargyri-Iodide (Donovan's solution).

The injection can be given in the dose of m. 5. to start with twice or thrice a week—as the case may be.

The dose can be increased gradually up to 20 minms, to be given twice a week.

I need not say that all the antiseptic measures must be strictly observed during an injection.

I could get chance for the trial of this treatment on two cases only, so I cannot lay much stress on it.

Further trial by the profession is solicited.

I have tried Donovan's solution injections on Syphilitic cases too and with good results, but slow action.

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THE I. M. S. AGITATION AND THE GOVERNMENT'S SURRENDER.

Since the World-War, recruitment to the I.M.S. had become a problem beset with great difficulty and embarassment to the Government of India and the Secretary of State. The causes at work, were chiefly (1) the difficulties and uncertainties common to All-Indian Services in existing political conditions (2) the long drawn out suspense as to the basis of re-organization of the military medical services in India (3) the altered status of medicine under the reform scheme as a transferred subject administered by Indian provincial ministers, (4) the loss to the I.M.S. of a number of Civil surgeoncies and a few important teaching posts through the formation of a provincial Cadre of non-I.M.S., appointments.

The first bait offered to secure an adequate number of recruits was to fill up all vacancies in this service by nominations and not by the competitive test, as previously done. The nominations after 1920-'21 were made partly from some of those who had held temporary commissions during the War and partly from fresh applicants. When the Secretary of State for India could not secure the number of British Officers he required even after holding out this bait, he introduced in 1928 the system of time-contract appointments with special inducements by way of free passages, gratuities of £. 1000/- and £. 2500/- after 6 and 12 years' service

respectively with several privileges including those of permanent commissions, Civil employment etc., Still the lull in recruitment persisted, the reason being, that apart from the wider issues of the transition period in India, two main sources of dissatisfaction remained viz., that the chief administrative posts under the Provincial Governments were omitted in the scheme from the list of appointments reserved for the officers of the I.M.S. and that the shortage of recruits so impeded the transfer of officers from military to civil employ as to minimize what has always been recognised as the chief attraction of the service.' The British Medical Association, London, at their meetiag held in June 1928 considered these proposals and adopted the following resolution:

"That the Secretary of State for India be informed (1) that the Association has carefully considered the new proposals for the re-organization of the medical services in India and notes that the prime object of the proposals is to maintain a war reserve of military medical officers and to provide European Medical attendance for European officers of the superior Civil services and their families, (2) that the Association is convinced that the new proposals will not attract an adequate number of European Medical men to the Indian Medical service so long as (*a*) the chief administrative medical officers of Local Governments are not specially included in the list of appointments of officers of the Indian Medical Service and so long as (*b*) the prospect of employment on the Civil side, which is the chief inducement to enter the I.M.S. is as indefinite as it is at present."

This had the desired effect and the Secretary of State for India after mature consideration and deliberation with the Government of India, in June 1929, authorized the publication of the following statement:—

"As regards paragraph 1 of the Resolution, it has always been the intention that the existing rights of Indian Medical Service officers in permanent civil employment on the date of publication of the reorganization scheme should be safeguarded. Applied to the civil medical administrative posts, this means that these posts will continue to be filled by the Indian Medical Service officers until all officers in civil employ on the date of publication of the reorganization scheme have retired or been otherwise provided for.

The procedure for filling these posts in accordance with the principle just enunciated is as follows:

The suitability of Indian Medical Service officers in civil employ for promotion to Administrative rank will first

be determined on the advice of a Selection Board consisting of the Director-General, Indian Medical Service, and one or two of the Chief Administrative Medical Officers of the provinces. The Provincial administrative heads will serve on the Selection Board in rotation, and those not serving as members of the Board will be invited to serve as Assessors. Local Governments will report annually for the consideration of the Board the names of officers whom they deem suitable for civil administrative posts, but the Board will not be precluded from considering other names should they think this desirable.

When a civil medical administrative post falls vacant in a province, the names of three I.M.S., officers from the approved list will be submitted to the Government of India by the Director-General, Indian Medical Service. The Local Government concerned will then be asked to state their views in order of preference. After considering these views the final selection will be made by the Governor-General in Council.

With regard to paragraph 2 of the Resolution, regarding the transfer of officers from military to civil employ, the present difficulty arises from the insufficiency of British officers to meet the minimum requirements of the Army. In view of the urgent necessity for transferring I. M. S. Officers to civil employ, the minimum requirements on the military side have been reduced and the normal period of training in India before officers can be transferred to civil employ has been reduced from two years to one year. Even with this reduction the Army will still be 22 officers short.

It has therefore been decided that as soon as this number is secured, and the new recruits have been trained in India for one year, one European I. M. S., Officer will be released for civil employ for every fresh recruit secured for the military over and above any required to meet casualties. Most of the 22 officers needed have already been appointed and it is anticipated that the remainder will be obtained without delay. The whole number therefore will probably proceed to India to join their appointments not later than the earlier part of next year. The flow of British officers from military to civil employ is therefore likely to be resumed early in 1931."

This tells its own tale and the I. M. S. is given once more a supreme place in the Civil Medical Department of the land. It practically withdraws the scheme framed by the Secretary of State in 1928, by reserving the highest civil administrative posts

in the Provinces for the I.M.S. for some 25 years more, on the ostensible ground that 'the existing rights of the Indian Medical service officers in permanent Civil employment on the date of publication of re-organization scheme should be safeguarded.' It has also introduced racial favouritism in the medical services as evidenced by the statement that "in future one European officer should be released for civil employ for every fresh recruit secured for the military." It has helped in the reservation of certain appointments in the departments of Medical Education, Research and Public Health for the Indian Medical Service officers, a procedure which is uneconomical, inconvenient and detrimental to the growth and development of these departments. Finally, it has given a complete go-bye to the recommendations of the Public Service Commission regarding the formation of a separate Civil Medical Cadre for each province.

The duty of public men and of the medical profession in India is now clear. They must oppose tooth and nail this last scheme of the Secretary of State evidently intended to pander to the tastes of the British Medical Association and secure and safeguard the interests of the British people. We have always thought such inroads on the part of the Military Department on the civil medical side are calculated to hamper the growth of the independent medical profession in India and we have grave misgivings as to the future of this body, if such inroads are left unnoticed and unchecked. We trust therefore that the various medical and political organizations in this country will lose no time in entering their emphatic protest against this scheme and to agitate for the immediate constitution of a separate Civil Medical Cadre for each province, as recommended by the Public Service Commission.

REVIEWS OF THE SILVER JUBILEE ISSUE— (APRIL 1929) OF THE ANTISEPTIC.

The Charing Cross Hospital Gazette, London.—We have received a copy of the "Silver Jubilee Number" of the "Antiseptic," and must congratulate the Editors upon this issue of that progressive journal.

Medical Woman's Journal, Cincinnati, March 1929.—"This medical journal which is edited by Honorable U. Rama Rau and U. Krishna Rau, M. B., B. S.. has been coming to the editorial desk for several years. It is **a well edited medical publication.** It celebrates its Silver Jubilee next month. While we could wish that more attention might be given to the subject of work done by

medical women in India, doubtless conditions in that country impose certain restrictions and inhibitions upon the editors. Reference is made to the nebulous state of scientific medicine in India, vaccination, sanitation, medical education, etc. Our best wishes attend the Antiseptic in the missionary work it has done in the past and is continuing to do."

The Medical World, London, April 12, 1929.—In common with most journals lay and professional, we have friendly "exchanges" with others; **always an interesting one** is *The Antiseptic* of Madras, whose editor, Dr. Krishna Rau, tells us that it celebrates its silver jubilee this month. Founded a quarter of a century ago "in the interest of the whole profession" the position of Indian doctors was the chief stimulus. The pay of assistant surgeons and hospital assistants was incredibly poor and their status derogatory to men of any scientific training, while the independent private practitioner who had recently come into being, led a most precarious existence. So *The Antiseptic* born of the consequent discontents was founded by the public spirit of two private practitioners of Madras and ever since it has gone on from strength to strength. The level of its contributed matter has been consistently high, but in medical politics it has helped many a reform. One great abuse the magazine did much to abate by its support of medical registration and control by a council on British lines has been the age-old prevalence of quackery. Next in an effort to raise the tone of the profession, it helped in the withdrawl of an inferior qualifying licence of the Madras University. But it is in the field of public health and sanitation that it has done even more necessary and arduous work. While it has seen the disappearance of most of the disabilities it set out to abolish, *The Antiseptic* looks forward to a united Indian profession as an ideal still to be accomplished, and with an equal singleness of purpose that too, is in a fair way to realisation.

Journal of the American Association for Medico—Physical Research St. Louis, June 1929.—We are in receipt of the Jubilee number of the Antiseptic published at Madras, India. This number of this valuable Journal is published on the Twenty-fifth anniversary of its founding.

The editors and publishers are to be congratulated on this Jubilee number. An adequate review is beyound the space we can devote to it. It is a handsome piece of book-making of 284

pages, well printed and handsomely illustrated. It contains a handsome picture of the office building of the Antiseptic, 75 half tone cuts of the founders of the Antiseptic and of prominent physicians of India, 12 X-ray plates, 2 illustrations in dermatology, and 7 figures in pathology.

The first 45 pages are devoted to a history of the Antiseptic and the aims and purposes for which it has contended for 25 years. Another section is devoted to congratulations and well wishes from all over the world. These are headed by letters from Sir Mohamed Habibullah, Member of the Viceroy's Executive Council in charge of Public Health and from Major General Thomas Henry Symons. Director General, Indian Medical Service. These are followed by some 41 letters from prominent scientists and physicians from all over the world. These in turn are followed by 23 letters from Medical Editors from all over the world, among them the letter of the Editor of our Journal. To these are added letters from four advertisers.

All these letters evidenced a high appreciation of the Antiseptic. Some of them are quite long and devote considerable space to commending the stand of the Antiseptic in favor of liberal progressive medicine in India.

The Editors of the Antiseptic had written all of us about two months in advance announcing the Jubilee number. The character of the response and the ideals and purposes of the Antiseptic may be gathered from the Editorial and Obiter Dicta in this Jubilee number.

The articles contributed to this number of the Antiseptic are of a highly scientific and practical import. They would do credit to the most scientific journal published in any part of the world. Later numbers of this valuable journal should be equally interesting—*E.M.P.*

The Medical Herald and Physiotherapist, Kansas city—A copy of "The Antiseptic," a medical journal published in Madras, India, has reached the editor's table. It is edited by Honorable U. Rama Rau and U. Krishna Rau, M. B., B. S. Subscription costs five crowns ten shillings a year. It is *a very well edited magazine showing the progress made by scientific medicine* during recent years in spite of the limitations and restrictions of the caste system. This number marks the silver jubilee. The editor speaks of the nebulous state of scientific medicine in India; of progress made toward vaccination: of quackery in India; of sanitation; of medical education.

The editor is about to realize his long dream, viz., a Medical Practice Act for all India. It is about to come into being, and with it an embryo Medical Council for all India. We congratulate the editors upon the Journal and upon the missionary work they are doing.—*Bell.*

The Deccan Medical Journal—Hyderabad April, 29.—We have received this valuable issue and congratulate the Editor in bringing out such a useful number. It gives the history of the journal from its first appearance 25 years ago till now. The Antiseptic has by its writings done much good to the Medical Profession in India and we wish it the same success in future. The credit is especially due to the late Dr. Nair and to Dr. U. Rama Rao. The special feature of the Journal, we have noticed, is that its pages are open to contributions from Medical men of all grades of qualifications and standing The subscription is small and the information obtained by reading the Journal is very valuable. We venture to suggest that considering the success it has already achieved an advance might be made by improving the printing and the general get up of the Journal if it is possible to do so without raising the subscription. If the style of the Jubilee Number is kept up it will be a great advance.

Indian Journal of Medicine, Calcutta, June 1929—This is rather a big volume of the journal consisting of 282 pages besides advertisements—prepared in commemoration of Silver Jubilee of the magazine, it having finished the twenty-fifth year of its existence. At the very beginning Dr. Rama Rau, the editor, gives a history of the progress of the journal through a quarter of a century and speaks about the part that the journal took in the promotion of medical reform in India and establishment of a feeling of fraternity between the independent medical profession and members of the profession belonging to the services. He says that the formation of a General Medical Council for India was one of the oldest dreams of the Antiseptic and this is now in the course of realization. In this connection he gives the history of his efforts in this direction.

After this editorial, a life-sketch of Dr. T. M. Nair the late editor is given. This is followed by messages of congratulations from many renowned European and Indian Physicians and greetings from Medical Press in India and abroad including such eminent journals as 'The Lancet' and 'The Prescriber.' They all approve whole-heartedly the desire of the journal to promote

medical reform in India and they all express their sincere satisfaction at the progress of the journal.

The articles include histories of the advances, recent and old of subjects like Surgery, Medicine, Midwifery, Ophthalmology, Psychiatry, Organotherapy and Dermatology and are all written by experienced specialists of the subjects. Subjects like Preventive Medicine, Maternity and Child-welfare, Vitaminology also have not been omitted. In one word the Science of Medicine in all its aspects has been dealt with and the book will be found to be full of information specially about recent advances in the different subjects. This book we hope will prove to be a valuable addition to medical literature.—*R. B.*

Indianapolis Medical Journal, Indianapolis.—The Antiseptic, a medical journal published in Madras, India, celebrated its Silver Jubilee after twenty-five years of growth and progress. Their April number sums up their accomplishments during this period, and this summation is a quite interesting history of the progress of modern medicine in India during that period.

Dr. E. G. Brackett M. D. Editor, the Journal of Bone and Joint Surgery, Boston 12th March 1929.—I am sending to you congratulations on the quarter century of publication of your Journal, the *Antiseptic*, and appreciation of the remarkable work which you have accomplished in establishing and maintaining a journal of this standard. This is pioneer work,—the most necessary, and at the same time the most difficult, because of the constant series of obstacles which continually put themselves in the way of progress. The results of your pioneer efforts must be satisfying to you, for they open the main path of progress, from which are disseminated the opportunities throughout all the by-ways and to all,

We are glad for you in this present celebration, which expresses the credit which belongs to you.

The Journal of Bone and Joint Surgery, Boston:—The *journal* acknowledges the receipt of the Silver Jubilee Number of *The Antiseptic* (Vol. XXVI, No. 4. April 1929), published in Madras. This journal was founded twenty-five years ago by the late Dr. T. M. Nair. Both Dr. Nair and Dr. U. Rama Rau, the present editor, have made persistent and commendable efforts toward the improvement of the standards of the practice of medicine in their

country. It is necessary to recognize the difficulty that surrounds such a pioneer effort, and they are to be congratulated on the results of their endeavour. The journal contains, in addition to many excellent papers, very many letters of congratulation and expressions of good-will from medical men of prominence in very many countries.

CURRENT TOPICS

SURGERY.

Cancer Dont's—Don't assume that the passage of bloody or slimy stools is due to dysentery. There may be cancer.

Don't assume that bleeding from the rectum points to piles. It may be due to cancer.

Don't expect always to find cachexia in rectal cancer; many patients in the advanced and inoperable stages may yet appear robust.

Don't forget that recurring attacks of morning diarrhoea should suggest cancer of the rectum in its early stages.

Don't rely on digital examination of the rectum when examining for cancer, as the proctoscope and the sigmoidoscope are most necessary for a correct diagnosis.

The classical signs of cancer are the signs of its incurable stages. Do not wait for the classical signs.

Early cancer causes no pain. Its symptoms are not distinctive, but should arouse suspicion. Confirm or overthrow this suspicion immediately by a thorough examination and, if necessary, by operation. The advice, "Do not trouble that lump unless it troubles you," has cost countless lives.

There is no sharp line between the benign and the malignant. Many benign growths become malignant and should therefore be removed without delay. All specimens should be examined microscopically to confirm the clinical diagnosis.

Don't forget that all rectal cancers, which compose about 16 percent of all malignant growths of the digestive tract and about 9 percent of all cancers, are detected less frequently in their early stages than are cancers growing in other parts of the body. This fact is due partly to neglected or incomplete rectal examination.—*M. W. J*

Renal Stones.—In submitting a detailed analysis of cases of renal and ureteric calculus, Mr. A. R. Thomson' says that when he was appointed chief of the genito-urinary department of Guy's Hospital in 1910 he decided not to publish results until the department had been in existence for some time. As a basis for his report he has collected the post-mortem records at Guy's from the year 1890–1909, inclusive, and in order that "a curb might be placed upon any unfair opinions gathered from the records of one hospital," he has read through the case-sheets of nearly 13,000 cases treated at the Victoria Hospital for Children and at the London Hospital. His investigation has, therefore, been extremely thorough and his conclusions may be accepted with complete confidence. Among them are the following: (1) The incidence of stone is about equal in the two sexes, but in elderly people more males are affected than females. (2) There is a slightly greater number of stones on the right side than on the left. (3) The large number of bilateral stone formations, which is about one-third of the total number of cases, points to the seriousness of this condition. (4) Bright's disease is not uncommonly diagnosed when there is a renal or ureteric stone present, and a stone is often the cause of Bright's disease. Bright's disease following on stone formation is more common in males than in females, but bad kidneys, such as bilateral pyonephrosis, are more common in females than in males. (5) Stone may form in the urinary tract as a result of some wasting disease. (6) The commonest place for a stone to be found is the pelvis of the kidney. (7) Compensatory hypertrophy of one kidney, when the other is diseased, is not nearly so common as is generally supposed. (8) Stones may recur after operations for their removal, but this, Mr. Thomson thinks, may be due to carelessness on the part of the operator.—*Lancet.*

Intravenous Lead in the Treatment of Cancer.—R.T. Petit in *Illinois Medical Journal* (January, 1929) describes the Blair Bell method of intravenous lead treatment in cancer, which the author was able to study in Liverpool with the originator. Prof. Blair Bell was struck years ago by the morphological and physiological resemblance between the chorionic epithelium of the trophoblast and the carcinoma cell. The susceptibility of the former to lead made him believe that cancer cells might also be susceptible to the poisoning effects of lead if administered in sufficient quantity. More than fifty lead preparations have been tried out so far, and at present the best appears to be the one described below. In 227 cases treated at the University of Liverpool, all of which were of

an unpromising class, the percentage of success was about 20 per cent. The treatment is, however, dangerous unless administered with great precautions and Blair Bell is quoted as follows:

There is still a considerable danger that if lead be used indiscriminately in the treatment of malignant disease many fatalities will follow, and the method itself, either from excessive caution or too much zeal, will be brought into disrepute. As we have already demonstrated, we ourselves have had disasters, and although our extensive experience has enabled us to avoid many more similar disasters, it is still quite possible for a patient to lose his life if incomplete investigations be carried out.

The lead suspension is prepared by the so-called sparking method of Bredifg as follows:

Silver free lead (assay lead) is melted and poured from a low height (a few inches) into water to form small shot-like masses. A handful of this lead is put into a large evaporating dish about eight inches in diameter with 500 c.c. of the sparking solution which is one-half per cent. "Difco" solution of gelatin containing 5 c.c. of 2 per cent. solution of calcium chloride per 500 c.c. The lead is sparked with either a direct or alternating current for about fifteen minutes. The current is reduced by placing five 600 watt conical resistances arranged in multiple down to 30 amp. at about 60 volts. The poles are bars of commercial lead about ¼ inch diameter and about 8 or 10 inches long, made of rolled sheet lead (assay lead). These are stirred about in the "shot" for about fifteen minutes or until the solution is quite black; decant into flask and cool in running water. The supernatant solution is siphoned off into a flask, and centrifugalized lightly (1,760 R. per minute) for three or four minutes. A portion of this is poured off for assay for its lead content. Assay and bring to 500 mg. per 100 c.c., then add salt to make 1·1 per cent., then boil.

The suspension should always be used within 72 hours and the administration is always intravenous.

The reaction to the treatment is variable—it may be local or general or both. Usually the patient complains of pain at the site of the tumor within a few hours after the injection and this pain may be accompanied by swelling and edema. The general reaction affects the blood and blood-forming organs with the production of anemia and stippling and there may be more or less disturbance of the gastrointestinal tract (chiefly colic) and of the liver (icterus) and kidney (albuminuria) and suppression of the urinary output. Blue line on the gums is rather rare. Toxic effects on the central and peripheral nervous systems are extremely rare.

The anemia produced by the lead is treated by injections of iron arsenite and when necessary, by blood transfusion. In severe colic morphin and atropine are used.—*I. J. M. S.*

Inflammation of the Tendo Achillis and Influenza.—N. Deutsch (*Med Klin.*, p. 710) has had 10 cases of this condition in the last 2 years. Some days after the influenza has died down, pains are felt in the tendo Achillis and a painful nodule or sensitive spindle-shaped swelling is found in its middle. The pain is most marked when the foot is dorsi-flexed. After one or two days the whole tendon is thickened and painful and the skin is red. This condition lasts for 10–14 days and then the inflammation disappears. Sometimes painful nodules remain and cause pain for months. The treatment is by lukewarm applications and then strapping.—*Med: Review.*

Retropharyngeal Abscess in Infants and Children.—Although retropharyngeal abscess is not common, its recognition is important owing to the risks attending spontaneous rupture. According to Greenwald and Messeloff the majority of cases occur during the first year of life, and it is just at this time that an adequate examination of the throat is difficult. Inspiratory and expiratory stridor, aggravated by the horizontal position, is of course, the outstanding symptom, but diagnosis should usually be possible before it becomes the presenting symptom. A previous history of acute nasopharyngitis is the rule, and in any case in which this is followed by restlessness and unilateral enlargement of the cervical glands, the qeestion of a retropharyngeal abscess should arise. Owing to difficulty in swallowing, mucus collects in the throat and causes the rattling and stertorous breathing so often heard in the later stages. A snoring, gurgling respiration during sleep is in fact, one of the most constant symptoms. Further, the younger the patient and the more rapid the course of events, the more pronounced are these findings. Torticollis is nearly always found, and its presence should suggest retropharyngeal abscess before anything else. As Greenwald and Messeloff point out, the examiner must have a clear conception of a normal throat in infants and children in order to determine, from his brief glance, whether or not there are pathalogical changes. Even then inspection of the throat in infants is rarely conclusive, and should be followed in all suspicious cases by palpation with the finger. In older children, difficulty is encountered in the examination because of trismus. The pushing forward of

one faucial pillar is an outstanding sign found on inspection and one that may easily be overlooked. Slight ædema of the soft plate may also be seen in some cases. The mucosa covering the swelling is at first red, and later, when there is suppuration, the redness fades and the pharyngeal wall becomes pale and somewhat yellowish, feeling elastic and boggy to the finger. Once an abscess has formed, surgical measures and evacuation of the pus are obviously indicated, but in the stage of lymphadenitis, before true suppuration, great harm may be done by incision, because genaralised sepsis may follow. In Greenwald and Messeloff's opinion, the best results are obtained under light ether anæsthesia unless the child is desperately ill; the outlook as a rule is excellent.—*Lancet.*

Treatment of Surgical Shock.—Dr. O. I. Sohlberg, of St. Paul, Minn., says the treatment should begin with its prevention.

The psychical factor is often overlooked. Every patient approaches an operation with apprehension. A surgeon who is not wholeheartedly convinced of the desirability of the operation and that the patient will be better off afterward than before, is not honest and the patient will sense it. Rigorous honesty and practice of the golden rule will mean that the patient will approach his ordeal in a hopeful frame of mind and the surgeon will do better work. A half-convinced patient who is hurried to the operating room by the insistence of an operator is in a bad frame of mind, and an apprehensive patient is already half shocked. Sugar is often present in the urine in excited or apprehnsive patients, showing how much of the precious reserve is gone even before he is touched.

"Overpreparation" is to be condemned. Physicking is unnecessary. It may do positive harm by depleting the body of water, and it certainly makes intestines harder to handle.

A good night's sleep is very important. If this does not come naturally, sedatives should be administered freely. A patient who has spent a restless, sleepless night is not in good condition for an operation. Before operation, fluids should be urged and carbohydrates given to raise the store of each and morphine to lower the irritability of the central nervous system

All general anesthetics produce acidosis. They should be given by skilled anesthetists.

Nerve block anesthesia of some type should always be employed. It has been proved that the central and sympathetic nervous systems are stimulated by trauma while a patient is under general

anesthesia even as when awake. This leads to liberation of epinephrin and sugar. If the stimuli of tissue trauma are prevented from leaving the area of operation, that factor is eliminated and much less of the general anesthetic is needed.

Incisions planned to minimize trauma by making underlying structures are more easily accessible by avoiding blood vessels, and, above all, nerves, will do a great deal to diminish trauma. Transverse incisions make these requirements easy to follow and give as good exposure in laparotomies as any other. Incidentally they are easy of closure and herniæ almost never occur. Sharp dissection and avoidance of trauma minimize tissue damage and absorption of tissue juices squeezed out by manipulation and reduce shock.

If in spite of these precautions shock has occurred, what shall be done?

1. Warm the patient. With exhaustion the temperature drops and the heat center vainly tries to bring it to normal, as fuel for that purpose is gone. External heat will arrest this loss of energy.

2. Give water in large amounts. The preferable route is by mouth; but if that is not possible, give it by rectum, under the skin or intravenously. This will add volume to the blood stream and also help to raise blood pressure.

3. Give morphine generously. This will reduce the irritability of the nervous system and thus prevent further shock and relieve the purposeless activity which these patients so often exhibit. It will reduce internal respiration and consequently the combustion of any remaining reserve. The dose should be large enough to be effective.

4. Give carbohydrates, preferably by mouth, as that is the quickest and most physiological. If that is impossible give intravenously and by rectum; but give it in large amounts. This will replace the depleted store of fuel and permit the fire of life to flame up again and break the vicious circle which exists in shock. If the condition is very grave, add insulin, as this will make the carbohydrates directly available and without any burden on the pancreas, which is also depressed.

5. Administer carbon dioxide. This does diminish acidosis and does raise blood pressure—*Minnesota Medicine Medical-world.*

Rectal Examination Urged—Early cases of esophageal stenosis are never detected except by the incidental passage of a stomach tube. When they become well developed the time for treatment has passed. This reasoning applies just as forcibly to

cancer of the rectum which may give no evidence of existence until well developed—then too late for successful treatment. Dr. Joseph Muir of New York, in Medical Journal and Record of New York declares:

Though cancer of the rectum has been known as a clinical entity since early in the eighteenth century, it was not until very recent times that its diagnosis was accomplished with any degree of accuracy. To-day, without doubt, a great number of persons die as a result of rectal cancer and are carried to their graves without anyone, medical or otherwise, being aware of the true nature of their malady. On the whole, however, the diagnosis is generally established with reasonable promptness and every effort made to treat and control the individual cases. Yet there is probably no disease among all which the practitioner is called upon to treat, in which diagnosis, course and outcome offer so many pitfalls, and are so uniformly unsatisfactory. Though the ways of treating it are infinitely varied—indicating how far from any solution of the problem of its therapy we still are, the outlook of all is uniformly gloomy. Only here and there can we detect a note of optimism, and these are sounded, as a rule, only when speaking of cases coming very early under competent supervision.

Any consideration of the treatment of cancer of the rectum must, therefore, be preceded by sufficient discussion of the factors which enter into the problem of control, rendering it so extraordinary difficult to obtain results, which are in any way satisfactorily either to physician or patient. For many years after Lisfranc first attempted to treat rectal cancer by surgery, the problem occupied the best surgical minds of every country, but despite every effort failure remained the rule, and today the individual who has been cured and *remained cured* through the ministrations of the surgeon remains an exceedingly rare phenomenon.—***Medical Haraled.***

Pruritus Ani.—J. F. MONTAGUE (*Amer. Journ. of Surg.*, April. 1929, p. 475) states that, from his experience of 391 cases of pruritus ani, he has found that every case is definitely curable. He considers that the use of x-ray treatment should be avoided, and that ultra-violet or quartz light therapy often causes an aggravation and extension of the pruritus. The use of carbolic acid ointment and belladonna or cocaine suppositories he also deprecates, and avoids giving opium suppositories and morphine owing to the danger of habit formation in a chronic ailment. Every patient should undergo a complete physical examination, to include the entire anal canal, rectum, and sigmoid, and also a blood chemistry

and urine analysis. It has sometimes been found that incorrect diet has been responsible for the intestinal causes of the pruritus. In order to give relief from the persistent and distressing itching and to give the patient rest and sleep the under cutting operation is performed. This consists of the severing of the sensory nerves immediately under the skin in the perianal region by means of a pair of double edged dissecting scissors under a local anaesthetic. This operation gives the skin sufficient sensory rest for it to heal, and in early cases the same result may be obtained by cauterizing with a 10 per cent. aqueous solution of silver nitrate the sensory nerve endings which have been exposed by scratching in the pruritic area. Protective ointments such as vaseline, boric ointment, or zinc oxide ointment may then be used. Vaccines, especially the pruritus vaccine of Lederle, are useful in minimizing the low-grade dermal infection which is often present in these cases.—*B. M. J.*

Dupuytren's Contraction.—Kanavel, A. B., Koch, S. L., and Mason, M. L., *Surg, Gyn. & Obst.* 48; 145, Feb. 1929.

In this paper the authors review the literature on the subject of Dupuytren's contraction and report on 29 cases treated surgically. As a result of their experience, the importance of wide excision is emphasized, not only of the contractad fascia but of all its attachments to the skin, the interfascial septa, and the volar interosseous fascia. Care should be taken in the dissection and elevation of the skin to minimize trauma and avoid consequent necrosis. All skin that is hopelessly involved should be removed and free full thickness grafts should be inserted. No attempt should be made to bring the edges of the wound together under tension. Where there is marked contraction of the fingers the heads of the proximal phalanges should be excised, and the extensor tendons of the affected fingers should be shortened. Active movements should be instituted as soon as the wound is healed. Under this method of treatment complete restoration of function will generally be obtained, though stiffness of the fingers and partial anaesthesia may persist for some time.—*C. M. A. J.*

The Diagnosis and Treatment of Tumours of the Frontal Region.—Cl. Vincent. Th. de Martel and M. David discussed eight cases of tumours of the frontal region which had come under their observation, since the Congress of Neurologie in July, 1928. The diagnosis was in each case verified by operative treatment. The cases included three meningiomata, three gliomata, one hydatid cyst, and one other case of doubtfnl origin. For the most part the diagnosis of these growths was facilitated by the clinical signs alone, but on three occasions the authors had recourse to ventriculography, for the purpose of determining on which side the growth was present. Optic neuritis was absent in these cases. The clinical mental syndrome of frontal growths was slowly manifested: generally it was present only in the case of growths of large size. There were no cerebellar signs in any of the cases. Of the eight patients five were cured. The three others died—one while being carried to the operating theatre, the second during the incision of the scalp, the last while operating upon the bone. The authors laid great stress upon an early operation, in the case of patients with brain tumours, since experience had taught that at any time sudden rapid progress might occur, imperilling the chances of success of operative treatment.—Societe de Neurologie, Paris, April 11. 1929.—*F.B.M.R.*

Electrocoagulation in Cancer.—At the Cook County Hospital, electrocoagulation is used in certain cases of cancer by Doctor Kobak.

It is surprising with the great amount of tissue destruction followed by plastic surgery, what good results they are getting. They do not believe radium is as efficacious as electric coagulation in carcinoma of head, face, tongue and mouth. After electric coagulation they carbonise the part by fulguration to prevent hemorrhage and too rapid separation of the slough. The Lynsh-Kellian suspension apparatus is used for mouth, tongue, and throat cases.

They use rectal anesthesia for these head cases, as follows:

1. Castor oil, one dram, two nights before operation.
2. Day of operation, at 6 a.m.. soap suds enema.
3. Day of operation at 6 a.m., luminal, 2 grains per mouth.
4. 9 a.m. Paraldehyde, 2 drams; olive oil, ½ oz.; ether, ½ oz. per rectum; chlorotone, 5 grains.
5. 9. 30 a.m. Morphine sulphate, ⅙ grain; atropine, $\frac{1}{150}$ grain.
6. 10'30 a.m. 60 per cent solution of ether with 40 per cent. olive oil, quantity equal to 1 oz. for every 20 lbs. of body weight or average. Ether. 5 drams; olive oil, 3 drams.—*Med. Hearld and Physio.—Therapist May, 1929 A. M.*

Carcinoma Arising in a Tuberculous Fistula:—W. Krey (*Deut. Zeit. f. Chirurg.*, April, 1929, p. 355) gives details of the clinical history and treatment of a case of squamous-celled

carcinoma associated with long standing suppurating fistula from the knee-joint connected with old tuberculosis of the femur. The malignant growth was restricted to the orifice of the fistula and did not extend along its track. The author regards this as a special type of carcinoma—a fistula carcinoma arising from the irritation caused by the chronic discharge from the fistula, and allied to the malignant diseases of the skin following the irritation of tar, soot and *x* rays. The limb was amputated and the patient has developed no recurrence after two years. The histology of the growth is discussed and illustrated, and the author includes a useful review of literature bearing on this rare form of malignant growth.

Replacemeet of the Thumb Nail:—J. Eastman Sheehan, reports the case of a boy, aged 16 years, who suffered the loss of the nail from the left thumb. At the time he was examined, there was no longer any nail growth; at about the level of the lunula there was a disintegrating mass, while toward the point of the thumb the nail bed had given place to cicatrized tissues, warped and folded in leaves. There was considerable pain. It was evident, especially in view of the failure of the previous interventions, that the problem was one of replacement—of introducing a nail that would grow. From this consideration two questions arose; Could nail substance transferred to an area in which growth had ceased be expected to grow? If so, from what area should it be taken, and what would be the subsequent history in the area to be denuded? On reflection as to the nature of the nail substance and as to the process of its production, it was recognized as being as truly epithelial as the epidermis itself, and no one who has had experience with reconstructive surgery can fail to have been made aware of the complete dependablity of the epidermal graft. The nail of the thumb of the other hand, to which the new one would be expected to conform, must be the donor, rather than the nail of the great toe, the only other practicable resource. The replacement of one thumb nail by a graft from the other thumb seemed therefore to be beyond prosect of misadventure and the procedure was carried out in that belief, which was completely justified by the result. There was nevertheless a moment of dramatic interest when, on removel of the bandages, inspection disclosed that healthy growth was proceeding on both nails. Thus there was once more triumphantly vindicated the dependability of grafts whose dependence is on the nourishment of living epithelial cells by the lymph fluid present in the tissues of the base, the exceptional feature in this case being the relatively exaggera-

ted thickness of the nail substance as compared with the horny layer of the skin epidermis.—*J. Am. M. Ass.* **92**: 1253, April 13, 1929. C. M. A. J.

MEDICINE

Difficulties in Diagnosis of Insulin Coma: Ernst Wiechmann, Glogne (*Journal A. M. A.*, May 4, 1929). made a series of examinations with the object of ascertaining the degree of intra-ocular tension in cases of diabetic coma and hypoglycemia after insulin injection. Of eight cases of diabetic coma, he found great reduction of the intra-ocular tension in six, while in two cases the tension was normal. These observations show that reduced intra-ocular tension may be present in cases of coma other than diabetic coma. Also in cases of hypoglycemia after insulin injection, he found reduced intra-ocular tension. In eight cases it was at the lowest boundary of the normal and only in two cases below this boundary. This fall in intra-ocular tension in hypoglycemia is not at all to be explained by alteration in the blood pressure. This has been proved by curves of blood pressure and of intra-ocular tension taken simultaneously. One explanation for the reduction of intra-ocular tension in hypoglycemia is to be found in displacements of the body fluids. After injection of toxic doses of insulin, there is a considerable rise in the amount of hemoglobin, which falls again after ingestion of food. In contradistinction to this, in hypoglycemia there is a fall in intra-ocular tension, which quickly rises after ingestion of food. It can be assumed from this that these changes are related to the sweating which is typical of hypoglycemia. The fall in tension would then be the expression of the streaming of intra-ocular fluid and of tissue fluids in general into the blood stream. That there is no consequent reduction in the hemoglobin percentage can be explained by the theory that the addition of fluid to the blood from the body tissues is counteracted by the great and speedy loss due to the sweating. In all the cases of hypoglycemia which he observed, the temparature fell below 36 C. (96.5 F.) He feels that according to this a fall in temperature is not absolutely pathognomonic of hypoglycemia coma. But according to his observations in general, it happens so often as to deserve a certain amount of consideration in the differential diagnosis between diabetic and hypoglycemic coma.—*N. W. M.*

Treatment of Spastic Colitis:—E. L. Eggleston (Bulletin of Battle breek Sanitarium) considers the principal etiologic factor in spastic colitis to the nervous instability. Unless treatment considers the fact that the spasm and mucous secretion are due to disturbance of the sympathetic and parasympathetic effects on the distal portion of the colon it will fail to relieve the intestinal stasis. Diet should be liberal and deviod of bulk or roughage until the patient improves. The gas is usually due to the stasis and will disappear as the constipation is relieved.

Heat is the most effective measure for relief of the spasm and may be applied in the form of the hot enema (from 114 to 120 degrees F.), fomentations or sitz baths. The oil enema given in the knee-chest position and retained all night is advantageous.

For general improvement the tonic effects of the cold rub, massage and, in selected cases, diathermy are of value. If drugs are needed, belladonna is serviceable as an anti-spasmodic, and the barbituric acid group as sedatives. Psychotherapy for the removal of those emotional or fear states that are responsible for the disordered function of the viscera is an important part of the treatment.—*M. H.*

The Diagnosis of Lobar Pneumonia:—Fitz, R., *New Eng. J. Med.* 200 : 20, May 16, 1929.

The onset of pnueumonia may be so sharp, sudden, and painful that its beginning can be dated almost to a minute, or it may be difficult to tell when the attack of bronchitis or grippe ends and the more serious illness begins. Any case with cough and even slight fever deserves rest in bed as a preventive measure against pneumonia.

Pain in the chest was the next most common symptom; blood-tinged sputum occurred in over one-third of the cases; 55 per cent of the cases were conscious of some sudden change in their heat-regulating apparatus as the disease began. Few patients were consciously short of breath. Vomiting may usher in an attack of pneumonia. Finally there is a group of patients with pneumonia who are obviously ill and yet have no definite complaint beyond a profound degree of prostration.

Pneumonia at its onset is rarely accompanied by no increase in body temperature, pulse or respiration rate. Usually the temperature is 102 degrees, the pulse rate 120, and the respiration thirty or more to the minute. Certain common mistakes are easily made. It is difficult to examine a partient's back unless he is

sitting upright; a patient is not harmed by being elevated to a semi-sitting position. Fluid in the chest may produce all the signs of consolidation except increased tactile fremitus. A pericardial effusion is often accompanied by an area of varying size at the back of the left chest, over which appear physical signs of frank consolidation.

The examination of the urine is not of help in the diagnosis. The white blood count is usually elevated, but occasionally is normal or subnormal. Often in young people pneumonia and appendicitis are confused, but if the suspects are carefully examined fewer patients with pneumonia will be subjected to laparotomy.

Elderly patients with suggestive signs of consolidation in the chest, but without concomitant fever, should be suspected of having some other illness than lobar pneumonia.—*C.M.A.J.*

Angina Pectoris and Coronary Occlusion:—The condition most likely to be confused with the more severe attacks of angina pectoris is acute coronary occlusion. The chief characteristics of this condition are these: The pain is much more severe than that of angina (it is terrific, often requiring repeated full doses of morphine for relief), nitrites are of no avail; the pain is much more protracted, lasting for hours: the patient is severely shocked the face ashen or very pale and covered with cold perspiration; the pulse is small, thready and rapid.—DR. W. H. LONG, in *Minn. Med.*, March, 1928.—*C. M. W.*

Laryngitis:—Dr. P. A. Harry, in the *Prescriber*, Feb., 1929 recommends for the general treatment of acute laryngitis a brisk purge at the onset of the attack, combined with rest in bed and a light diet. Absolute vocal rest and cold compresses externally must be ordered. The temperature of the room is best at 65° F. and it is helpful to have the air moistened by means of steam from a bronchitis kettle. The addition of a teaspoonful of the compound tincture of benzion (or a suitable substitute) to the water in the kettle has a sedative effect. Antiseptic throat sprays and nasal douches are also useful. All irritants to the throat should be forbidden.

In chronic laryngitis, all local cavities and sinuses should be inspected, a suitable non-irritating diet ordered and tobacco and alcohol prohibited. Local treatment consists of the use of stimulating inhalations and astringent paints. Oleum pini sylvestris or oil of cubebs, in a 1; 20 dilution, should be used in vapor form. Frequent application to the vocal cords of nitrate of silver chloride of zinc, perchloride of iron or of powdered alum will effect a cure. Change of air and complete voice rest are also helpful.

Where the laryngitis is due to syphilis, tuberculosis or other disease, special measures will, of course, have to be taken.

BOOK REVIEWS.

Lectures in Psychiatry.—By William A. White A.M., M.D., Nervous and Mental Disease Publishing Co., 3617, 10th Street W. W. Washington D. C.

General Practitioners who are on the look-out for a concise yet comprehensive treatise which gives them the latest views on mental disorders will find this volume invaluable. William White's name is a guarantee of the soundness of the views embodied in the book—views which are the result of extensive knowledge and clinical experience.

The book before us, is a reproduction of the lectures delivered presumably to General Practitioners, and is replete with demonstrations of clinical cases. It is out of line with the ordinary text-books on Psychiatry, and saves the reader much sustained work in order to get even a mere acquaintance with the subject.

The author has dealt with the subject in 4 or 5 groups, so as to give the reader "some idea of Psychiatry not only as a medical speciality in particular but as a body of thought in general."

The book is interesting from end to end and is well worth perusal by every medical man.—*F. N.*

The Art of Surgery. By H. S. Souttar, D. M. Meh., (oxf.) F. R. C. S. (Eng.) Surgeon London Hospital.

London: William Heinemann (Medical Books) Ltd., 1929. P.p. 624. Illustrated Price sh. 30 net.

Mr. Souttar has produced this work with the object of lightening the student's burden, by omitting what is not essential and by describing very effectively what is fundamental.

This book differs from other text books on the subject in its arrangement. Besides, there is a greater continuity in the method of writing, which together with the absence of repetition makes it pleasenter to read.

A notable feature of Mr. Souttar's book is the introduction of marginal drawings—an arrangement that is sure to help any reader in driving home the facts presented in the text. Many of these illustrations are very good and aptly chosen. In this the author has more than achieved his ideal to provide a thumb nail sketch for each paragraph capable of being illustrated.

The chapter on fractures is very effectively written, and is novel in its argument. Detailed description of those fractures that are commonly met with is given, with proper emphasis on the peculiar clinical picture exhibited by some of the fracturers. Many of the important points to be considered in treating these fractures are also effectively given.

The treatment advocated for these fractures are based on methods that have yielded good results under the hands of the

writer, and we are sure if those methods are properly followed should give good functional results under anybody' hand.

The chapter on surgery of the nervous system is excellent.

The last chapter on local and spinal anæsthesia is worth reading, specially the portion dealing with the use of these methods in cranial Surgery.

The importance of the technique of preparation of Novocaine solution before injection is carried out, is well emphasised. The note of warning about the infiltration anæsthesia in the presence of Sepsis is quite useful.

The book includes two useful appendices, one dealing with the measurement of lower limbs, and the mechanics of apparent shortening and lengthening, and the other with the therapeutic uses of Radium.

The whole work is most attractively brought out and the printing is of a bold type and easy to read. We have nothing to say by way of criticism but to add that the price of the book is rather prohibitive specially to the Indian students.

In our opinion the book is comprehensive, up to date and practical, that it cannot fail to attract a large number of readers.

We have no hesitation in recommending this book to both students and busy practitioners as being practical and upto date. *V.C.S.*

Syphilis.—By Charles C. Dennie, M. D. Asst Professor of Dermatology and Syphilology, University of Kansas School of Medicine

Published by Harper and Bros., Newyork, 1928. P. p, 304. Price $ 2. 50.

This monograph on Syphilis is the outcome of the author's long experience in the treatment of Syphilis.

A very good account of Syphilis—its morbid anatomy, diagnosis and treatment are very well discussed, and all aspects of the disease are touched upon with sufficient detail.

About a dozen chapters are devoted to the treatment of Syphilis, wherein one can find what should be given in various manifestations and how, but also what should not be given under certain circumstances. The book is very handy, and well written. We are sure it will help any practitioner to understand and combat the most portean of infections.—Syphilis—*V. C. S.*

Catalytic process in applied chemistry.—By T. P. Helditch—D.Sc. F. I. C.—University of Liverpool—Chapman and Hall Ltd., London 1928. Price 16 —net.

The study of this handy volume of a branch of chemistry gives a very good idea of the vast experience and the method of making a most complex subject as easy as possible.

A book like this was really a want to the analysts, technologists and research workers, who will find a great help to solve

their difficulties which arise everyday, in their work with catalytic processes.

The book has been divided into 4 sections. First section deals with "general principles of catalytic action" which is explained very clearly and easy to understand with an elementary knowledge of chemistry.

Sections II, III, and IV deals with catalysis at surface of "solid inorganic materials", "colloided organic compounds" and "homogeneous catalysis in liquid system" respectively. These sections may be called the vital part of the book, and are written in a very simple style with reference to most up to date publications and research works on the subject.

The two classified lists at the beginning of the volume are a great help to workers to save their valuable time in search of references.

This is such a valuable book that every student, analyst, technological and research worker ought to have a copy for progress, prosperity and success in his works.—*N.C.B.*

Purdah system and its effect on motherhood.—By Katheleen Olgavaughan, M. B. (Lond) Cambridge: Heffer and Sons 1928 Pp. 48. Price sh. 2-6 d. net.

The writer explains in plain language the effects of purdah system on Motherhood and gives evidences to prove that osteomalacia arises from want of exposure of the skin, to sunlight. The prevalence of pelvic deformities in woman condemned to purdha system is well discussed. There are five chapters in the book.

The first chapter deals with osteomalacia and its nature and the following chapter gives the various theories advanced to account for the occurrence of osteomalacia. Chapter III deals exclusively with osteomalacia in Kashmir, and explains how the social conditions of the higher class people are predisposed to the disease, while the "manji" or the boat-woman enjoys absolute freedom from the disease.

The last two chapters give brief account of the recent work on calcium metabolism, and conclusions drawn from the various workers on the field.

We quite agree with the writer's opinion, that the "Purdah" system, by depriving the girls and women of sun light, is directly responsible for the production of osteomalacia, gross pelvic deformities, and deaths of thousands of mothers and children in child birth annually. No schemes of improving the National Health of India can afford to ignore such a state of things, which takes toll of the more educated of the people whose lives and work are essential to the preservation of all that is good in ancient civilisation.

Doctor Vaughan's work is invaluable to us in that it concentrates our attention on the universal need of the nature's inexhaustible store house—the 'Sun'. After all is said, it is a practical handy volume to be read by all.—*V. C. S.*

Technique of contraception.—The Principle and Practice of Anticonceptional methods. By James. F. Cooper, M.D. 1928 Pp. 271 Day Nicholas, Inc. 15 East 40th St. New York City:

The author presents in this volume in a scientific method the observations of and conclusions drawn from the experiences which he had had as medical Director of the clinical Research department of the American Birth control League.

The book opens with a few chapters which contain a number of statements from men in public affairs regarding the work of the League.

In the following chapters the author gives exhaustively the various methods of contraception that are in vogue and discusses their relative advantages. Many illustrative cases are given in evidence.

A full chapter is devoted to a discussion on the organisation and working of the birth control clinics; a resume of the work done by the various clinics of the world is also given.

We recommend this book with full hopes that it will give a fund of information to all those physicians interested in the study of this much debated subject—contraception—*V.C.S.*

Compend of Diseases of the skin.—By Jay Frank Schamberg, A.B., M.D., 8th Edition: 324 pages 126 illustrations Price $ 2·00. P. Blakiston's Son and Co., 1012, Walnut Street, Philadelphia, 1928.

The present eighth edition of this hand book has been thoroughly revised, and more recent progress in dermatology has been included and brought up to date.

Of the additions, the treatment of Syphilis of the central nervous system is lucidly written.

The book contains many useful illustrations. In our opinion it is a useful and concise volume, and we recommend it as a suitable aid for the use of students and practitioners in their study of *Dermatology*:—*V.C.S.*

The Vizagapatam Medical College Magazine June '29.—We have read this volume with interest. It contains valuable contributions from students and Professors alike and the get up is neat and nice. All credit to the students of the institution who are taking a lively interest in Medical Journalism—a thing which augurs well of their future. We wish the Journal a long and prosperous career:—S.T.

PREPARATIONS AND INVENTIONS.

The Rehabilitation of Damaged Tissues.—Recent investigations show that glycerin is not only an ideal antiseptic, but, also, a germicide, capable ef penetrating the tissues, of stimulating the defending white blood cells, of bringing more blood to the site of infection, of hastening the removal of tissue debris, and, finally, of stimulating the repair of fixed tissue cells.

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The Denver Chemical Manufacturing. Co. therefore respectfully urge the members of the Indian medical profession, in their own interests as well as that of their patients, always to prescribe, and accept none other than, the original and genuine Antiphlogistine.

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