

The Antiseptic

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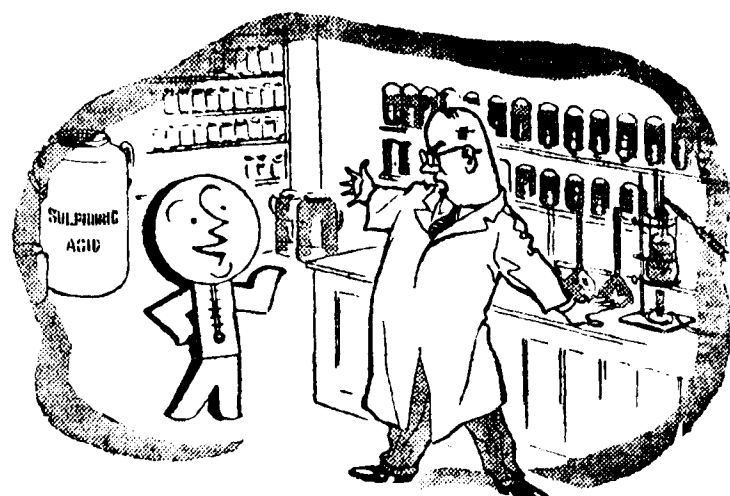
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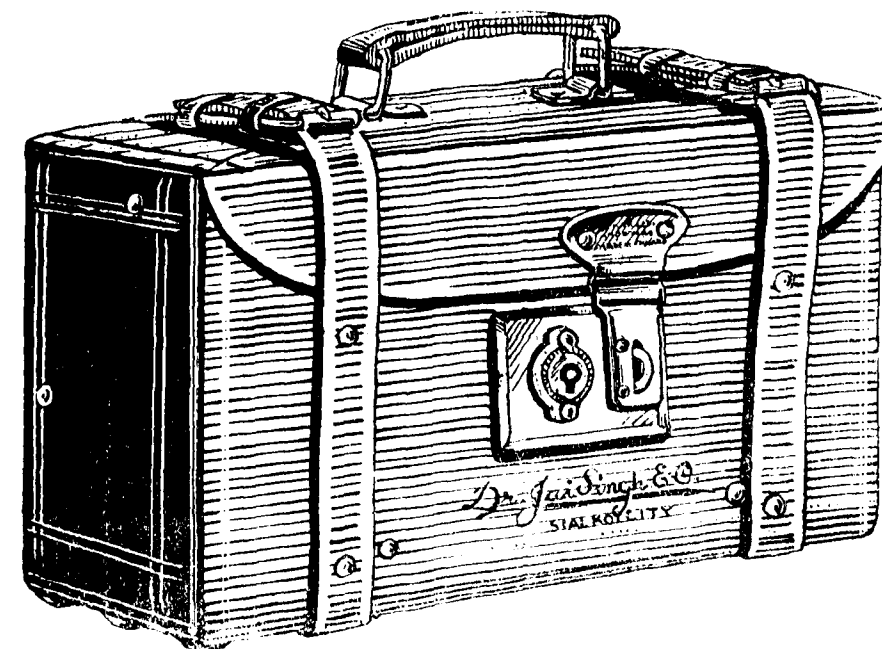
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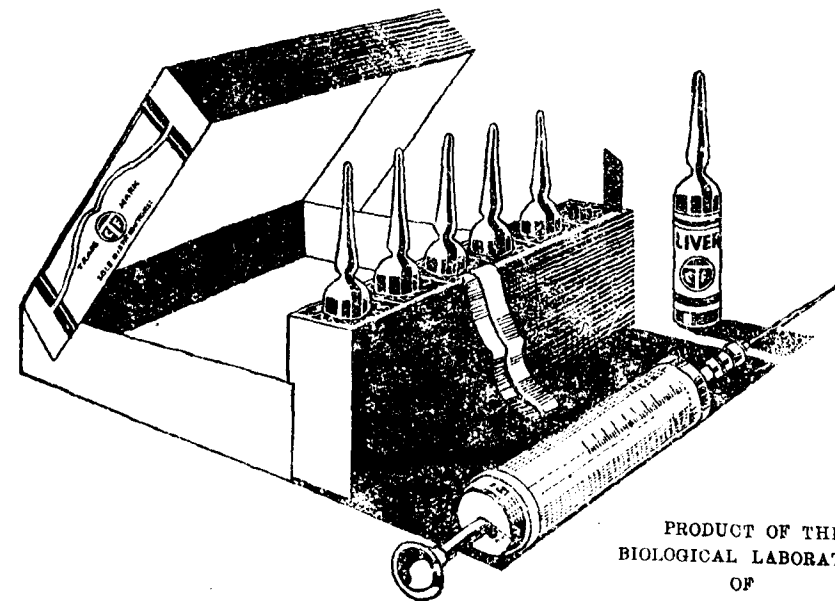
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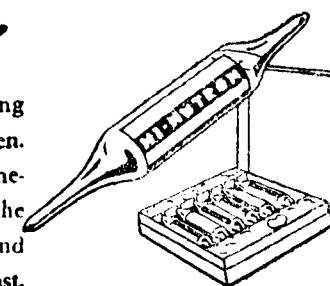
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Original Articles

The Clinical Picture of Diphtheria*

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DIPHtheria is by no means as rare as is generally believed amongst us. Often we come across cases, particularly in children, with fever, pain in throat and swelling of the cervical glands at the angles of the jaw. In many cases the prostration is great and the toxæmia severe. There is difficulty in swallowing. Looking into the throat we find beads of pus, grayish yellow, dirty looking in colour and a membranous structure beneath. The position of the pus and membrane is the uvula or/and the tonsils in most cases.

For what complaint the patient is brought to the doctor?

The patient is brought for complaints like the following:

(1) *Pain in the throat*:—In the majority of cases it is for this complaint that medical advice is sought.

(2) *Difficulty or inability in swallowing*:—In younger children who cannot exactly express what is happening to them it is often to this difficulty that the attention of the parents is first drawn.

(3) *Fever*:—High continuous fever with severe prostration. In fact the child looks acutely ill.

(4) *Swelling of the neck-glands during fever*:—A careful mother often notices the enlargement of the glands very early and comes with that complaint.

(5) *Regurgitation from the nose (rather a late symptom)*:—The mother complains that the liquid given to the child comes out from the nose. This is due to the paralysis of the soft palate by the toxins.

(6) *The voice of the child has changed during the fever (late symptom)*. There is a nasal twang in speech.

* Paper read before the Ahmedabad Medical Society recently and sent to the Antiseptic for publication.

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Description of the patient.—In the beginning the patient gets chilliness, sore throat and fever. Restlessness at the onset is marked in younger children. The fever is continuous and usually varies between 101° and 104°F. Toxæmia and prostration are early and severe, far more than in ordinary fevers. There are paroxysms of perspiration due to toxæmia when the temperature comes down by a degree or two and then again goes up to its high level. Pallor and anæmia soon follow, particularly marked on the face which appears extremely pale, and finally the 'leadens hue' of the text-books.

The pulse is rapid (tachycardia) and feeble, i.e., of low volume and force. The heart-sounds are also feeble as the heart-muscle is apt to be affected very early by the toxins in this disease. That is so to say a sort of myocarditis with inflammation, œdema and softening of the fibres of the cardiac musculature. The blood-pressure is getting progressively lower. Later on there may be sinus-arrhythmia and heart-block.

So far as the throat condition is concerned there are drops of pus, ashy gray, or dirty yellowish, or dirty greenish in colour, situated in most cases either on the uvula or a tonsil or tonsils (in rare cases on fauces, pharynx or area between the uvula and tonsil) with a membranous structure beneath and a red zone of inflammation round about. The membrane is well-defined, elevated and pearly gray in colour. It is adherent and on trying to separate it leaves bleeding points on an eroded surface. The tonsil may be involved as a whole or there may be multiple pain-head spots which spread and fuse together. The condition goes on spreading and later on there may be sloughing or necrosis. In many cases there is an inflammatory condition of the nose also and hence reddish or mucopurulent discharge from the nose.

Pain in the throat and therefore the difficulty in swallowing (dysphagia) are the early symptoms. Sometimes the mother describes that the child cannot take anything inside and that there is a lot of difficulty in taking even the water or medicine. There is a nasal twang in speaking, a condition which can never be forgotten if once seen. This is very characteristic of diphtheria and is due to the paralysis of the soft palate. The same paralysis also produces the regurgitation of fluids from the nose.

Adenitis and periadenitis.—Diphtheria being an acute inflammatory condition, the lymphatic glands draining the area get swollen very early. The swelling may be unilateral in the beginning but soon becomes bilateral as the disease advances. The swelling is a very considerable one, so much so that in some cases the thickened neck comes in line with the mandible (Bull's neck). There may be difficulty in breathing due partly to pressure and weight of these enlarged glands and partly due to extension of inflammation round about. There is a lot of periadenitis also. The swollen glands are tender to touch and the skin over them shining.

The tongue is heavily loaded and the mouth foul-smelling (halitosis). There is excessive salivation. The uvula is anæsthetic and immobile.

There is albumin in the urine in most cases.

The toxins of diphtheria produced locally at the site of lesion enter the circulation by lymphatics and bring about the toxæmia and paralysis of various muscles. Finally, we may meet with a condition of paralysis or

degeneration of the cardiac muscle which eventually fails thus closing the picture, the acute circulatory failure. The mind remains clear upto the end in most cases.

It must be noted that mild cases of diphtheria do occur where the symptoms are mild and temperature slight, or there may be very grave cases of diphtheria where the temperature may be subnormal.

The diphtheria fever lasts for about a week or 10 days and two or three more weeks are necessary for the convalescence.

It must always be borne in mind that in some cases the diphtheria may primarily start in the nose (nasal diphtheria), larynx (laryngeal diphtheria), conjunctiva (conjunctival diphtheria), etc., and in such cases the picture gets modified accordingly. For example, in laryngeal diphtheria the prominent symptoms are the hoarseness or huskiness of the voice, croupy cough, restlessness, obstructed breathing, violent dyspnoea, stridor and cyanosis. The laryngeal diphtheria is such an urgent condition that it constitutes a medico-surgical emergency.

Differential diagnosis.—1. *Acute suppurative tonsillitis or acute follicular tonsillitis* very much simulates the diphtheria but here (1) the pus is limited to the tonsil or tonsils affected and there is no membrane; (2) the soft palate is clear; (3) nasal regurgitation and nasal twang absent; and (4) bacteriological examination.

2. *Mumps*:—Here (1) the condition not being serious the patient does not appear so ill and the general condition not much upset as in diphtheria; (2) the temperature not so high; (3) as the mumps usually start unilateral the swelling is unilateral and the position of the swelling is characteristic (site of the parotid), reaching right below the lobule of the ear; (4) the tonsils and uvula are clear; (5) and the patient begins to improve day by day by the ordinary treatment.

3. *Vincent's angina*:—Very much resembles the diphtheria and sometimes it is difficult to differentiate without the bacteriological examination. But here (1) the sloughing patch is as a rule depressed and not raised as in diphtheria; (2) Vincent's angina being a sort of acute tonsillitis is limited to the tonsils and fauces and there is nothing on the soft palate; and (3) the bacteriological examination would reveal the presence of Vincent's spirillum and fusiform bacillus.

4. *Scarlet fever*:—In scarlet fever which is a very rare disease in our country the tonsils do get swollen, red, cedematous and there may be beads of pus, thus simulating diphtheria but here (1) the whole throat is uniformly bright red with red swollen tonsils and no pus on the soft palate. No membrane; (2) the whole body is reddish in colour; (3) the strawberry tongue of scarlatina; (4) cervical glands not so much enlarged; and (5) the bacteriological examination for the Klebs-Löffler's bacillus is negative.

5. *Syphilis*:—In both acquired and inherited syphilis, in secondary stage, the throat is inflamed. Points of differentiation: (1) history; (2) other signs and symptoms of syphilis; (3) Wassermann positive; and (4) bacteriological examination.

6. *Malaria*:—The fever of diphtheria resembles somewhat the fever of malaria because of paroxysms of perspiration, and such a mistake may

occur if the examination of the throat is neglected. Therefore, in all cases of continuous fever the throat examination must be done.

Complications.—The clinician should always be on guard for complications and dangers that may arise from time to time. To enumerate briefly:—

(1) *Cardiac complications*:—Myocarditis, heart-block and cardiac failure—muscular failure or nervous failure. Fatty degeneration or fibrous degeneration of the myocardium. Endocarditis and pericarditis rare.

(2) *Toxaemia*.

(3) *Local gangrene*:—Ulceration, cellulitis, gangrene.

(4) *Extension of the lesion*:—(a) Local extension: tonsils, epiglottis, larynx (laryngeal diphtheria almost always fatal from asphyxia), soft palate, trachea, bronchitis, pharynx, oesophagus, tongue, nose and nasal sinuses; (b) remote extension: parts at a distance may get affected: conjunctiva, genitals (special danger to delivery cases), cheeks, lips, gums, wounds, umbilicus in the new-born.

(5) *Urinary system*:—Suppression of urine, albuminuria, nephritis.

(6) *Haemorrhages*:—In skin and serous membranes and viscera: epistaxis, puerperic spots, petechial haemorrhages, conjunctivæ hæmorrhage, bleeding from the stomach or bowels, etc. These are fatal cases.

(7) *Paralysis*:—Due to toxic neuritis (parenchymatous degeneration of nerves). Palate very common. In some cases loss of patellar reflex. In rare cases ocular muscles (loss of accommodation, squint, ptosis), pharyngeal muscles, intercostal muscle or muscles of the extremities or muscles of the larynx or the diaphragm may be paralysed.

(8) *Pulmonary complications*:—Broncho-pneumonia very common and mostly fatal. Lobar pneumonia rare. Emphysema, pulmonary collapse.

(9) *Otitis media*:—Through the Eustachian tubes.

(10) *Embolism*:—Secondary to cardiac thrombosis producing hemiplegia or gangrene of a limb due to arterial blocking.

(11) *Secondary organisms*:—The picture may be complicated by other bacteria which may be associated with the diphtheria bacillus, e.g., streptococcus, staphylococcus, pneumococcus, B. coli, etc. Hence the suppuration of the affected lymph-glands, broncho-pneumonia, septicæmia, etc., may be superadded.

Diphtheroid Inflammations.—Finally a brief mention must be made about the term "diphtheroid inflammations" (sometimes known as pseudo-diphtheria). These are the conditions which merely simulate the diphtheritic conditions or appear almost identical with the diphtheritic inflammations but which are not in fact due to the Klebs-Löffler bacillus. The organisms most often found are streptococcus and pneumococcus, occasionally the Hoffmann's bacillus and Vincent's fusiform bacillus. They produce membranous inflammations (pseudo-membrane) and the picture very much resembles the diphtheria from which it can be made out only by this bacteriological examination (smears and cultures). These cases are as a rule milder, prognosis good, mortality low, and the patients recover without the administration of the diphtheria antitoxin. Locally there may be a severe catarrhal condition or a membrane or necrosis. The place most often affected is a tonsil.

In all doubtful cases or in cases where a bacteriological examination is not possible the anti-toxin must be given at once in order to err on the safe side.

Summarization.—(1) Diphtheria is not a rare disease in this country; (2) in every child-patient suffering from continuous fever, careful examination of the throat must always be carried out as a routine measure; (3) the diphtheritic child may be brought to a doctor for various complaints; (4) the clinical description of the patient is given; (5) the differential diagnosis and complications are described; and (6) diphtheroid inflammations. In doubtful cases the antitoxin must be given at once.

Indian Village Obstetric Emergencies

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(continued from page 492 of July 1944 issue).

Chapter XI. Vomiting

I. Vomiting may be the first symptom of malaria, meningeal irritation, food poisoning, and many systemic general diseases or intra-abdominal disease.

A thorough physical and neurological examination is necessary. If the vomiting is symptomatic the cause requires treatment.

1. Early in pregnancy when no other cause can be discovered and the vomiting fails to respond to simple remedies the condition is *hyperemesis gravidarum*.

Minor degrees of vomiting may be treated in the patient's home by giving food rich in the Vitamin "B" group plus glucose and sedatives. Intravenous fluids are useful in threatened dehydration.

Genuine hyperemesis gravidarum cannot usually be treated satisfactorily outside hospital because it will be necessary to deal with any possible pelvic abnormality such as a retro-displacement or erosion and also to pass and keep in position a Bailey's or Ryle's tube through which the woman can have her stomach washed out besides being given fluid and solid food. Psychotherapy is most important and yet difficult in the presence of friends and relatives.

It is important to get the sufferer to hospital before she develops dehydration, fever, tachycardia, albuminuria, ketosis, and jaundice. If induction of labour is to be done it must be done before the woman's condition has become desperate.

2. After delivery intractable vomiting must, in the absence of any other cause, be due to *acute dilatation of the stomach*, which is a rare condition. Usually before vomiting commences the woman feels uncomfortable and the pulse rate increases. There may be hiccough and as the stomach fills with fluid the output of urine is likely to be reduced. Then commences enormous effortless vomits of dirty brown fluid.

(a) In hospital the treatment is simple. Pass a Bailey's or Ryle's tube into the stomach through the nose, keep it there, empty the stomach by means of a syringe and keep the stomach empty by frequent aspiration. The woman may drink as she pleases. The aspiration tube should not be removed for 36 hours after the stomach has apparently

regained its tone; (b) Prevent dehydration by giving continuous intravenous drip saline alternating with 5% Glucose solution.—If this treatment can be carried out in the woman's home she need not be sent to hospital.

If the woman cannot be sent to hospital and if no stomach tube is available—(a) Place the woman on her face; tie her ankles to the bottom of the bed; raise the foot of the bed 18 inches on blocks to drain the stomach; (b) Give intravenous Saline by constant drip and add 20 ccm. of 50% glucose every hour; (c) Failing a supply of pyrogen-free water the only alternative is continuous rectal Saline by Murphy's method as described in Chapter XIV.

II. Retention or Incontinence of Urine.—This is usually due to incarceration in the pelvis of a retro-displaced uterus but it may also be due to a pelvic hæmatocele, a pregnant fallopian tube, a myoma in the posterior wall of the uterus, or a stone in the bladder.

For diagnosis a vaginal examination is essential and great gentleness is imperative to avoid rupturing a pelvic hæmatocele or pregnant tube, should such a condition be present. The bowels and the bladder must be emptied before performing the vaginal examination. To empty the bladder may require traction by a volsellum on the anterior lip of the cervix and the use of a long rubber or gum elastic catheter or even suprapubic puncture. Full antiseptic precautions are required in case abortion should rapidly supervene.

Diagnostic Table

	Incarcerated uterus	Pelvic hæmatocele or pregnant tube	Posterior wall myoma	Stone
Young primipara.	Usually.	Unlikely.	Unlikely.	Possibly.
History of irregular vaginal bleeding.	Uncommon.	Common.	Uncommon.	Uncommon.
Anterior fornix stretched.	Yes.	No.	No.	No.
Cervix.	Pulled forward against emphysema or even above and tends to be tilted anteriorly.	Tends to be tilted posteriorly.	Tends to be tilted posteriorly.	Normal.
Uterus.	Forms part of pelvic mass.	In front of pelvic mass and small (unless there is an ectopic pregnancy as well as a uterine pregnancy).	In front of pelvic mass and normal size unless the uterus is pregnant.	Normal size and position.
Consistency of pelvic mass.	Normal pregnant uterus.	Soft and may be pulsating.	Hard as a rule.	There is none but hard stone may be felt at base of bladder.
Urethra elongated.	Yes.	Not much.	Yes.	No, and metal catheter reveals stone.

Treatment.—(1) An incarcerated uterus must be replaced.

(2) To do this the bowels and bladder must be emptied.

(3) To mistake a pelvic hæmatocele or a pregnant tube for an incarcerated uterus and to endeavour to replace it is likely to kill the sufferer unless a laparotomy can be performed soon after.

(4) Beware of damaging the bladder by forcible efforts at reposition. Dexterity and patience are the ingredients for success.

(5) If the symptoms have been acute and are relieved by catheterisation the woman may be kept in bed continuously for a day or two in the Sim's semi-prone posture, the bladder being emptied regularly, in case spontaneous restoration occurs.

(6) If spontaneous restoration fails or if symptoms are not relieved by catheterisation, manual reposition is to be tried. The knee-chest (Genu-pectoral) posture is of great help. Make the woman kneel so that her chest is on the bed or ground and the thighs are vertical. When the labia are separated air distends the vagina. Introduce two fingers into the posterior fornix as high up on the fundus as possible and then endeavour to manipulate the fundus to one side or the other past the sacral promontory, generally the right side has more room.

(7) If this fails after a little persistence, try putting a volsellum or bullet forceps on the anterior lip of the cervix and while pressing the fundus upwards with two fingers pull gently on the forceps, being very careful not to tear the softened cervix.

(8) If the fingers in the vagina fail, pass one or two fingers (well lubricated) into the rectum and push up the fundus laterally past the sacral promontory, at the same time exerting gentle traction on the handles of the volsellum.

(9) If the above fail or if the patient is too nervous place her in Sim's semi-prone posture, give an anæsthetic and repeat the manoeuvres described above.

(10) Sinclair's method may succeed if manual reposition fails. Take a thick rubber ring pessary, a size or two too large for the vagina, so that when in position it cannot assume a circular shape. Squeeze the pessary into an ellipse and slip it into the vagina and, if possible, over the cervix. Leave it there and the pressure it exerts in trying to assume a circular shape should force the uterus up past the sacral promontory in a day or two. Give the patient barbiturates to prevent risk of miscarriage.

(11) Another method is to take a child's football bladder or rubber balloon, boil it and then insert it into the vagina while the woman is in the knee-chest posture. Fill the balloon with air or water using a syringe (a wound syringe does well) and tie the neck of the bladder or balloon. Keep the woman in Sim's posture for a few days. She may need Opium or Morphine for the discomfort though barbiturates are safer if miscarriage is to be avoided.

(12) If reposition fails and in the other conditions mentioned the woman should be sent to hospital. If the journey to hospital is long, arrangements must be made to relieve bladder distension on the way.

(13) If it is impossible to get the woman to hospital pass an aspirating needle from the vagina through the uterine wall and drain off the liquor amnii to induce miscarriage.

Chapter XII. Fevers.

I. **Maxims.**—1. During pregnancy and the puerperium women may suffer from any of the febrile diseases common to the whole human species. Such diseases require the standard line of treatment.

2. Without the assistance of a microscope or the aid of a laboratory much diagnosis is guess work or intuition.

3. It is of great importance where specific remedies exist that an accurate diagnosis should be made and the correct line of treatment followed. Many lives are lost owing to neglect of this principle.

4. High fever, toxins or circulating organisms are liable to induce abortion, miscarriage or premature labour. In malaria it is the disease and not the Quinine which causes expulsion of the fetus provided the Quinine is given in small divided doses i.e., 14 grains a day in 7 doses at equal intervals.

II. **During Pregnancy.**—A. *Malaria*:—I find it quite impossible to avoid mistakes in the diagnosis of malaria without taking a thick and thin blood film (and often repeating them) of every case which I see with the possible exception of obvious surgical lesions.

1. It is important to differentiate malaria from pyelitis, pneumonia, infective hepatitis or the enteric group of fevers because Quinine is not good for any of these conditions.

2. In treating malaria I have come to prefer Atebrin or its English or American equivalents. Urgent cases (i.e., vomiting, unconscious, etc.) can be given an "I.M." injection of 0.3 gramme Atebrin Mussonate (Quinacrine Soluble, Mepacrine Methane Sulphonate) in 9 ccm. of sterile water followed by an oral course or a second injection after 24 hours.

3. Atebrin by mouth must never be given on an empty stomach.

4. I now prefer the following oral course:—1st day, as soon as malaria is diagnosed and the victim has taken some food, give 0.3 grammes Atebrin (3 tablets brushed); this is followed by another 0.3 gramme in six hours or so after some more food. 2nd and 3rd days 0.2 grammes after the morning and again after the evening meals. 4th, 5th and 6th days 0.1 gramme after the morning and again after the evening meals. The total dose (2 gramme) should be reduced somewhat for very small women.) The yellow coloration sometimes produced by Atebrin is only due to the dye and is not a sign of liver damage. This treatment should be concluded by a course of tonic pills containing 3 to 5 grains Ferrous Sulphate and traces of Quinine and possibly also Arsenic and Strychnine, t.d.s.

5. If Quinine has to be given, owing to its rapid excretion in the urine, it should be given in doses of 2 grains at 5 a.m., 8 a.m., 11 a.m., 2 p.m., 5 p.m., 8 p.m., and 11 p.m., daily for 7 days (i.e., 7 doses of 2 grains each equals 14 grains daily). An alkaline mixture should always be given ten to fifteen minutes before each dose of Quinine so that the urine rapidly becomes and remains alkaline to litmus paper on being tested daily.

After the completion of seven days Quinine treatment the tonic pills containing 3 to 5 grains Ferrous Sulphate with traces of Arsenic Strychnine and Quinine should be given, t.d.s.

B. *Urinary Tract Infections*:—The commonest invading organism is the *B. coli* and during pregnancy the pelvis of the kidney is the usual site attacked. The urine is hyperacid, which often gives rise to a chilly feeling in the back, opalescent and has a fishy odour. On culture the invading organisms can usually be grown and a centrifuged specimen of uncontaminated urine usually contains "pus" cells though intermittent excretion of "pus" cells is not uncommon. A severe frontal headache or pain in the eyes made worse on stooping is a common complaint. The pulse rate is usually increased out of proportion to the temperature, which tends to be of the remittent type with an evening rise. There is usually pain in one lumbar region more commonly the right and severe constipation. There may be vomiting, rigors and sweating in bad cases. The condition is commonly misdiagnosed malaria or influenza.

Cystitis as shown by painful and frequent micturition may be due to gonorrhoea but it is more usually due to downward spread in neglected or maltreated cases of pyelitis. Cystitis may also result when there is incarceration of the gravid uterus, pelvic hæmatoma, ovarian or other tumours (See Chapter IX). Relapses of pyelitis every month or so during a pregnancy are common.

Treatment.—While the infecting organism is being identified—

(1) The urine must be made and kept alkaline by frequent large doses of a mixture containing Tincture of Hyosciamus or Belladonna with Bicarbonates and Citrates, fruit drinks and a diet of potatoes and naturally curdled milk. (Uncurdled milk and cereals prolong the disease). The woman must drink 120 oz. of fluid every 24 hours and this intake must be charted. The alkalinity of the urine must be tested by litmus every time it is passed and the total urinary output must be charted and maintained at over 1,500 c.c. (52 oz.) daily by increasing the fluid intake if necessary.

(2) After an initial dose of 2 grammes (= 4 tablets crushed) one gramme of Sulphanilamide (= 2 crushed tablets) must be given every four hours for the first 24 hours and then every six hours for three days followed by 8 hourly doses for a further 3 days. If this induces nausea or vomiting 50 to 100 mgm. of Nicotinic Acid (= 1 or 2 crushed tablets) should be given with each dose of the Sulphonamide.

(3) For constipation rely on enemata. Do not give purgatives. Rice polishings also help.

(4) Only *B. coli*, *B. proteus* and *Streptococcus hæmolyticus* will respond well to Sulphanilamide but if the patient cannot tolerate Sulphonilamide, Sulphathiazol or Sulphadiazine will have to be substituted. Staphylococcal infections may respond to a course of Sulphathiazol, which in gonococcal infections is the drug of election. Infections with *Streptococcus faecalis* require Mandalic Acid treatment. Probably the simplest method is the administration of "Mandical." If this fails "I.V." Neosarsphenamine or oral Sulphathiazol can be tried. Such cases are more safely treated in hospital. Sterile pyuria often responds to "I.V." Neosarsphenamine. I have never had much success with Hexamine and dislike using it during pregnancy. A standard text book or special articles should be consulted on these subjects. Do not permit your patient to become gravely ill for want of the correct treatment.

(5) For the dangers of renal damage during Sulphonamide therapy see (IV) (A) (6) below.

(6) Any cause of pelvic pressure must be eliminated.

C. Malaria and pyelitis concurrently:—Make and keep the urine alkaline. Treat the malaria first and then pyelitis. If the urine is always kept well alkaline to litmus, Quinine will not irritate the kidney. The urine must be tested daily with litmus.

D. Erysipelas:—Responds well to Sulphonamide treatment for hæmolytic streptococcal infections. Great care is required to prevent spread of the organisms from the local lesion to the genital tract. (See (IV) (A) below).

E. Gonorrhœa:—In view of the danger to the eyes of the child and of tubal inflammation in the puerperium gonorrhœa if discovered during pregnancy requires emergetic treatment. [See (IV) (A) below]. The introduction of Penicillin may effect a revolution in the treatment of gonorrhœa.

F. Septic abortion or septic threatened abortion:—Keep the woman at rest in bed. Treat as for puerperal sepsis. Perform no intra uterine manipulations until the temperature has been normal for 72 hours unless compelled by hæmorrhage, etc., to do so.

G. Typhoid fever, small-pox, amebiasis, bacillary dysentery, cholera, infective hepatitis etc.:—Must receive the usual treatment. Much depends on good nursing.

1. **Typhoid etc.:**—Do not starve a patient suffering from the enteric group of fevers. Starvation causes perforation, hæmorrhage, and heart-failure. Give light, easily digestible food in small feeds every 2 hours by day. Never give Calomel or other purgatives; rely on occasional enemata and liquid paraffin. For distension give activated charcoal. For diarrhœa give Kaolin and if necessary Opium. Glucose supports the heart, but tends to distension if given in excess especially if combined with barley water. If the patient lies awake at night do not neglect sleeping draughts or more powerful aids. It is the exhaustion that kills these patients in the majority of cases.

2. **Pneumonia:**—Do not load the stomach of a patient suffering from pneumonia. Whey and Glucose supply sufficient nourishment for such a short illness. Never spare Morphine, especially in the first few nights in pneumonia. You will never see any bad effects from this. Lack of sleep, especially in the first few nights, kills many.

H. Malaria and pneumonia concurrently:—It is normally undesirable to give both Quinine or Atebrin simultaneously with Sulphonamides. In serious infections, however, the risk must be taken. It is probably safer to exhibit Quinine along with Sulphonamide than to risk Atebrin with Sulphonamide. Personally I treat such a case with an immediate "I.M." injection of 0.3 grammes Atebrin Mussonate in 9 c.cm. of redistilled water and then, after an interval of three or four hours, I proceed to administer Sulphathiazol and alkalies by mouth in accordance with the dosage laid down in (IV) (A) below.

1. **Black-water fever:**—See instructions for "prevention of urinary suppression after intravascular hæmolysis."

The patient should not be moved if it can be avoided.

III. Intra partum fever may occur during prolonged labour. Diseases other than genital tract infection may be responsible but the latter should be suspected especially when the membranes have been ruptured over 24 hours and dirty examinations have been performed.

Such infections are to be diagnosed in the same way as *puerperal sepsis* and treated similarly.

Great care is required in effecting delivery to avoid further damage or infection. If the vagina has become black or green in colour or if bubbles of gas escape when the uterus is pressed or the foetus manipulated in a long labour, clostridia infection (gas gangrene) should be diagnosed.

In prolonged labours *shock* is often due to *fulminating sepsis*.

IV. Fever After Delivery must be regarded as *puerperal sepsis* until some alternative cause can be established. (General and local diseases may co-exist with puerperal sepsis). [See (2) below].

1. **Puerperal sepsis:**—The bacteria generally responsible are streptococci, staphylococci, coliform bacilli, gonococci and clostridia (the latter cause gas gangrene).

The commonest initial lesion is an endometritis but the portal of entry may be any tear or injury in the birth canal. As a rule the only organism which travels along the mucous surface is the gonococcus. Other bacteria endeavour to penetrate the tissues and, if not dealt with by the local defence mechanism, pass *via* the lymphatics and veins to parametrium or peritoneum and thus to the general circulation.

In general the more dangerous bacteria such as the streptococcus hæmolyticus and the hæmolytic staphylococcus aureus, are the cause of infections with an early onset and in some such cases the infection is so fulminant that the woman dies in a state of shock without developing any fever.

A woman can be infected several days after delivery if virulent streptococci are coughed or rubbed into the vagina, (which will naturally retard the day of onset shown in the table below).

Probably most infections due to dirty examinations and manipulations are mixed infections and luckily the organisms are often not of great virulence.

In conformity with their behaviour in other parts of the body, virulent streptococci when attacking the birth canal do not give rise to much pus production. But since mixed infections are common, the presence of pus does not exclude the streptococcus hæmolyticus.

In addition to fever the general symptoms are malaise, headache and there is often more lower and abdominal tenderness than would be accounted for by the bruising of the abdominal wall, etc., during labour. In the following table I have endeavoured to bring out the salient features of each type of infection.

Fever must however be considered in relation to the possibility of an extra genital source of infection being in operation and since urinary tract infection is a common accompaniment of genital tract infection, this possibility must be constantly in the mind of the medical attendant.

Diagnostic Table

ACTERIA.	Streptococcus haemolyticus or Haemolytic Staphylococcus aureus.	Clostridia of gas gangrene.	Gonococcus.	Other bacteria and mixed infections.
PREDISPOSING CAUSES.	Another septic case in the medical attendant's or midwife's practice or a sore throat in some one connected with the case, even the victim herself. Lacerations of the perineum, vagina and cervix.	Prolonged labour especially if the membranes are ruptured early, the foetus has been dead for sometime and there is bruising or tearing of the birth canal.	Antecedent gonorrhoea, which may have been overt or cryptic.	Dirty vaginal examinations & manipulations. Difficult or prolonged labours. Injuries to the perineum, vagina and cervix.
POSSIBLE PRODRROMATA.	Intractable insomnia.	Sudden vomiting.	Ophthalmia neonatorum.	—
DAY OF ONSET.	1 to 4.	1 to 4.	8 to 10.	1 to 7 and 10 to 27.
TYPE OF FEVER.	Initial rigor and continues high, about 103°F.	Usually between 101°F. and 103°F. May be rigors and collapse.	Sudden onset. Moderate fever.	Varies. May be initial rigor and high fever in severe infections.
PULSE RATE.	Rapid, weak and thready.	Rapid, above 120.	Usual ratio to temperature.	Varies but in mild infections is not much raised.
RESPIRATION RATE.	Gradually increasing out of usual ratio.	Rapid. May be air hunger.	Normal ratio to temperature.	Varies.
GENERAL APPEARANCE OF PATIENT.	Restless, nervous and worried. Usually looks very ill.	Looks very ill but remains acutely conscious. Often euphoria. Later cyanosis and jaundice.	Does not look very ill.	Varies according to the seriousness of the infection.
SKIN.	Hot and dry.	Cold and clammy.	Normal.	Varies.
LOCHIA.	Almost free from bad odour, normal, scanty or slightly increased.	Very foul smelling or sweetish. Often with bubbles of gas.	Not much abnormal as a rule.	Profuse, purulent, putrid. May be bloody and/or frothy.
URINE.	Usually highly acid and concentrated.	Acid, dark red, smoky or black, scanty, possibly anuria.	Occasionally slight burning sensation on micturition.	Varies.
BLOOD.	Leucopenia and rapidly increasing anaemia.	Leucocytosis 20,000 to 50,000 and rapidly increasing anaemia.	Moderate leucocytosis.	Variable leucocytosis.
COMPLICATIONS.	1. Lymphangitis. 2. Thrombophlebitis. 3. Perimetritis and pelvic peritonitis. 4. General peritonitis.	—	1. Pelvic peritonitis. 2. Tubal abscess.	Parametric abscess. 2. Thrombophlebitis. 3. Pelvic or general peritonitis. 4. Broncho pneumonia.

NOTE:—After the initial rigors and rise of temperature a subsequent rise or rigor usually marks the extension of the septic process to some neighbouring structure or the release of a thrombus into the blood stream. In this manner a remittent or intermittent fever may be produced which is liable to lead the unwary into a diagnosis of malaria (malaria and puerperal sepsis may co-exist).

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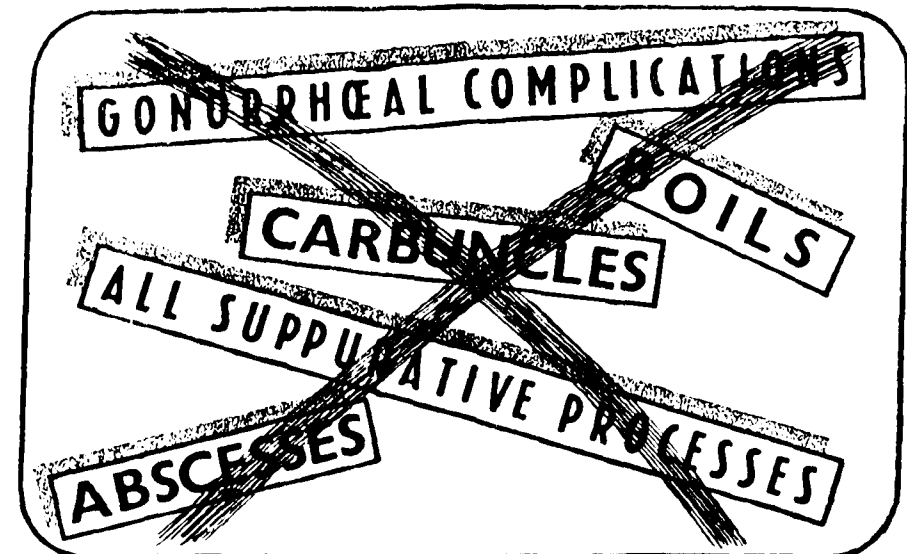


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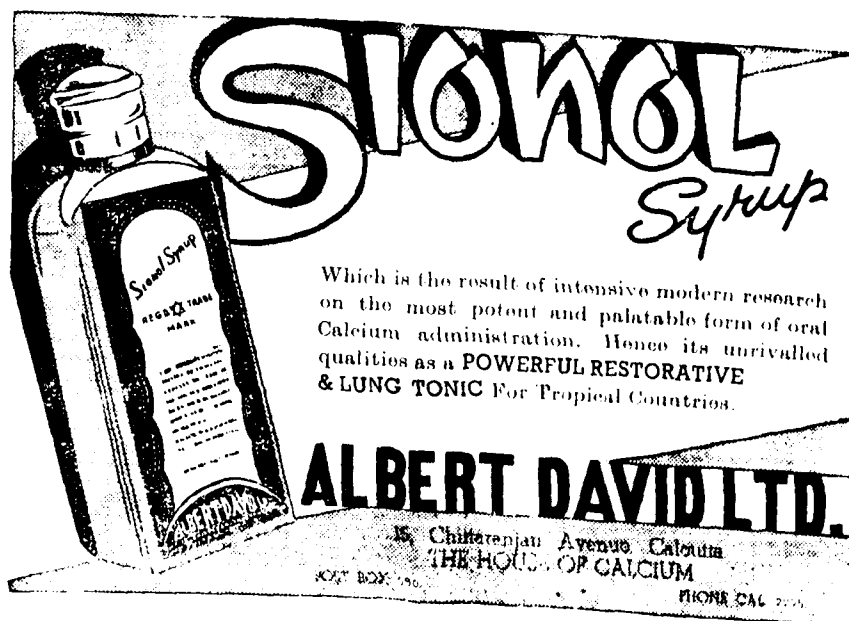
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When there is fever in the puerperium the uterus must be palpated to detect subinvolution, the vulva and vagina must be examined for signs of infected wounds and, if necessary, a bimanual examination must be performed to elucidate the exact condition.

All these examinations entail the wearing of masks and a thorough sterilization of the examiner's hands and instruments and of the patient's vulva. The woman's bladder must be empty. If a douche is given it must be given at very low pressure so that the fluid does not go beyond the vagina.

A. Specific treatment:—The word "*Sulphonamide*" is used to include all members of a group of drugs. The members of this group vary in the rate at which they are excreted. Sulphathiazol is rapidly excreted so doses should be given every 2 hours. Sulphanilamide is excreted moderately and as a result doses should be administered every 4 hours. Sulphapyridine is excreted slowly and therefore it is sufficient if the interval between the doses does not exceed 6 hours.

Streptococci faecalis, streptococci viridans and most indifferent types of streptococci are insensitive to all Sulphonamides.

Hæmolytic streptococci, and when in the urinary tract *B. coli*, are the only bacteria which are satisfactorily sensitive to *Sulphanilamide*. If available, it is desirable to employ *Sulphathiazol*, *Sulphadiazine* or *Sulphapyridine* in that order in preference to *Sulphanilamide* until more specific remedies become available because some staphylococci and some clostridia are sensitive to the drugs in the order given, but if dosage is inadequate at the outset organisms which were originally sensitive may become Sulphonamide resistant.

(a) Scale of doses of Sulphonamides for a course of 6—7 days. (Without daily leucocyte counts it is risky to give Sulphonamides for more than 7 days). For an Indian adult female weighing about 100 lbs. or 50 seers the following scale of dosage is recommended with increase or decrease according to weight:

(i) Severe infections which threaten life. Initial dose = 2 to 3 gm. "I.V." plus 1.5 gm. (= 3 tablets) by mouth. Followed by, during the first, second and possibly third days—1.25 gm. (= 2½ tablets) every 4 hours i.e., 7.5 gm. (= 15 tablets) every 24 hours. During the next two days—1.0 gm. (= 2 tablets) every 4½ hours with a six hour break at night i.e., 5 gm. (= 10 tablets) in each 24 hours. During the following two days—1.0 gm. (= 2 tablets) every 8 hours, i.e., 3 gm. (= 6 tablets) in 24 hours.

(ii) Less severe infections:—Initial dose—1.5 gm. (= 3 tablets). During the first two days—1 gm. (= 2 tablets) every 4½ hours with a 6 hour break for sleep at night, i.e., 5 gm. (= 10 tablets) in each 24 hours. During the next two days—1 gm. (= 2 tablets) every 6 hours, i.e., 4 gm. (= 8 tablets) in 24 hours. During following two days—1 gm. (= 2 tablets) every 8 hours, i.e., 3 gm. (= 6 tablets) in 24 hours.

It is important to commence treatment with a large initial dose and in severe infections the patient must be awakened for doses during the night.

To avoid toxic effects the patient should drink at least 120 oz. of fluid in each 24 hours. The fluid intake must be charted to avoid risk of error

and with each gramme of Sulphonamide it is advisable to give 50 to 100 mgm. of Nicotinic Acid.

For oral administration the tablets should be crushed and given with an Alkaline diaphoretic mixture containing 20 grains of Sodium Bicarbonate and 20 grains of Sodium Citrate followed by a rinsing of the mouth and swallowing of a glucose drink.

In comatose states well diluted powder may be given by nasal catheter or stomach tube.

The urine must be kept alkaline to litmus and the output for each 24 hours charted.

For "I.V." injection 10% solutions of the sodium salts of Sulphathiazol or Sulphapyridine or 5% solutions of the sodium salt of Sulphadiazine are used. These solutions being highly alkaline will cause necrosis if permitted to escape outside the vein. Infusions must be given very slowly. The drugs can be combined with normal saline for drip infusions.

In the case of Sulphanilamide there is no sodium salt but the drug is soluble. A saturated solution is prepared by dissolving 1 gm. of crystalline Sulphanilamide in 125 ccm. (4½ oz.) of sterile normal saline solution. The required dose can then be given by intravenous drip.

(b) *Toxic reactions*: Some few individuals are hypersensitive to Sulphonamide drugs. It is advisable to be on guard and enquire whether such drugs have been given on a previous occasion and with what effect. There are many minor toxic symptoms suffered and signs are shown by about half the patients such as cyanosis, malaise, headache, nausea, vomiting and rashes. Jaundice is of serious significance and so is a recurrence of fever after a normal period. Pyrexia, lassitude, headache and possibly a sore throat appearing especially after the 7th or 8th day are suggestive of agranulocytosis. A reduction of urinary output below 35 oz. in 24 hours is a danger signal especially if combined with pain in the loins or hæmaturia. If agranulocytosis, hæmolytic or aplastic anæmia, development of blood transfusions should be given. In acute hæmolytic anæmia, hæmaturia or threatened anuria 600 to 1,200 ccm. (1 to 2 pints) of 3.0% Sodium Citrate solution should be given intravenously by slow drip. [See Chapter XIV]. In agranulocytosis injections of Pentnucleotide, 0.35 gramme, b.d., should be given. In hæmaturia or threatened anuria hot water bottles applied to the loins and forcing fluids are of value. If there is complete suppression of urine a continuous "I.V." drip infusion of 3% Sodium Sulfate in sterile pyrogen-free water should be instituted or the patient sent to hospital where the renal pelvis can be washed out. For success early diagnosis and prompt and appropriate measures are essential.

(c) If the Sulphonamides are found to fail in a particular infection or if severe toxic symptoms are produced Sodium or Calcium Penicillin, if available, should be employed. Full details of dosages are not yet available but it is suggested that 15,000 to 20,000 "Oxford" units in 2.5 to 3 ccm. of suspension should be given "I.V." or "I.M." every three hours. Or 120,000 units daily should be given by constant drip, i.e., 30,000 units in 1 pint of fluid taking 6 hours. Up to one million units may be required. Unfortunately there are species of bacteria, more or less resistant to Penicillin including almost all gram-negative bacilli, *B. proteus* and *streptococci faecalis*.

(d) In gas gangrene in addition to Sulphonamide therapy give every 4 to 6 hours according to the severity of the case "I.V." 20 ccm. of

Haffkine Institute concentrated gas gangrene antitoxin (Code word "Gangoon") plus a similar dose "I.M." This means giving in each 24 hours 120,000 to 180,000 I.U. Welchii plus 60,000 to 90,000 I.U. Septique plus 40,000 to 60,000 I.U. Oedematiens until satisfactory response is obtained. In case of no response Penicillin should be tried if available because *Cl. Oedematiens* is Sulphonamide resistant but susceptible to Penicillin. Even without Sulphonamide therapy renal failure is common. It is therefore important to push fluids by mouth. "I.V." 3.0% Citrate solution and Glucose solution by constant drip are needed if fluids by mouth cannot be retained.

(e) If the Sulphonamides fail and if Penicillin is not available or if the invading bacteria are resistant to both some infections can be overcome by the aid of intravenous Iodine. I have had success with the following old fashioned formula as well as with some proprietary preparations. Potassium Iodide 15 grains, Iodine 10 grains, Calcium Chloride 100 grains redistilled water 3 oz. (90 c.c.). Of this the initial dose is 10 c.c.m. "I.V." followed by 5 c.c.m. on each succeeding day or 10 c.c.m. every alternate day. If Colloidal Iodine is preferred 20 c.c.m. is given "I.V." daily. Some cases of sepsis have responded in the past to Quinine given orally, "I.M." or "I.V." For oral treatment 15 grains daily of the Hydrobromide of Quinine is recommended though other salts may be used. For "I.M." or "I.V." injections 5 grains daily should suffice. Absolute asepsis is essential to avoid abscess formation when giving "I.M." injections of Quinine. Adrenalin or Pituitrin must be at hand to combat shock when giving "I.V." Quinine, which must never be given at a rate exceeding one half grain per minute.

(f) *Local treatment*:—(i) For tears and puerperal ulcers of the vulva and vagina and possibly of the cervix Proflavine or Acriflavine 1 part in Glycerine 1,000 to 2,000 parts makes an excellent cleansing and healing dressings when applied on gauze or lint. Proflavine and Acriflavine are usually supplied as a Sulphate but this is acid and a neutral or alkaline salt is to be preferred.

Heat 4 oz. of Glycerine to 110°F. for 5 minutes. Allow it to cool slightly and then add 1.75 grains Proflavine or Acriflavine which has been mixed with 0.5 grains Sodium Bicarbonate and previously been powdered finely. The flavine dissolves instantly giving a 1 in 1,000 solution. The dressings should be changed when soiled with urine. Puerperal ulcers and septic tears can also be cleansed rapidly if finely powdered urea or Sodium Sulphate is applied and the dressings changed as soon as soiled by urine or faeces. A mixture of finely powdered Sodium Sulphate and Glycerine ranging from 1 part in 5 to half and half is also effective.

(ii) The Proflavine or Acriflavine in Glycerine or the Sodium Sulphate in Glycerine may be used for Remington Hobbs' treatment in which 5 to 10 c.c. of the mixture is injected into the interior of the uterus, using a syringe and catheter, one to three or four times a day. This is excellent in theory but in cases which respond to the Sulphonamides or Penicillin it is unnecessary, so long as free drainage is maintained, to cause the sufferer the discomfort entailed.

B. General treatment:—Most cases of serious sepsis are greatly improved by a timely blood transfusion.

A light nourishing diet given in small easily digested feeds is most important and sleep is absolutely indispensable.

Morphine sometimes induces difficulty in micturition in Indians. This must on no account be confused with renal failure and suppression of urine when Sulphonamides are being given. Difficulty in micturition calls for the use of a hot enema and/or catheter and *not* for the withholding of life saving drugs.

Rest both in mind and body are necessary for the patient. Often over-anxious relatives kill the sufferer by importunate enquiries.

I doubt the value of Ergot in puerperal sepsis because it reduces the blood supply to the uterus and its exhibition entails an additional drug. Our aim should be to increase the blood supply to the lesion in all types of established sepsis.

Free drainage is very essential and can be obtained in the prone posture and in sitting absolutely upright. Enemata are to be preferred to purgatives though there is no objection to milk or cream of magnesia. The real virtue in a bowel action is that it aids drainage if the patient sits up. The danger of purgatives is that they exhaust the sufferer and may induce a troublesome diarrhoea.

Diarrhoea should be controlled by Omnopon or Morphine plus Kaolin if necessary.

A warm starch and opium enema is sometimes comforting in cases of diarrhoea.

A good dose of Bromide and Chloral or a tablet of some proprietary barbiturate administered to chosen relatives often has a surprisingly good effect upon the patient.

Unless the woman is very gravely ill or dehydrated there is no need to put an end to breast feeding.

As soon as possible get the woman onto a well balanced generous diet containing all the vitamins, mineral salts, etc. Plenty of fresh or curdled milk is useful and fresh air speeds recovery.

When the infection is overcome a little Ergot and plenty of exercises will help involution.

(g) *Treatment of complications*:—(i) *Parametritis* may result in abscess formation. Such an abscess may point above the inguinal (Poupart's) ligament, in the posterior fornix or it may track into the thigh or the rectum, etc.

(ii) *Pelvic peritonitis* sometimes localises as an abscess above the posterior fornix.

(iii) *Salpingitis* often leads to a small abscess and at times such an abscess is large enough to point in the posterior fornix.

When pus is present it must be let out by the most convenient route for easy evacuation and drainage. If a large incision is made and a wide rubber tube inserted as a drain there is usually no necessity to douche out the abscess cavity daily, a process which is exhausting to the patient, especially after a posterior colpotomy.

Small collections of pus in the tubes or surrounding the ovaries, which do not point in the posterior fornix, are not amenable to open drainage and should be treated by conservative measures.

(iv) *Thrombophlebitis* is to be treated by absolute rest. If a leg is the affected part it should be elevated, placed under a cradle and swathed

in lint which is to be kept continually moist with an evaporating lead lotion.

(v) *Pyæmic abscesses* are to be opened where they occur and drained.

2. During the puerperium and in prolonged cases during the labour any febrile disease may set in.

It is essential to have an exact idea of the manner in which such cases should be diagnosed, always bearing in mind that there may be more than one cause for the fever.

In addition to puerperal sepsis causes of fever are:—

(a) Malaria which can only be differentiated rapidly from puerperal sepsis due to streptococci hæmolyticus or hæmolytic staph. aureus by thick blood film examination (for the treatment of malaria see (II) (A) above).

(b) *Breast trouble*:—(i) If cracks develop express the milk manually or by a breast pump and feed it to the baby off a spoon. Treat the cracks by an emollient or touch them with silver nitrate.

(ii) Engorgement may be experienced two or three days after delivery. There is pain in the breasts which are found to be firm, thick and knotty or nodular. Any rise in temperature is slight. Engorgement is best treated by daily 5.0 mgm. of Stilboestrol, and possibly tight bandages and an ice bag in a very bad case. If the child is unable to draw off all the milk a breast pump or manual expression should be employed. A small dose of Morphine may be necessary for the mother.

(iii) Interstitial mastitis may occur in the first day of the puerperium. It is due to infection entering through a cracked nipple as a rule. The breast becomes hard, red and painful. The woman may feel chilly or have a rigor as the temperature mounts.

Immediate application of ice or of an evaporating lotion and a tightly fitting bandage with adequate doses of Sulpathiazol for preference may abort the condition and avoid the necessity for subsequent incision and drainage. If an abscess forms the child will have to rely upon the other breast.

(iv) Parenchymatous mastitis is due to a duct or ducts, in which decomposition of milk is going on, becoming blocked. It is rare for this to occur until after the first week or ten days of the puerperium. The symptoms tend to be less severe than in interstitial mastitis and the area of inflammation is usually localised to a wedge-shaped portion of the breast, the apex of which is situated at the nipple and the base at the periphery. If the blocked duct can be made patent by sucking on the obstruction the condition will subside. Sulphonamides, ice and support should not be neglected. If an abscess forms it must be drained or aspirated. I prefer the method described by HAMILTON BAILEY in "Emergency Surgery" which I have found very satisfactory.

General diseases may cause fever in the puerperium. And so may the psychoses. The latter are usually due to sepsis, which may be of a low grade and which may be situated in the nasal sinuses as an alternative to the pelvic organs. Some cases of psychosis are due to hereditary tendencies and others follow toxæmia such as eclampsia. The manic-depressive and the delusional psychoses are the more common types. Treat

incipient insanity by plenty of sleep, plenty of food, plenty of exercise and avoidance of bowel stasis in addition to attacking the septic focus. The ultimate prognosis is best in cases treated by a psychiatrist.

(v) Urinary tract infections. Cystitis resulting from catheterization or bladder trauma is more common than pyelitis. Great care is required to ensure that there is no concomitant genital infection. The immediate treatment is the same as for pyelitis (see (II) (B) above). Scrupulous attendance to cleanliness and the use of Proflavine in Glycerine dressings to injured areas may obviate the formation of a fistula.

(vi) Tetanus has not yet been banished. The disease may commence 2 days after infection and may be apyrexial but there is often fever with the onset of symptoms which consist of headache, pains in the back, difficulty or frequency of micturition, insomnia, constipation, yawning or sweating. Often the first symptom recognised is the onset of trismus. For treatment reliance should be placed on 20,000 units of concentrated Tetanus antitoxin (40 c.c.m. Haffkine Institute "Tetcon") half "I.V." and half "I.M." as soon as the case is diagnosed. This dose is repeated in 12 hours and again every 24 hours until all danger of further spasms is over. For actual spasms chloroform inhalations may be given. Barbiturates by mouth, "I.V." or "I.M." are most helpful. If barbiturates are not available Morphine and Hyoscyne should be used and repeated as required. Rectal paraldehyde in 10 drachm doses is also excellent. If even nasal feeding is impossible "I.V." Glucose should be given.

(To be continued).

Treatment of Strangulated Hernias*

P. P. HALEMANI, M.R.C.S. (Eng.),
Dublin.

It may be said in simple words that the treatment of strangulated external hernias is immediate operation, without delay. In early cases, the operation of hemiotomy in strangulated external hernias in expert hands, carried under local or spinal anaesthesia, is so simple, that it carries very little mortality. The dangers and mortality increase as time passes, due to the cumulative effects of intestinal obstruction and the prolonged operation required either in the form of intestinal resection or exteriorisation of the gut. Frankan's statistics show that the average mortality of strangulated external hernias is 15.7. The average mortality of internal hernia is 40. And the average mortality of external strangulation where resection and anastomosis was done, is 42.8.

The chances of patient's survival without an operation ending in faecal fistula are very small. The other form of treatment, *vis.*, taxis is extremely dangerous and should only be used when the patient denies an operation or where there is no surgical aid.

The prognosis mainly depends on the duration of the strangulation before operation.

Days	1	2	3	4	5
Inguinal hernia	6%	15%	28%	40%	50%
Femoral hernia	8.7	18%	28%	40%	50%

* Specially contributed to 'The Antiseptic.'

Taxis:—It is not a safe method and should only be used when the patient denies an operation or where there is no surgical aid and that too under the following conditions: (1) when the duration is less than 6 hours; (2) when there is a history that the hernia was reducible; (3) it should not be used in the case of a femoral hernia; (4) the manipulations should be carried on gently in a relaxed patient.

Dangers:—(1) reduction *en masse*; (2) rupture of intestine; (3) escape of infected fluid into abdominal cavity; (4) reduction into another loculus.

The operative treatment consists in: (1) pre-operative treatment; (2) anaesthesia; (3) operative details; (4) post-operative treatment.

Pre-operative Treatment.—Though the operation is an urgent one there is always time for the preparation of the patient. The patient is admitted for at least one hour before the operation into the hospital or nursing home and kept under the influence of small doses of Morphine. This is all that is necessary in quite early cases. In cases which are seen after 12 hours certain pre-operative measures are indicated which are as important as operation itself. They are: (1) gastric or duodenal drainage—this is of utmost importance as it prevents the swallowing of vomit; decompresses the distended intestine and prevents the paralytic ileus and distention necrosis.

Antishock producing agents:—Heat and Morphia come under this heading and the most powerful measure we have got is the intravenous Glucose Saline. As much as one litre should be run in and in very severe toxic cases as much as two litres should be used.

Blood transfusion:—In large hernias, where there is a fear of large quantities of blood being lost transfusion of blood is advisable. It reduces shock, replaces the lost blood and may be a great aid in a prolonged and precarious operation.

Choice of anaesthesia:—By far the safest anaesthetics are either local or spinal. There is no fear of swallowing of the vomit as the reflex cough is intact. It prevents paralytic ileus. Ether and chloroform are most dangerous anaesthetics on the type of patients suffering from strangulated hernia and further exert an inhibitory action of peristalsis.

Operation:—Technique differs in each individual operation but the general principles may be first indicated, special points being stressed in each type: (a) an incision is made on the hernial swelling and should be sufficiently large enough to provide easy access; (b) everything down to the sac is cut which is then separated from the coverings; (c) the sac is opened at the fundus with the flat of the knife to avoid injury to the presenting distended intestine; (d) the escaping fluid is examined, and if this is haemorrhagic and foul smelling great care is taken in handling the intestine as this may be very friable; (e) the sac is opened upto the neck and the contents are examined. No decision is made until the constriction is cut; (f) the constriction is either divided or stretched and the opening must be sufficient enough to allow free withdrawal of intestine; (g) the gut is freely pulled down and carefully watched especially at the site of constriction. If any doubt exists, the loop is covered with hot saline towels and examined again after a few minutes; and (h) now comes the crucial point to decide whether the gut is viable, doubtful or

non-viable. If it is viable, the gut is washed with saline and returned into the abdomen. The sac is excised and the canal is closed. The treatment of doubtful and non-viable gut will be dealt with later on after dealing with each individual types.

Inguinal Hernia.—An oblique incision is made on the hernial swelling starting half an inch outside the internal abdominal ring, the sac is exposed and it is opened at the fundus with the flat of the knife. The constriction may be at the external abdominal ring in case of very large hernias and in children, but, more usually, it is at the internal ring. I have operated on a case of direct strangulated inguinal hernia where the constriction ring was in conjoint tendon. The best guide is the index finger and the ring is cut upwards and inwards. The intestine is drawn downwards and the gut is properly examined. If the gut is viable it is returned into the abdomen and great difficulty may be encountered while sending the intestine in the abdomen as they are greatly distended. The intestinal coils should be squeezed in hot saline towels and the ring should be relaxed. Then the sac is excised and the canal is closed.

Femoral Hernia.—Inguinal route is the best (Lotheissen's operation) for the following reasons: (1) the ring can be cut under direct vision; (2) if excision of the gangrenous gut is required one gets more room; and the closure of the canal is better.

The incision is oblique, starting $1\frac{1}{2}$ " above Poupart's ligament and then passing down and in over the swelling. The coverings are incised and any constricting fibres at the saphenous opening are either divided or cut. The sac is opened at the fundus and the contents are inspected. The external oblique aponeurosis is opened up for a short distance from the external ring and the arching fibres of the internal oblique and transversalis are identified. The crural canal is now exposed from above and enlarged by stretching with finger, assisted by division of Gimbernot's ligament, and of the fibrous band in front of it. The neck of the sac is opened above Poupart's ligament and attempts made to push the contents into the inguinal part of the wound. Great care should be exercised at this stage to avoid injury to the distended and friable intestine and if the ring is not roomy enough to ensure the safe transmission Poupart's ligament should be divided. After reduction of the contents the cut end of the ligament is sutured, sac is ligatured and excised and a radical cure effected by fixing the conjoint tendon to Cooper's ligament and by overlapping the external oblique aponeurosis.

Strangulated Umbilical Hernia.—It is best to commence the incision round the lower part of the neck where coverings are thicker and the contents least likely to be adherent to the sac. The ring, the margin of the sac and the adjacent aponeurosis must be exposed thoroughly. The neck is opened and the sac slit up towards the fundus. The constriction is nicked laterally and the ring well stretched with fingers. The contents are now examined and the adherent intestine is separated from the sac and omentum and reduced. The omentum is ligatured off at the neck and divided there, its adhesions to the sac being left undisturbed. The sac with adherent omentum, together with the redundant skin are now removed together by a curved incision passing over the upper aspect of the neck and joining the previous incision round the lower aspect. The operation is completed by performing one of the well-known methods of radical cure.

Treatment of Doubtful and Non-viable Gut.—1. *Doubtful gut.*—No hard and fast rules govern the treatment of doubtful intestine, and a great deal will depend on the condition of the patient, the experience of the surgeon and the actual degree of damage done to the gut. A small patch of necrosis at the site of constriction can be safely segregated if the lumen is not narrowed by the procedure and the rest of the gut is healthy. But when the constricted portion is severely damaged, the recovery of the constricted portion is in question undoubtedly the safest course to deal with, as if it were actually nonviable. But, however, in old debilitated patients where there is a chance of the gut being recovered the safest way would be to return the gut into the abdomen just at the hernial orifice and put a drain against danger of future perforation. As an alternative method, we may leave the doubtful loop in the wound and wait for subsequent developments. If the distension is too much, sudden decompression in the form of an enterostomy may be performed all at once.

Non-viable gut.—Strangulated large intestine should not be treated by primary resection and anastomosis. The loop is either exteriorised and drained or resected and both ends drained. The faecal fistula may close spontaneously or second operation may have to be undertaken after the complete recovery of the patient.

The treatment of gangrenous or non-viable small gut cannot be dismissed so easily. From the commencement of this century, surgeons have preached the doctrine of immediate resection and anastomosis. The mortality of primary resection and anastomosis is very high viz., 42.8 per cent., and therefore more conservative methods of exteriorisation and faecal fistula formation have their indications and usefulness and neither should be advocated to the exclusion of the other.

Immediate resection and anastomosis.—This procedure has 3 advantages over exteriorisation: (1) the patient does not lose ground through non-absorption of nourishment; (2) it is free from the danger of sloughing and cellulitis of the abdominal wall owing to the auto-digestion by the escaping digestive juices; (3) it avoids the subsequent problem of closing the intestinal fistula.

Indications for immediate resection and anastomosis.—(1) Early strangulation of a small loop in a patient in a good condition; (2) In children who rarely bear faecal fistula; (3) in high jejunal strangulation where auto-digestion and starvation are more common; (4) the smaller the length of the intestine, the better are the results of primary resection and anastomosis; (5) the experience of the surgeon is also to be taken into consideration.

Exteriorisation.—In the presence of the non-viable gut, the other alternative is the exteriorisation of the gut. The disadvantages associated with this procedure are those connected with an intestinal fistula and these are:—

1. The diversion of the intestinal contents is complete and the fistula is not controllable. While the tubes remain in position, this is not of great consequence, but after a few days, the tubes loosen with the escape of intestinal contents into and on the abdominal wall. The resulting auto-digestion is complicated by sepsis and large parts of abdominal wall become excoriated and may slough or even a fatal cellulitis may

occur. The opening of peritoneal cavity for the completion of the anastomosis now becomes an extremely formidable procedure, owing to the danger of peritonitis. Further more, especially, with a high, or moderately high, fistula, the patient progressively deteriorates through inanition.

The following is the best method of exteriorisation:—The strangulated coil with 18" of the proximal and 6" of the distal intestine is brought out of the wound. Lateral anastomosis is performed and the anastomosed portion is returned into the abdomen. A Witzel enterostomy is then made a little proximal to the anastomosed portion, the catheter being brought out through a separate stab wound. The strangulated coil with a margin of viable gut at each end is fixed outside the wound by a rod passed through its mesentery and the wound closed snugly round its base. After 24 hours, the strangulated gut is dissected and Paul's tubes are tied into each open end. After the Paul's tube comes out, the fistula should be closed without delay. When the lateral anastomosis is made at the first operation, all that now remains is to free and invaginate both open ends and after thorough cleaning of the skin deliberately to re-open the peritoneum and return them into abdomen.

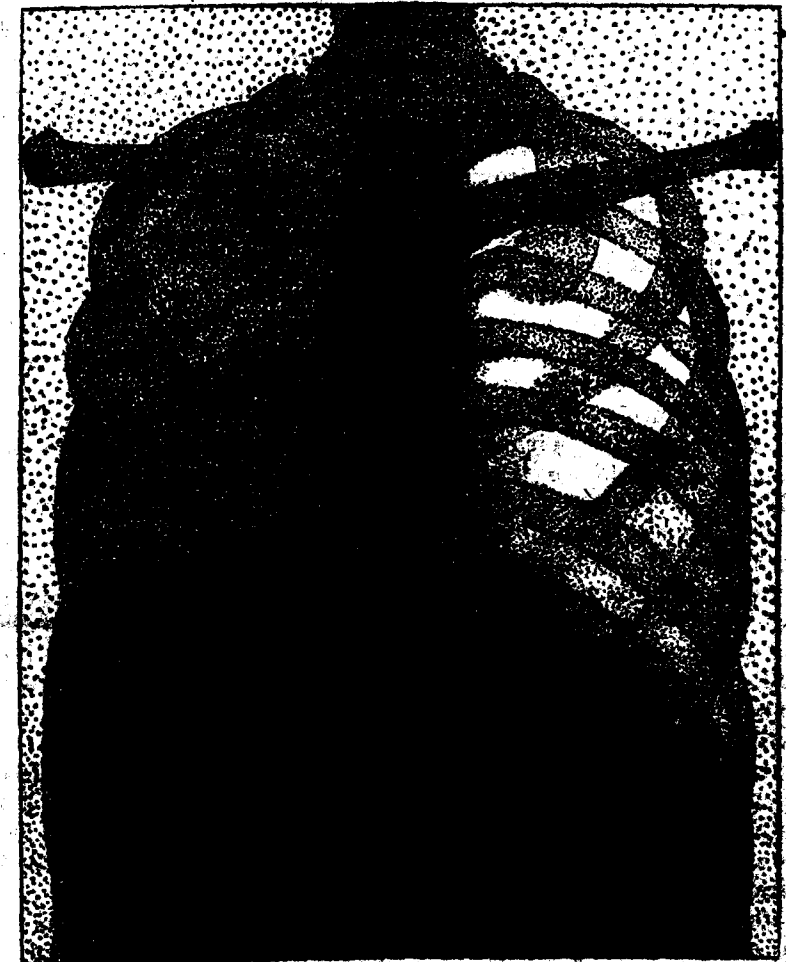
Is Complete Immunity Attainable in Convalescent Exudative Type of Pulmonary Phthisis? *

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ALL major infectious diseases, with the exception of malaria, leprosy and tuberculosis, either kill or cure the patient, i.e., any person who withstands and recovers from the onslaught of any of these diseases, remains for the rest of his life, immune to that particular disease from which he suffered and so does not get a relapse as a rule. On this empirical observation prophylaxis against infective diseases in general has been based beginning from Jenner's vaccination against small-pox in pre-bacteriological era which was the first of its kind, up to the present bacteriological era when prophylaxis against a host of infective diseases such as cholera, typhoid, diphtheria etc., are being carried on extensively, as also Calmette's B.C.G., against tuberculosis which has been found to protect non-infected babies which is now being applied to non-infected adults as well. On this analogy one expects that when a person recovers from exudative type of lung tuberculosis in its most acute form, without cavity being formed and who becomes convalescent rapidly, showing no trace of the lesion in the lungs afterwards, to remain immune from the disease for the rest of his life, unlike the chronic smouldering fibrocaseous or fibrous (proliferative) type of tuberculosis cases where lesions are detectable by X-ray in many cases even when the patients are in apparent good health. This idea finds confirmation in a recent case of the writer whose X-ray film, taken nearly at the end of the active period, is shown on accompanying Plate (*vide page 551*), showing extensive lesion over nearly whole of the right lung, but who became rapidly convalescent showing no fever, cough or pain and had good appetite, and who not more than a month after the acute period, showed absolutely no physical

* Specially contributed to 'The Antiseptic.'

signs, being in fact a healthy person. The only question remains now about this case, whether at some future date, this person will get a relapse in common with most cases of tuberculosis of lungs whether exudative or proliferative, the distinction being not clear-cut in many cases. But if it be proved that this immunity may occur in exceptional cases only, so the general prevalent idea that almost all cases of tuberculosis, exudative or proliferative recur, will hold good and so relapse may occur in this



X-Ray Film taken on 24-9-'43.

Showing extensive exudative lesion occupying
whole of the right lung.

case also. But if one thinks of the circumstances under which this exudative case was detected which I am going to relate, one can think that immunity occurs in many cases of exudative type of tuberculosis which remain undetected, or if detected passes off as pneumonia or influenza, as the party remains healthy not only during the observation period, but for the rest of his life, if environmental surroundings such as physical rest and absence of mental worry and open air life can be had. Then

the case is not thought to be tuberculous at all. Then we have no other alternative but to come to the opposite conclusion namely that recurrence ought not to take place in purely exudative cases. The relation of full history of this case of tuberculosis of extensive type will bear out the point, that this case would have remained undetected, had it not been for the accident of X-ray film being taken under the most fortuitous circumstance.

The following is a short report of the case :

The patient, a married lady, aged 35, mother of several children, the last being 4 or 5 years of age, was brought to my clinic in July 1943, for treatment of repeated attacks of hæmoptysis of a severe kind, without any fever. Marked loss of appetite and progressive emaciation were also present. The onset of the disease began after the accidental death of a 16 years old boy of her by drowning. No physical sign was found. Rest, followed by graduated exercise and a course of tuberculin, gave the happiest result—no more hæmoptysis occurred, weight increased from 114 to 128 lbs., appetite improved. In the 3rd month of treatment (September, 1943) the husband reported to me that the patient had got an attack of influenza, with high fever, cough and pain all over the chest. Perfect rest was advised, which was carried out. As there was no alarming symptom such as hæmoptysis, there was no occasion for me to see the patient at her house. The fever came down to normal within one month by help of rest alone without injection of any of the so-called specific drugs such as Gold or Calcium salts. About this time, 24-9-'43, an X-ray film was taken without my knowledge on the suggestion of her brother (a lay man) who thought that her sister, a phthisis case, was not being properly treated without the help of X-ray film, an opinion prevalent both among lay men and doctors. Two days after this, I had occasion to see her and found no definite physical sign—no fever, the appetite was good (the X-ray film though available then I did not look at it). She was asked to move about and was allowed to come to my clinic to complete the course of tuberculin. So every week I had opportunity of examining her chest. No physical sign was found at any time. She started regaining the weight lost during the acute febrile period (from 114 to 125 lbs. within 4 weeks). When at this time I asked her husband to bring the film to me for examination, I had not the faintest idea of finding anything in the film, but when I looked at it I was surprised to find extensive lesion over whole of the right side as is shown in the Plate. This made me think, that tuberculosis of exudative type occurs and passes away in many cases rapidly (in this case within couple of weeks at the most) without being detected, as films are usually not taken during the active period. Saw her on 7-7-'44 perfectly healthy. Secondly, one can say that even if it is detected by the physician by the presence of physical signs, it is diagnosed as pneumonia. Many a case of tuberculosis gives history of pneumonia occurring at some period of their life from which they trace the onset of the disease. These are talked of by medical practitioners as patches (sputum being negative to tubercle bacillus in early stages).

I may mention here another case, detailed report of which I need not give, where the relapse occurred after two years in the shape of recurring hæmoptysis without any fever, or cough, or loss of weight, after undue exertion, but when first seen by me was ordinary pneumonia, whole of

right side being found the seat of exudative type of tuberculosis and who, after subsidence of the fever, showed signs of effusion in the pleura and which has since been absorbed. At the time when this so-called pneumonia occurred, there were three points which pointed to tuberculosis: (1) his father died of tuberculosis; (2) there was no toxic symptoms to be found as in lobar pneumonia; and (3) marked emaciation.

Discussion.—One may ask the pertinent question why, in this case, after showing in the film so extensive a lesion, it passed away without any excavation, accompanied as it was with so much high fever, when in a majority of these cases cavities form after exudative type of the disease. The writer has had painful experience of some such cases, who in the initial hæmoptysis apyretic period, shows slight or no physical sign but in whom exudative type of an extensive nature sets in suddenly undistinguishable from ordinary lobar pneumonia (both in the febrile reaction and physical sign) accompanied often with severe hæmoptysis but where our hopes for recovery as in pneumonia, are frustrated by this not taking place, instead shelling out of the whole lung or portions of it takes place, which often leads to natural pneumothorax and death in no time.

To answer this question one has to look to the question of immunity as applied to particular communities as a whole apart from factors applied to one particular person. Those observers as BOEREL, BUSHNELL and CUMMINS who have had opportunities of studying this question from records of extensive number of tuberculosis cases occurring among different nations who are congregated together in one place as during the last world war in France have come to the conclusion, that tuberculosis occurring in communities, where it is prevalent for a long time, takes benign type called European type and is amenable to treatment by rest and open air and graduated exercise. Besides the European nations are included in this group the Chinese and a good number of communities of India such as Bengalees, Panjabees etc. Those communities who get it for the first time (virgin soil) such as Gurkhas in this country and Negroes or Senegalese in Africa get it in the most malignant form called Senegalese type, the exudative type ending in excavation in no time. It seems that in India some groups of people or communities have become immunised and so get this benign type when they get it. This disproves the assertion of some observers here who being connected with the institution have opportunities to get records of a large number of cases where surgical interference takes place as a rule, that in India as a whole this immunity has not occurred and so sanatorium treatment of rest and graduated exercise will lead us nowhere and so active treatment by so-called specifics as gold etc., is necessary followed by surgical treatment as A.P. etc., and later by thoracoplasty by which they say at least a certain number of patients can be saved. This I gather from some recent papers contributed by institutional medical men in the medical journals of this country.

In this connection I am quoting below from a paper of mine published in 1935 where I discussed this question why recurrence does not take place in many cases of tuberculosis in this country and if it does why it takes benign type leading to cure, which will illustrate this point.

(1) "From a study of the cases of tuberculosis as delineated above, it can be said that tuberculosis among people of this country conforms to the European type running a chronic course and tending towards recovery and not to Senegalese type running an acute fatal course.

(2) "Tendency to relapse which is a character which tuberculosis

possesses in common with leprosy and with no other bacillary disease persists in many of the cases even so long as 20 years, after disappearance of the active phase of the disease."

The next pertinent question is about interpretation of the film reproduced here. If we leave aside the clinical records of the case and try to interpret the picture as it is, it may be pneumonic consolidation, pleuritic effusion, thickened pleura, or exudative tubercular affection of the lung with or without cavity formation under thickened pleura. If one thinks that X-ray film can never give us any idea about the aetiology of the lesion seen in the lung by X-ray, which many medical men do not know, one has to fall back on the clinical records of the case to get this aetiology. Finding this extensive lesion as depicted in the film occurring in an already diagnosed tuberculosis case one must say that it is tuberculous in origin and not a pneumonic consolidation. Secondly, the lesion passing away rapidly, not being detectable two days after the film was taken, and in the subsequent period, the question of pleuritic effusion or thickened pleura does not come in. This rapid appearance in some portion of the lung and rapid disappearance of exudative lesion may not be the actual seat of tuberculosis. It is explainable by the allergic response of the system around a tuberculosis focus, as is depicted occurring in children as an extension of hilar tubercular affection in the lung, which is not actually of tubercular origin which is depicted in text books on tuberculosis, being the result of allergic response of the system. When it heals the enlarged glands in the hilar region remains to show the lesion, from which the lesion in the lung appeared, being allergic response of the system.

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The Relations of a Dentist with the Client— Psychology Plays the Main Part*

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THE profession of a dentist is complicated enough. To-day dentistry, in the words of President LOWELL of the University of Harvard, "oldest of the arts and the newest of the professions," is universally accepted with great reverence. It is a science allied to medical doctrine and to medical education; and all have recourse to it when the need arises.

Dentistry is a science that requires the tact of a psychologist, the dear and sensitive soul of an artist, the genius and ability of a sculptor, the steady hand of a mechanic, the subtlety and business acumen of an industrial, the soft speech of a lady and the patience of a Benedictine monk.

* Specially contributed to 'The Antiseptic.'

One who shelters behind the circle of these all embracing qualities becomes a perfect and wonderful dentist. It would be rare for one possessing these qualities to make a mistake; and he works with everything in his favour to guarantee his success in the profession.

Personal hygiene, neatness, good appearance, assiduity, modesty and good address are the essential features to attract the sympathy of a clientele.

Dr. EDMUND C. KELLS gives this prescription for a "well-balanced and high class dentist":

R Ability, industry, judgment, personality % 100 parts service to 10th degree.

"This capsule might spell success in any enterprise."

These essential features developed to their full form a mirror in which the dentist reflects the rays of his professional ability.

The dentist should enter into relations with a client, of whatever social strata, in a courteous and gentle manner.

Absolute confidence, skill and refinement in work, the magic art of expression, the sweet qualities of the spirit, keenness and high thinking, a penetrating foresight and the other attributes like geniality, a sense of humour and tenderness are the ties of inter-relationship.

Psychology is of capital value for all dentists.

Individuals vary according to their emotions and according to their moral and physical faculties. A multitude of the sick enter into relations with the dentist and he with his passive and elastic virtues from the time he embraced the profession is obliged to conform to and adjust himself to all the idiosyncrasies and to all the morbid and ignorant mental attitudes.

"Wisdom consists in the mutual adjustment of thinking and feeling"—says the Professor Emeritus of psychology of the University of Wisconsin, Dr. JOSEPH JASTROW.

We have to appreciate that all minds do not operate alike. Some are orthodox, others are reformed, some are materialistic, others are conservative. It is also interesting to the student of human relationship to note that quite often one thinking group fails to understand another of the opposite turn of mind—a consistent expression of the mature mind of Dr. JOSEPH BRENSTEIN, D. D. S.

Dentists, however bound by these excellent and high principles, ought to try and understand in the first place the plastic psychology of the client in familiarising himself with all the dispositions of the clinic moment. Courtesy, attention, and consideration ought to embrace psychology.

To study the psychology, gauge the faculties—to check up the predisposition by a retrospective examination is of supreme importance.

Good work occupies a rightful place in the scale of relationship. Sure success to acquire large and profound relationship, consists in the valiant efforts of a dentist and resides in the first and abrupt impression produced in the mind of the patient.

A Serious Head Injury with Cerebral Hernia
J. S. Bhatnagar.



[Vide page 557]

But, however, one who understands and learns to appreciate psychology more and more and its diverse methods and who knows to impress his personal interests in favour of each of his clients is indeed clever and shrewd.

A dentist, eminent psychologist that he is, should never drown himself in the chaos of scorn. By his objective and subjective observation, and subjective, retrospective and introspective, extrinsic and intrinsic, should calculate precisely by psycho-diagnostic and psycho-analysis the intellectual equipment and other momentary conditions; and value them by the typical manifestations of the client of his mental calibre and his general advancement.

To a fresh professional in dental science in the beginning to appreciate and to discriminate the capacity of his clients would be difficult but with long practice, whether in the shelter of the school or under the training of any psychologist, he should know how to ingraft considerably his natives aptitudes with the acquisition of new knowledge when in relation with the patient; and he should learn to develop gradually and to facilitate by habit the exercise of spontaneity of observation.

The outstanding problems of psychology are of vital interest for the background of this profession, since the studies of applied psychology, entirely relative, paves the way for an intelligent and lucid appreciation of the basic requisites of humanity, in respect of the worthy profession and leads to formulæ the principles of practice.

"The theory and practice must be humanized" says BERGSTEIN. In effect each practice merits that it should be applied to a particular patient at a given time.

Various methods can be employed everyday by a cultivator of dental science to attain his rich knowledge with science and to transform the spiritual magnanimity by scientific power. It is not easy for a professional actuated by his multifaced impulses, rational and irrational, to reach the peak of happiness in life.

Above all, the professional concepts of ethics ought to be studied and translated in detail so as to valorize the responsibility to himself and towards society.

The client always is directed by the first impression that he receives. Either he approves or disapproves according to the expression created by a positive or negative thought. He approves all that his environment awakens in his ego springing upon him a strange mystic sensation of well-being, material and moral, comfort and tranquillity. His soul takes a pride in and intoxicates himself with the influxes of confidence. The barriers of doubt and timidity disappear, barriers these which often block the progress of the profession. This again is another motive for the dentist to provide himself with the studies of the emotional state of an individual.

Given an impression of antipathy and indifference, the client keeps clear of the dentist. He evades the interview because the dentist has already spoken in deciphering the psychological moment.

In order to free himself from these incongruities it is to his advantage to know the type of client who he usually comes into contact with.

BERGSTEIN classifies the following types for the easiness of comprehending them:

1st group:—Suspicious clients, superstitious individuals, people who doubt everything, timid people, people who lack confidence and people full of fear and hesitation.

2nd group:—People affecting a mental reservation who have not the force to register discontent.

3rd group:—Sly people suffering from resentment and despondency.

4th group:—Chronic sufferers who never are satisfied.

These groups elucidate and raise up the curtain of the nature of individual emotions and lay bare the path for the preparation and adaptation of the spirit of a dentist to that of the client.

So the study by the dissection of the human spirit and of the autopsy of complexities, of temperamentals, of neurotics, of hysterics and other phases of representative psycho-analysis of the clients will favour the dentist enthusiastically to draw the public to his particular clinic.

The dentist, finally, estimates the responsibilities under which he ought to proceed, profoundly considering and developing the study of co-relation and filling the existing great gap in professional work.

Translated from "O Medico," a local medical magazine.

Cases and Comments

A Serious Head Injury With Cerebral Hernia

A Case Report

J. S. BHATNAGAR, M.B., B.S.,

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5th June 1944.—Nanka, Bhil, aged 18 years, having received a blow of sword was brought to the Jhabua Hospital at 2 a.m. in an unconscious state. The injury was received at about 1 p.m. on 30th April 1944 in the village Utti, 30 miles from Jhabua. Next day he was removed to dispensary at Bori where he was detained till the morning of 4th June 1944. On 5th morning examination revealed an injury to the frontal region of the skull on left side. Blow of the sword was so severe that the cut extended from little above the right ala of the nose running over its bridge, crossing laterally the mid-line of the frontal bone, curving round to the left and down over the coronal suture upto the fronto-sphenoidal process of the zygomatic bone, right down deep to the roof of the orbit, cutting the eye balls and duramater with the superficial part of the frontal lobe. Both the nasal, left half of the frontal, the left lacrimal and the orbital plate of the frontal bones were sharply cut. Anterior cranial fossa was obliterated in its anterior part. Orbital plate was broken into pieces and these were lying loose under the frontal lobe of brain which had herniated out through the gap produced by completely cutting out a big piece $2\frac{1}{2} \times 1\frac{1}{2}$ consisting of frontal tuberosity and the supra-orbital margin of the frontal. Upper part of the frontal had fractured and the fissure extended from the cut edge upto the coronal suture above. The whole flap (See photo) with the nasals, frontal piece and the lacrimal was turned over on to his face.

The cut measured $10\frac{1}{2}$ " and the left frontal lobe of the cerebrum was lying exposed. Foul smell was coming out of the wound as already 6 days had elapsed since the infliction of injury. I attempted to operate upon him but having seen the extensive injury and the highly septic wound (but not gangrenous), I left the case and got him removed from the table back to the wards. Prophylactic doses of anti-gas and anti-tetanic serum were injected, wound was irrigated with antiseptic and the dressings were changed. The flap was turned over the brain and bandaged. I had no hope of his life but the patient lived the whole day and night.

6th June 1944: Patient alive, pulse good, but unconscious though sensations of pain were felt (patient screamed on touching the wound). There was no paralysis. I took him to the table again after injecting Glucose and Calcium I. V. and Morphia and Atropine subcut. Chloroform anaesthesia for $2\frac{1}{2}$ hours was given. The flap was cleaned, sterilised, eye enucleated (in the mess it was removed with great difficulty), pieces of bones lying loose removed, the big piece of frontal removed after detaching from the flap to which it was adherent (it could not be replaced due to oedema and herniation of brain), frontal lobe lying out of the cranial cavity without duramater upto a depth of $\frac{1}{2}$ " above and 1" below was scrapped off. Nasals and lacrimal were replaced with the flap. Conjunctiva very much oedematous was also partly removed. The whole area was irrigated with hydrogen peroxide and eusol lotion. Sulphanilamide (M & B) was sprinkled over the wound and the brain. Duramater and the membranous coverings were not found and the flap consisting of the subcut. tissue, subaponeurotic, subpericranial, scalp aponeurosis and the pericranium was turned over again and stitched by apposing the margins carefully, thus closing the hole. The floor of anterior fossa (by the absence of the orbital plate) was reconstructed by stitching the under surface of the flap with the periosteal lining of the orbital cavity. Corrugator rubber tissue was left for drainage through the eye and the left frontal angle. Progress of the case is as below:—

6th June 1944: Sulphanilamide 4% 5 cc. Crookes was injected thrice I. V. and three tablets of Cibazol were given. (Patient was able to swallow).

7th June 1944: Enema, two injections of Sulphanilamide 1 m. and three tablets of Cibazol were given. The wound was still smelling foul and oedematous. Patient still unconscious and wetting his bed.

8th June 1944: The same as on 7th. Wound dressed with spirit and dry gauze. Drainage was removed.

9th June 1944: Lumbar puncture was done. About 20-30 cc of CSF was removed and M & B 693 sol. 3 cc. was injected intrathecally. Three tablets of Cibazol were also given and the blood count revealed 24,000 total W. B. C. Wound was septic, dressed and irrigated with Eusol twice with surgical fomentations.

10th June 1944: Hexamine 40%, 10 c.c. I.V. and 3 tablets of Cibazol were given. Patient had absolute constipation and retention of urine. The bladder had distended upto the umbilicus when I saw the case at 10 p.m. Urine was removed by catheter and enema given with no result. Patient had regained consciousness. Three stitches were removed and the wound was irrigated and dressed with eusol twice.

11th June 1944: The same as on 10th. Urine removed by catheter twice. Enema tried with no result. Wound better.

12th June 1944: Hard scabyllæ were removed by fingers from the rectum and descending colon. Urine removed by catheter. Prostigmine Roche 1.1 cc., Atropine gr. 1/100, 10 cc. Hexamine, Sulphanilamide 4%, 5 cc. were injected morning and evening. Calomel grs. 3 was given in the night. Two stitches were again applied. Wound dressed and irrigated with Eusol twice.

13th June 1944: Soda Sulph z i, Mag Sulph z i, were given early morning and Prostigmine was repeated both times with Hexamine I. V. The patient passed large amount of faeces in bed but retention continued. Wound clean and dressed with Eusol.

14th June 1944: Again Prostigmine and Atropine were injected and after an hour of the injections the patient passed urine and faeces voluntarily twice. Wound dressed with Eusol.

15th June 1944: From 15th to 17th wound dressed with Mercuriochrome and Eusol twice. Condition good and no pus. Patient passing urine and faeces voluntarily.

18th June 1944: Wound dressed with 6% Sulphanilamide oint. Liver extract 2 cc. I.M. on alternate days, Iron by mouth were prescribed.

19th to 22nd June 1944: C. S. F. was oozing from the frontal corner and from above the inner canthus of the left eye soaking the dressings daily, but gradually becoming less as the days passed on. Same dressings as before continued.

23rd to 25th June 1944: Temperature shot up with severe rigor and headache. Quinacrine was injected and Quinine prescribed by mouth. Next day the patient complained of severe pain in the hypogastrium and difficulty in passing urine. Urine exam. revealed numerous pus cells (probably cystitis). Cibazol three tablets daily for three days followed by Ammokat z ii t.d.s. were given.

26th June to 26th July 1944: Wound practically healed up. No oozing of C. S. F. Patient still weak. The patient again had temperature from 11th July to 16th July 1944 when the treatment given on 23rd June was repeated. Since then the temp. is normal. The patient is moving in the ward and in the verandah. A distinct gap can now be seen on the forehead and throbbing in this part of the skull is visible. No deficiency in his mental condition is noticed and no neurological symptom is complained of by the patient except the right foot drop which I think is due to disuse atrophy and will clear off by massage. Nutrient diet, Wyamin capsules, iron and tonic Quinine pills are being given.

Tonic Quinine pill: R. Quin. Sulph. gr. 2, Ext. Nux. Vom. gr. $\frac{1}{4}$, Ext. Bellad. gr. $\frac{1}{4}$, Aloinum gr. $\frac{1}{4}$, Ferri Arsenas gr. 1/10, Ext. Gent. Co. Qs. Mft. Pillulæ Bd. po on alternate weeks for 2 months.

Interesting Features of the Case.—(1) Such a serious injury with sepsis does not necessarily mean death. (2) Duramater and the meningeal coverings of the left frontal lobe have been replaced by the flap stitched back. (3) Miraculous effect of sprinkling Sulphanilamide (M & B) and Cibazol by mouth in combating the infection specially in such a septic case and when the treatment was commenced 6 days after the

infliction of injury. (4) About 1" depth of the brain substance of the left frontal lobe was scrapped off leading to no motor or sensory loss or impairment of memory. (5) Lumbar puncture and M & B 693 intrathecally restored the consciousness after nine days. (6) Tonicity of the bladder and the rectum was regained by repeated injections of Prostigmine and Atropine.

The patient is still in the hospital under my treatment and any enquiry about the case shall be welcome.

I should thank my assistant, DR. L.N. SAXENA, L.M.P., and the nursing staff who very carefully carried out my instructions and for the special care they have taken in this case.

Is it Pott's Disease?

DR. AMAR NATH GULATI,

Physician, Surgeon and Pathologist, Block No. 11, Sargodha.

A BOY aged thirteen years complained of (i) extreme weakness, (ii) fever and (iii) purulent discharge from two openings in the right lumbar region—duration six months; gave history that eleven months ago got a pain in the chest and fever started subsequently. Since then he did not recover and had been ailing with gradual loss of weight, cough, and fever. About six months ago he developed a swelling over the back of right chest below the last rib; it burst open with the purulent discharge on hot fomentations. The case had been treated as "Caries spine" and was discharged from some places as incurable, and was so run down that all hopes were lost for his life. The patient was brought just for final opinion for the treatment if there is any for him. On examination found the boy very thin and lean, practically reduced to skeleton: extremely weak, at the change of dressing one ounce of pus would come out with force, usual local and general examination was started.

Local Examination.—The sinuses were then probed to know the direction of sinuses and to feel the bone but did not go towards the vertebral column; but the probe pointed upward. Exploratory needle was put in the eighth intercostal space in the midaxillary line in the right chest, pus came out, the bacteriological examination did not reveal the nature of the pus. (Performed after the general examination of chest).

General.—Tongue dry and slightly coated. Resp:—Dyspnoea and restlessness. Spinous processes and bodies not painful on direct or indirect pressure. Abdomen: Spleen, ++; Liver +++; but there is no tenderness. Wall of the abdomen oedematous and veins prominent over it. Temperature at the time of examination 101°F. Pulse 96 p.m.

Chest.—On percussion the right lung was found to be dull, on auscultation breath-sounds were absent. Circulatory: Heart displaced beyond left mid-sternal line. Laboratory examination: Blood no M.P.; but shows picture of secondary anaemia. Urine: Trace of albumin present. Stools: No cyst or entamoeba-histolitica found. X-ray picture was taken; whole right side of chest looked opaque.

Probable Diagnosis.—(1) Pott's disease. (2) Chronic empyema and pus found its way through the sinuses below the twelfth rib into the right lumbar region. Diagnosis No. 2. was confirmed by X-ray and exploration.

Treatment.—Patient was put on the table under general anaesthesia. Opening was made in the eighth inter-costal space for free drainage of the pus. About two pounds of pus came out and a little serous fluid along with that.

Dagenan and Syptenilum continued with due precaution regarding the differential blood count; frequent change of dressing with general food tonic; patient became alright after two months. Weight increased by 20 pounds: swelling appeared over the feet and abdomen which subsided after alkaline treatment and fomentation; liver reduced to its original size, which was perhaps palpable due to pressure from above. Sinuses closed themselves. There was no cough, no fever and patient was discharged as perfectly cured.

Interesting Points.—Long-standing pus in the pleural cavity forced its way through the wall of the chest, escaped through the lumbar region. (1) It helped the patient to live for such a long period with empyema because some amount of pus was constantly being drained off through the sinuses. (2) It is very likely to mistake such cases for Pott's disease in hurried examination.

Ascariasis Lumbricoidal (Round Worm)

PRABHAS CHANDRA RATH, L.M.P.,

Rural Medical Officer, Kodala, Ganjam Dist., (Orissa).

As a rural medical officer I have come across many cases of ascariasis which is a common infection in this part. Out of these some are very interesting and misleading.

I. I was called to see a patient at about 8 a.m.

History.—The patient was a child aged 12 years who developed all on a sudden twitching movements of the face muscles and fits of the whole body and remained comatose for one hour. Pupils dilated. But again the fits came after one hour in the interval of 15 minutes. I enquired about the previous history but it was not helpful to me. I thought of epilepsy to be the cause but all of a sudden the idea of ascariasis struck my mind. On enquiry they gave the history of teeth-grinding in the nights. I controlled the fits by Chloral Hydras, Pot. Bromide and last of all Morphia. The child was still in a comatose condition with fits in the interval of 6 hours.

I gave Santonin grs. ii, Sodi Bicarb grs. x at bed time with Mag. Sulph $\frac{3}{4}$ ii the next morning. The child passed about 20 round worms and vomited one. On the next day though he remained listless, there was no fits. Towards evening he came to sense but talked madly and drew imaginary threads which led me to the suspicion of dhatura poisoning. But gradually he became alright.

II. I was called to attend a case of a cholera in a neighbouring village at about 7 p.m. By the time I went there the patient was in a collapsed condition after few motions and vomiting and developed cramps in the muscles. I started the Roger's Saline treatment with Adrenalin 1 c.c. Pituitrin 10 units 1 c.m. and Camphor in oil $\frac{1}{2}$ gr. 1 c.c. and Kaolin drink.

Patient recovered in the night. But he passed three dead round worms the next morning from which I think the whole trouble was due to ascariasis as there was no other case of cholera in that village. Still he suffered from suppression of urine for which I had to give Glucose 50 c.c. 25% intravenously and Caffeine Sodi Benzoas $7\frac{1}{2}$ grs. 2 cc. Patient became alright.

III. One child aged about 8 years was brought to me for loss of appetite, earth-eating and enlarged abdomen. I gave the child one dose of Santonin and he passed about 50 round worms. Besides these, many cases of diarrhoea, dysentery and bronchitis are due to ascariasis and are commonly seen in this rural area.

A Case of Typhus Fever

MANORANJAN CHANDA,
Chanda Niketan, Manikganj, Dacca.

MANY cases of typhus fever in India were reported in the *Indian Medical Gazette* of April this year. I venture to cite a case here seen by me some 5 years back in a village about 12 miles from Manikganj town (Dacca). In the latter part of December I was called in to see a case of fever at Madhupur. The patient was a quack, Mohammadan by caste, and about 45 years old. He was of fair complexion. He came from Upper Assam about 3 weeks before I visited him.

He had a sudden attack of fever with chill and pain all over the body with intense aching pain in the head. The fever rose upto 103°F . and took a remittent course afterwards, ranging from 102° to 104°F . The face was flushed and eyes were congested. The rash appeared on the 5th day all over the body, mostly over the chest, abdomen and extremities. Face and back were less affected. The rash was petechial in nature. The patient had a tendency to vomit but there was no actual vomiting. Tongue was dry and coated. Insomnia was present with occasional delirium. Spleen and liver were slightly enlarged. Urine was chemically examined. It contained trace of albumen and excess of urobilinogen. The patient was somewhat constipated. He had slight conjunctivitis and bronchitis and was restless. There was prostration and weakness of heart and also had dysentery (colitis) in the latter part of the fever. He complained of pain in the muscles during the whole period of fever. The rashes were present even after the remission of fever. Fever fallen by short lysis on the 17th day.

The treatment was symptomatic. No blood examination or Weil Felix reaction was possible to take. Whole family was infected by louse.

So far as I remember one boy or girl of 8 years of the same house also developed similar symptoms after a month of the 1st case. The disease in this case lasted for about 2 weeks, but was milder in intensity. No other case of the same nature was reported from the locality.

The first case was confounded at first with measles and typhoid fever.

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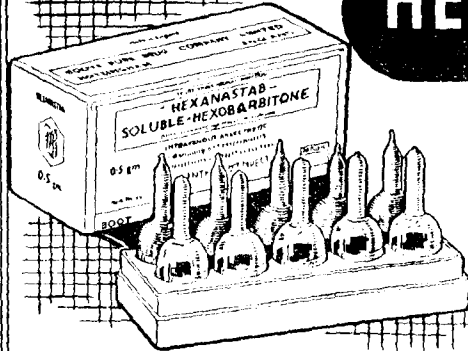
date obtained his basic medical qualifications before or after 1st January 1940 respectively, and one month's pay for each completed year of service thereafter. Disability, Family and Widow's Pensions, Children's and Educational Allowances as laid down by Regulations for the Indian Medical Service.

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The Indian Medical Association

THE Indian Medical Association did well to have the meeting of its Working Committee and of its Central Council at Madras on the 1st, 2nd and 3rd instants. Although it might have caused some inconvenience to the members of the Working Committee who have had to come from far off places to Madras, it has, in our opinion, been more than compensated by the opportunity it gave to those members to meet the Medical Profession in the South and to exchange views about important matters concerning the profession. We must therefore congratulate Rai Saheb DR. S. N. KAUL, for being the first President to have taken courage to call for a meeting of the Working Committee in our provincial headquarters.

From the report sent to the Press we find that some important subjects were discussed at this session of the Committee. One important item discussed at the meeting from the point of view of the I.M.A. in this Presidency was the ban imposed by the Government of Madras on the members belonging to its Medical Service from becoming members of, or taking part in the proceedings of, the Association.

We commented on this ban in a previous issue. We now understand that the ban was imposed on account of two resolutions passed at the last Annual Conference of the Indian Medical Association. One of these requested the release of DR. JIVARAJ N. MEHTA, and the other suggested that a National Government was essential for the socio-economic well-being of the country. These were construed by the Madras Government as being of a political nature and hence it prohibited its medical men in service, under the Civil Service Regulations, from participating in the Indian Medical Association.

We understand Rai Saheb DR. S. N. KAUL and Capt. P. B. MUKHERJEE, President and Secretary respectively of the I. M. A., had a lengthy and frank discussion over this matter with the Adviser to H. E. the Governor of Madras, in-charge of the Medical portfolio, and we learn that the Government have promised to look into the matter and do what they can.

In this connection, we wish to point out that of the two resolutions,

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one has automatically become lapsed by the release of DR. JIVARAJ N. MEHTA. It must be remembered that DR. JIVARAJ N. MEHTA was the President of the Association when he was detained under D.O.I. Rules. Was it therefore too much of the Indian Medical Association to express its regret at the detention of its active President? Can a resolution expressing a desire that its President should be released be construed as delving into high politics? We are sure any Association worth its name would certainly have acted likewise under similar circumstances.

The second resolution which referred to a National Government has been advocated practically by all the parties in India and even in England. H.E. the Viceroy, LORD WAVELL, himself has expressed a desire that all communities should make up their differences and should come together to take upon themselves the responsibility to govern India in these difficult days. We wonder how this becomes an offence when reiterated by the I. M. A. We are sure that the British Medical Association, and as a matter of that, Associations in other countries like the American Medical Association, would also have passed similar resolutions, if placed under similar conditions. Under the circumstances, we do not see any reason whatsoever for the government to misunderstand the resolution. We hope that they will, in view of the abovementioned facts, reconsider their decision, lift the ban, and help to unify the Medical Profession in India which has become absolutely necessary to meet the grave situation facing the country.

Another important subject discussed at the meeting of the Association was the amalgamation of the All India Medical Licentiates' Association with the Indian Medical Association. It is indeed a pity that in this country two such important Associations should exist independently. The members of the Medical Profession feel that a union of these two would be in the best interests of the profession as a whole. We are glad to note that the Working Committee of the I.M.A. will not only have no objection but would welcome the proposal of amalgamation of the two Associations and would even be glad to move in the matter. No doubt it may be argued that an amalgamation at this juncture would not be to the interests of the Licentiates themselves. It has also been argued that the Medical Schools having been closed in a few Provinces, the number of Licentiates would gradually dwindle and ultimately the All India Medical Licentiates' Association will have to merge with the I. M. A. This certainly is not the correct attitude to take. A few years ago the tendency on the part of the leaders of both the Associations was for amalgamation, but, however, during the last two years and more, we have noticed an inclination on the part of at least some of the leaders of the All India Medical Licentiates' Association not to favour this amalgamation at this juncture, but to postpone it to a later date after the War. It has also been argued in some places that the Licentiates are now in a better position than before and are in high favour with the Government and that therefore their prospects would be better off if they were a separate entity than if they merged in the I. M. A. This suspicion has been strengthened by the fact that some of the chief executive of the All India Medical Licentiates' Association are occupying important posts in Government Medical Service, either as recruiting officers or as some important officials connected with recruiting. We wonder if the rank and file of the Licentiates in this country would favour this attitude. Any way,

in the larger interests of the medical profession as a whole, this attitude should certainly not be taken up because it is to the detriment of the medical profession. Some of us, who have been agitating for the removal of the caste system in the profession by the abolition of medical schools and for the inclusion of Licentiates in a common register, feel that the amalgamation is the right thing to do at the present moment. We hope that at the next Conference of the Licentiates, a resolution favouring the amalgamation of the two Associations will be passed. This would be in the best interests of solidarity and unity among us, for in union alone lies our strength.

We hope the Working Committee of the I. M. A. will meet at different centres in India, so that it can get into closer touch with the members of the profession scattered all over the country.

We Endorse

If the late DR. SIR NILRATAN SIRCAR was born in a free country, a grateful public and a still more grateful profession would have by this time erected a fitting memorial to keep his memory green for all time. Writing on his passing away in the issue of September, 1943, of THE ANTISEPTIC, we said:

"Like many distinguished men who have gone before him, like others who will keep the line continuous to the end of time, SIR NILRATAN was a poor boy who made good. His life story has all the traditional attributes of the 'log cabin to the White House' genre..... He laboured harder than any other to raise the standards of the profession in India..... The Indian Medical Association owes its existence and its present enviable position to the untiring and devoted labours of this selfless patriot and veteran physician who filled a large part of the public stage in India for a period extending over four decades. He had the vision to perceive early in his career as a medical man that if the Indian medical practitioners are to face and combat the many difficulties and obstacles that are placed in their way of their attaining that position and status which are by right their due, by the much-pampered members of the Indian Medical Service who easily get the hearing of the powers-that-be, and who are too zealous to maintain their monopolistic position, an Association of their own is necessary to put forth their demands unitedly, unflinchingly and with determination. He brought into existence the Indian Medical Association, nurtured it as a father would his son, presided over and guided its activities for a considerable length of time and built it up step by step to its present high position. If to day the position of the Indian medical practitioners is considerably improved, their voices heard, their grievances redressed, much of the inequities and injustices that existed done away with, they are not a little due to the outstanding personality and ceaseless devotion of this doyen of the profession and the great respect and influence he commanded not only among his brethren in the profession but also in the public life of this country..... SIR NILRATAN was a pioneer industrialist also."

Better late than never. The Calcutta Medical Club has come forward to perpetuate his memory, and the Convenor, Memorial Committee, has now issued the following appeal:

"The Calcutta Medical Club has decided to perpetuate the memory of the late SIR NILRATAN SIRCAR, Kt., M.A., M.D., D.C.L., L.L.D., the founder and first president, by instituting a Fund of Rs. 25,000/- from the interest of which, as a first step, will be created an Annual Oration called Sir Nilratan Sircar Memorial Oration which will be delivered annually by a medical man of outstanding abilities from all over India. The Committee appeal to the public to donate to the above Fund, which should be sent to the Honorary Secretaries, Calcutta Medical Club, C.M.C. House, 91-B, Chittaranjan Avenue, Calcutta."

We wholeheartedly endorse this appeal and request not only the members of the profession but also the public to contribute their mite to crown the efforts of the Committee with success.

Gleanings From Medical Press

MEDICINE and THERAPEUTICS

Acid Phosphate for Flatulence.—Prof. R. J. S. Medowall states that in the course of experiments for another purpose he observed that the injection of phosphates, acid or alkaline, have a remarkable effect on the intestine if injected intravenously or into the lumen. There is a marked dilatation of the vessels of the gut, which develops a flushed appearance, and commonly there is a gross exaggeration of peristalsis, sometimes visible through the abdominal wall. He has applied these findings clinically in cases of abdominal discomfort due to the accumulation of gas in the intestine. Sodium acid phosphate in doses of 15 gr., thrice daily, acts almost as a specific. Although the treatment is so successful the exact reason is not clear. It may be that the phosphates have a specific action on alimentary activities. Tyrody in 1910, found that the solution best for the study of isolated intestine contained phosphates in addition to the usual elements of Ringer's solution. But the acidity of the substance may be concerned. The increased acidity may promote the digestion of starch; the absorption of calcium may be promoted.—*Clinical Journal*.

Treatment of Whip Worm Infection.—In order to understand the difficulty of securing satisfactory elimination of the whipworm, *trichocephalus trichiurus*, from the human bowel, it is well to realize that the delicate anterior end of this worm is basted into the mucosal layer of the cæcum or appendix. This allows the worm to maintain a tenacious hold on the bowel wall. Experience has demonstrated that caprokol (hexyl resorcinol crystals) as administered in ascariasis is only partially effective against this worm. Much better results are obtained with tetrachlorethylene and oil of chenopodium in the proportion of approximately 9:1, but special preparation must be made for the administration of this or any other anthelmintic for use against this whipworm. The patient should be kept on a light diet for two days preceding treatment. The night before specific medication, purgation with sodium sulphate should be carried out and, following good elimination, there should be a high enema of isotonic solution of sodium chloride to clean out the residue of viscous faeces which remain attached to the worms. The following morning the patient should remain in bed and without breakfast, should be given 0.8 c.c. (10 minims) of tetrachlorethylene and 12 c.c. (2 minims) of oil of chenopodium, which should have been thoroughly mixed. This preparation can be safely given on a teaspoon with sugar. Two hours after administration there should be a follow-up sodium sulphate purge and following bowel movements after treatment a light noon meal may be taken. The prescription described

does not guarantee complete elimination of the worms but, if carefully carried out, will in the average case produce satisfactory clinical results.—*J.A.M.A.*

Plasma Intraperitoneally in Gastroenteritis in Infants.—The difficulty of making blood transfusions in young infants induced Curtin and a collaborator to resort to the intraperitoneal introduction of blood. Frozen plasma was thawed out in warm water, withdrawn in a large syringe and injected into the peritoneal cavity in amounts of from 75 to 100 c.c. More than one or two injections were rarely necessary. The "plasma lift" seems to keep the infant with gastritis going along until the proper food can be found and assimilated. Some 60 cases of acute gastroenteritis were treated. The intraperitoneal plasma injection was used with excellent results preceding and following operations for pyloric stenosis in infants with severe malnutrition and in 3 cases of severe hemorrhagic disease of the newborn. The use of blood plasma intraperitoneally in the treatment of gastroenteritis and allied conditions in infants is a therapeutic procedure of proved value, equal in all respects to the intravenous use of plasma. It is a simple procedure, applicable in the home as well as in the hospital, and in the treatment of shock, where it is impossible to transfuse intravenously. It is probable that the adult as well as the infant should benefit from the method.—*J.A.M.A.*

How to Interpret the W. R.—A positive W. R. carried out by a reliable pathologist is confirmatory evidence of syphilis if a patient has clear cut signs of the disease. In the absence of signs of syphilis no positive serum test, no matter by whom it is done, even if it is positive on a second specimen, in itself justifies institution of anti-syphilitic treatment. Quite a number of pathological conditions—mostly tropical diseases may be responsible for false positive reactions. But such conditions as glandular fever, scarlet fever, pneumonia, late tuberculosis, diabetes mellitus, enteric fever, and malignant tumour to mention only a few—have been incriminated from time to time. Recent vaccination also has been shown to be a cause. In addition there are people, very few it is true, whose sera appear to be 'liable' in that they give false positive reactions without apparent reason.

In most of the above conditions the W. R. remains positive only for a comparatively short time, and tests repeated over a period of three months will usually show a weakening of the reaction or return to negativity. As a general rule, therefore, one should not diagnose syphilis on serum reactions alone unless they remain positive for at least three months. Meantime a complete clinical

examination of the patient should be carried out, including radiography of the heart and great vessels and examination of the cerebrospinal fluid. The term weak positive should never be used. A doubtful reaction is one which is neither positive nor negative, and, except in an established case of syphilis, should merely serve as an indication for further investigation, both clinical and serological. A negative reaction does not exclude syphilis. The serum of a syphilitic patient gives a negative reaction in the first few days after the appearance of the sore, and not in frequently in the late stages of syphilis and especially in tabes dorsalis, not to say in syphilis which has been insufficiently treated.—*B.M.J.*

Parenteral Fluid Administration Beneath the Fascia Lata.—Finley and his associates practised subfascia lata infusions of 1,000 c.c. of isotonic solution of sodium chloride or of 5 per cent. dextrose solutions in 261 cases, the average time required for the delivery of the solution being fifty-six minutes. In 33 patients the average time for absorption of the same amount of fluid by hypodermoclysis was 167 minutes. The solution appears to be absorbed rapidly, as shown by the excretion of phenolsulphonphthalein dye in the urine. This absorption probably takes place in the extensive loose areolar space and capillary and lymphatic bed just beneath the fascia lata. There is more rapid absorption in elderly patients, probably because of more lax structures. The rate of absorption is not greatly influenced by the state of dehydration. Minimal swelling and pain is associated with this method. Because of the decreased discomfort, increased rate of absorption and unquestionable safety of the method, fluid and electrolyte needs can be replenished several times daily and intravenous solutions can be restricted to transfusions and hypertonic fluids. The surgical patient may be moved in bed frequently, without long periods of immobilization. The technic of insertion on the lateral thigh is simple and, because of the rapidity of absorption, the entire procedure can be left safely in the hands of the nursing staff, with elimination of a large amount of nursing time and care.—*J.A.M.A.*

Peroneal Muscular Atrophy.—Schwartz discusses a form of neural or neuritic atrophy, the hereditary familial peroneal muscular atrophy (Charcot-Marie-Tooth syndrome). He brings down to date the history of a family with this type of muscular atrophy, which was first reported by Macklin and Bowman in 1928. The author stresses its hereditary character, pointing out that the P family, of which the subsequent case presentation is a part, now has 26 cases in five generations. In this family males transmitted the disease three times, females seven times. It is generally accepted that males are more frequently affected than females. This is borne out in the P-family histories, which show that, although males

have transmitted the disease but three times in five generations, 13 males were affected. Peroneal atrophy usually begins in late childhood or youth. In the P family there was a tendency for the disease to appear at increasingly younger ages in succeeding generations. The first indication of progressive peroneal atrophy is atrophic weakness in the small extensor and abductor foot muscles, generally beginning in the abductors. Thereafter it spreads to the extensor longus hallucis, extensor communis digitorum and peronei, producing in combination with atrophy of small foot muscles a mild equinovarus deformity and "pie-pie-griffe." Flexor muscles of the ankle remain unaffected for the longest period, although they too become involved. There is the tendency to develop hammer toes and pes cavus, sometimes eliciting no complaint except the necessity for higher arched shoes. The arches slowly become higher, with hyperextension of the metatarsophalangeal joints coupled with flexion of the digital joints. With the slow spreading of the atrophy, all muscles below the knee joint are affected. The patient exhibits the typical "stork legs." The author reviews the genealogy of the P family and presents the case of a man seen by him who was a member of this family. In this patient treatment with vitamin E and B₆ was tried, because these vitamins proved effective in muscular atrophy. Adrenal cortex extract was instituted in an attempt to effect further permeability of circulation in skeletal muscles and blood capillary walls. Light and heat treatment was prescribed to relieve vasomotor symptoms and to make the patient more comfortable. Aminoacetic acid was given to provide added energy by increased protein metabolism. With this treatment there was some improvement, and subjective improvement is the best that can be hoped.—*J. A. M. A.*

Acute Anterior Poliomyelitis.—C. J. McSWENEY, Irish J. M. Sc., January 1943, p.1. This is a complete article on poliomyelitis. The history of the disease and its epidemiologic features are discussed. The virus enters probably by two routes, through the nose and through absorption from the bowel. The pathologic process involves edema of the cord, perivascular infiltration, and swelling and then death of the nerve cells. The cerebrospinal fluid shows increased pressure and the count of white blood cells, half of which are usually polymorphonuclears in the early stage of the disease and all of which are later lymphocytes. The globulin content is increased. The disease occurs largely in young children but has been observed in persons from 3 to 45 years of age. Carrier states are likely to result from subclinical forms of the disease. Multiple instances of the infection in the same family are rare but have been observed.

The disease occurs in the summer. The four stages of the clinical progress are as follows: (1) the preparalytic, lasting about three or four days; (2) the paralytic, up to

ten days; (3) recovering up to the end of three months, and (4) the convalescent, up to two years. Signs of the disease are disinclination to flex the spine, hyperesthesia of muscles and head drop. There may be interference with reflex responses. Paralysis of the muscles sets in. The bulbar form of the disease interferes with circulation and respiration.

Differential diagnosis includes meningitis, acute and tuberculous encephalitis and peripheral neuritis. The prognosis in the majority of cases is good. The bulbar type of the disease is more frequently fatal.

There is no specific treatment. The author does not believe that the Kenny treatment is a panacea for poliomyelitis. He advocates prevention of contractures and protection of the legs at first, application of splints after three weeks and re-education of the muscles. Prophylaxis consists in preventing congregation of people in public places, boiling and pasteurization of milk and water and protection from contamination by flies. Vaccines so far are of no use. Excreta must be thoroughly uncontaminated.—A. J. D. C.

Meningococcosis of the Locomotor Apparatus.—HELMUT W. JAEGER, Arch. Soc. cirujanos hosp. 12: 305 (Dec.) 1942.

Thirty-seven cases of meningococcal arthritis were found among 1,000 cases of meningococcal infection (3.7 per cent). The real frequency of arthritis is higher than this would indicate, for in postmortem examinations in 40 cases 9 instances of purulent synovitis not clinically diagnosed were found. This observation also indicates that meningococcemia may occur early in the disease, that is, that there may be simultaneous hematogenous invasion of the meningeal and extrameningeal tissues.

Two new types of the meningococcal infection in the locomotor apparatus are described, purulent bursitis and purulent tenosynovitis.

The term "meningococcosis" is proposed as a designation for the meningococcal infection on the whole, and inflammation of the joints, bursae and tendon sheaths is termed meningococcosis of the locomotor apparatus.

The anatomoclinical classification of Herrick and Parkhurst is questioned, and it is shown that in most cases the meningococcal arthritides are forms of purulent synovitis and that the so-called "meningococcal arthralgias" are also in reality arthritides.

The wrists and knees are the joints most frequently involved. Monoarticular and polyarticular involvements are observed with nearly the same frequency.

The prognosis is always good, but it is to be remembered that some cases have been reported in which meningococcal osteoarthritis led to ankylosis.

Unfortunately we have no adequate treatment for meningococcal arthritis; the sul-

fonamide drugs have no action on this type of infection. Although the prognosis is often good, a successful treatment is desirable for its economic importance. The period of hospitalization and the amount of medical attention required could then be reduced.—A. J. D. C.

Discussion on Nutritional Anæmia in Children and Women.—A WARTIME PROBLEM. HELEN M. M. MACKAY, LUCY WILLS, R. H. DOBBS and K. BINGHAM, Proc. Roy. Soc. Med. 36: 69 (Dec.) 1942.

From this discussion on nutritional anæmia in children and in women in wartime the following conclusions were drawn:

1. The blood picture is not a true reflection of the state of health of the child. A well developed child has often lower hemoglobin and red blood cell values than a less well developed child.

2. The blood picture is not necessarily an index of the iron content of the diet.

3. Iron administered considerably in excess of the body's requirements causes as a rule no change in the hemoglobin level of the normal child. Occasionally there may ensue immediately after its presentation a slight, but only transient, rise in the hemoglobin level.

4. Iron administered in medicinal doses to persons with hypochromic anæmia causes a considerable rise in the level of hemoglobin. The maximum rise, however, is not sustained but falls after several weeks to a more moderate and normal level, although the same or even a larger intake of the drug is continued.

5. Iron in medicinal doses would thus seem to exert a stimulating or irritant effect on the hemopoietic tissues as well as to supply material essential for hemoglobin formation. Otherwise, the highest level produced would be maintained. This stimulating effect is more evident in the abnormal than in the normal state.

6. The maximum level to which the hemoglobin can be raised by the administration of iron cannot be considered the optimum or physiologic level, since the highest values induced are not maintained.

7. The individual optimum level of hemoglobin varies with age and sex. This seems to be lower in infants than in older children, in children than in adults, and in female than in male patients.

8. The individual optimum level of hemoglobin is also affected by factors which influence the oxygen supply or needs of the tissues, such as environment, defects in the cardiovascular system and abnormalities of metabolism.

9. The term nutritional anæmia seems to be too loosely employed. It is unjustifiable to speak of a low hemoglobin level as presumably arising from a dietary error. Many factors determine the hemoglobin level of a person, all of which must be considered before the true cause can be assigned.—A. J. D. C.

Acute Heart Strain.—Acute heart strain occurs in the healthy or diseased heart, either in the male or female, when there is an unexpected sudden severe stress placed upon the heart due to some unanticipated, added physical strain thrown upon a person who is already doing almost capacity work. The symptoms are:

Onset.—To be considered, the symptoms must come on during or immediately after the performance of some strenuous work, when cardiac stress and aortic pressure are at a maximum.

Pain.—This may vary greatly and still be significant. It may be precordial or subternal in location.

Weakness.—This varies from just a disabling weakness to complete unconsciousness.

Dyspnea and palpitation.—These two symptoms occur at the time of onset of the condition and often become permanent, growing worse with time or effort.

Disability.—The cardiac response is definitely limited after an acute strain, with any exertion producing marked cardiac symptomatology.

Heart failure.—If the patient continues to work, the symptoms of heart failure often ensue.

Death from primary heart strain.—This occurs as a rule only when some pre-existing cardiac pathologic lesion is aggravated by the strain.—PARSONNET, A. E., and BERNSTEIN, A. B.: Heart Strain: Critical review; development of physiologic concept. Ann. Int. Med. 16 (O. S., 21): 1123-1136, June 1942. —(U. S. N. M. B.)

The Acute Diarrheal Diseases.—Shigella infections proved the most important single cause of diarrhea in 1,499 cases investigated. Since true dysentery (bloody stools) was present in exceptional cases 'shigellosis is preferred to bacillary dysentery' as the

name for shigella infections. Hardy and Watt have found sulfamethazine, sulfamerazine, sulphapyrazine and phthalylsulphathiazole beneficial in more than 1,000 patients with shigellosis; results with sul-faguanidine, succinyl sulphathiazole, sulfadiazine and sulphathiazole have been reported previously. The sulphonamides in general were more effective against flexner than against some varieties of shigella paradyenteriae. Sulphadiazine and the newer well absorbed sulphonamides acted more promptly than the poorly absorbed compounds. Sulphathiazole was satisfactory in flexner infection, but less beneficial than other well absorbed compounds in some infections. Minimum dosage of sulphaguanidine or succinyl sulphathiazole for adults was 5 gm. t.i.d.; during the acute phase 4-6 doses were given daily. Of the well absorbed sulphouamides 1 gm. was given t.i.d. or q.i.d. in adults. The initial dose of all preparations, was twice the maintenance dose and medication was continued until stool cultures were negative on two consecutive days. On the basis of their observations they recommend a minimum treatment period of 5 days, and extension to 7-10 days for some infections; therapy should continue for 2 days after cessation of symptoms. Shigellosis in heavily infected groups may be controlled either by identifying carriers by stool culture and treating all patients and carriers until the stools are negative or by giving small doses of sulphanomides to all persons in such groups. The latter method has proved effective in 7 groups, but is not yet advised for general use. Therapy recommended per acute amoebic dysentery is 0.045 gm. emetine for no more than 6 days. Carriers of entamoeba histolytica respond better to 1 gm. chiniofon t.i.d. for 7 days, 0.5 to 0.75 gm. Diddoquin t.i.d. for 18 to 20 days, 0.25 gm. vioform t.i.d. for 7 days or 0.25-0.5 gm. carbarson t.i.d. for 10 days; these courses may be repeated if necessary 2 weeks after completion.—J. A. M. A.

SURGERY

Penicillin in the Treatment of Wounds.—It is pointed out that penicillin has three properties required of an ideal antiseptic; it inhibits the growth of susceptible bacteria in extremely high dilutions, it has almost no local or systemic toxicity, and its action is unimpaired by serum, blood or pus. Two methods of treatment are possible—local application and systemic administration. The former is achieved by applying penicillin to a wound or other lesion to obtain local antiseptic action; for this purpose, penicillin is immensely superior to the sulphonamides for three reasons: it is a much more potent bacteriostatic agent, it acts efficiently on large as well as on small numbers of bacteria, and its action is not inhibited by pus. Systemic treatment consists of injecting a solution intravenously or intramuscularly, with the object of maintaining a bacteriostatic concentration in the blood.

The action of penicillin on bacteria is highly selective, some species being very susceptible and others almost, or completely, resistant to it. The following are susceptible:—Grampositive cocci; staphylococcus aureus, streptococcus pyogenes, other streptococci except enterococcus, and pneumococcus, clostridia; cl. welchii, cl. septicum, cl. oedematis, cl. tetani. Nisseria; N. gonorrhoea, N. meningitidis. B. anthracis, actinomyces bovis, C. diphtheriae.

The following are insusceptible: proteus, Ps. pyocyanea, the coli-typhoid-dysentery group, Pasteurella and brucella, all species of hemophilus, streptococcus faecalis (enterococcus) and the tubercle bacillus.

It is necessary to know not merely the nature of the infection, but the sensitivity of the actual organism concerned, if treatment is to be controlled properly.

Penicillin in solution is most frequently

administered through a tube inserted into the wound. Least wastage occurs—and the best results are usually obtained—when the wound is closed around the tube, which leads to a dependent part. The tube should be of narrow bore, so that a syringe for the injection can be attached without leakage; and the dressing should be applied so that the end of the tube protrudes through it. The solution should not be injected under pressure. In most cases the solution should be injected 12-hourly, but the amount used will depend on the character of the wound. Open wounds may be sprayed with the solution, although the use of the powder or cream is generally to be preferred. Penicillin cream may be used for skin infections or surface wounds which cannot be closed, or when the nature of the wound is such that the solution cannot be retained. The cream may be spread on the wound, but as a rule is spread on the gauze to be applied. Penicillin powder may be used for wounds which cannot be closed or it may be applied preparatory to closure. Enough should be applied for the whole surface of the wound to be coloured with penicillin (approximately 8 units per sq. cm. is usually sufficient).

The sodium salt may be administered intramuscularly, 15,000 units being dissolved in 2.3 c.c. of sterile water and given 3 hourly. Sometimes there is pain and inflammation at the site of injection. The sodium salt may also be administered intravenously by drip, dissolved in saline or glucose solution, 100,000 to 120,000 units being given in this way in 2½ hours. The calcium salts have been given intravenously with no ill effects.—*Clinical Journal*.

The Diagnosis and Prognosis of Brain Tumors.—Gilbert Horrax, Bull. New York Acad. Med. 19: 125 (Feb.) 1943.

From the standpoint of diagnosis tumors of the brain fall into two main clinical categories: those which present well known symptoms and signs of tumor of the brain and those which show many different neurologic or other characteristics but lack the usual classic picture of this disorder. In the first group one deals with the time-honored triad headache, vomiting and choked disk. Here abscess of the brain and other inflammatory conditions producing the symptoms must be excluded. Likewise subdural hematoma, malignant hypertension and aneurysm of a cerebral blood vessel must be ruled out. The author cautions against spinal puncture in these cases. It is seldom necessary or helpful. While accidents are rare, he states, the danger is more than theoretic.

In the second group are patients who do not have choked disks and who in general present signs and symptoms which are as indefinite as they are inconstant. Thus they may experience convulsions, focal or generalized, slow visual failure, changes in personality and progressive hemiparesis—bizarre neurologic and psychologic syn-

dromes which require meticulous evaluation and often lengthy observation.

Regarding the location and the pathologic characteristics of tumors of the brain they may again be divided into two groups. The first group includes the following types: those which as a rule can be recognized with a high degree of accuracy from the symptoms and the objective clinical signs; those which are benign, encapsulated and favourable for complete enucleation, such as meningiomas, acoustic neuromas, pituitary adenomas, some of the benign though uncommon cholesteatomas or slowly growing gliomas and those somewhat less favourable tumors, such as the congenital cysts of Rathke's pouch, pinealomas and some aneurysms.

In the second group are tumors which seldom or never give evidence of their location. This group includes many of the large infiltrating gliomas of all kinds which occupy the silent areas of the brain. By means of the ventriculogram some of these tumors may be detected in the cerebellum, above or below the tentorium or in the region of the third ventricle.

As to prognosis, a skilled neurosurgeon, with the assistance of a competent pathologist, should be able to express an opinion on the outlook for the patient after the operation. Obviously the most important factor is the nature of the tumor and the extent to which complete extirpation is possible.—*A.J.D.C.*

Analysis of Shock.—Confusion arises from the fact that three unrelated mechanisms may cause the clinical signs of shock following injuries. These are, primary or neurogenic shock, the effects of hemorrhage, and delayed or secondary shock. These may operate singly or in combination. Traumatic shock is not a disease entity but a syndrome. It represents the summative effects of the three conditions mentioned. Each of these causes low arterial pressure, hence they cannot be distinguished by that criterion. The physiological disturbances which accompany secondary shock are not the same as those of hemorrhage. Simple uncomplicated hemorrhages apparently will not produce this syndrome. But hemorrhage, when present, is a highly important contributory factor; a person in whom secondary shock is developing may not withstand. The loss of an amount of blood which would be insignificant in an otherwise normal person. Loss of capillary tone and abnormal permeability of endothelium are important factors in secondary shock. These have not been shown to play a part either in primary shock or in the effects of hemorrhage. Abnormal permeability disturbs the mechanisms of fluid balance, leading to edema of the viscera and to haemoconcentration. A serious derangement of renal function accompanies secondary shock. This is seen not only after injuries and burns but also from the effects of intestinal obstruction, mesenteric thrombosis, metabolic intoxications, anaphylaxis, transfusion

reactions, severe infections, and from the effects of various poisons. Patients who survive several days in a state of sublethal shock frequently develop the syndrome of uramia and die of renal dysfunction. The clinical management of shock requires the recognition of the causative mechanism. Cases of primary or hemorrhagic shock, unless accompanied by extensive trauma, respond more readily to treatment than do those of advanced secondary shock. Observations on the concentration of the blood and a consideration of the elapsed time since the injury are valuable aids in determining which mechanism in the major factor causing circulatory deficiency loss of blood volume is an outstanding feature after hemorrhages, and in secondary shock. The one is best treated by transfusion of whole blood; the other by plasma or serum.—*B.M.J.*

Use of Gas Gangrene Antitoxin.—The army medical bulletin points out that the incidence of gas gangrene has been high and the mortality-rate has been high. One of the principal means of improving this state of affairs is greater use of polyvalent gas gangrene antitoxin. Experimental evidence supports the view that administration of the antitoxin has definite value in prophylaxis provided it is given early enough, by the proper route and in adequate dosage.

The conditions which call for an injection of prophylactic antitoxin are extensive laceration of muscle as in compound fracture, obvious contamination of the wound with soil, clothing or other foreign bodies, interference with blood supply and delayed surgical treatment. Wounds of the buttocks and legs are those most frequently associated with the development of gas gangrene. Whenever possible antitoxin should be given intravenously; in this way an effective concentration of antibody is immediately available. If intravenous administration is impossible, then the antitoxin should be given intramuscularly into healthy tissue; the subcutaneous route should never be employed, and no advantage is gained by injecting the dose into the region around the wound.

The prophylactic dose is the same by either route, and is that amount of polyvalent antitoxin containing 9,000 units of cl. welchii antitoxin. With the usual polyvalent antitoxic sera this dose will also contain amounts of other antitoxins against such anaerobes as cl. oedematiens and cl. septium.

Therapeutic administration of antitoxin is called for urgently at the very earliest sign of infection. These may be no more than a feeling of weight in the limbs or stump, local pain and swelling, quickening of the pulse, or an altered mental outlook. For treatment of an established case antitoxin should always be given intravenously; where suitable it may be given in an intravenous drip with blood, plasma or saline. In exceptional circumstances there may be

no alternative to intramuscular administration. The initial dose should contain not less than 27,000 units of cl. welchii antitoxin, and needs to be repeated at intervals of 4-6 hours according to the conditions of the patient. The amount has to be determined for each individual according to his progress. Both in prevention and in treatment is to be regarded as an essential adjunct to the appropriate surgical and chemotherapeutic measures.

Successful chemotherapy with penicillin, sulphonamides or other drugs does not lessen the need to give large doses of antitoxin. Surgical treatment and bacteriostatic agents may arrest the spread of infection without eliminating all clostridia. In remnants of necrotic muscle these organisms can survive, grow and produce toxin. Unless this toxin is neutralized by adequate amounts of antitoxin life may be still lost, although spread of the gas gangrene has been arrested. The risk of severe allergic reactions is no greater from gas gangrene antitoxin than from any other antitoxin, and is almost negligible if refined (pepsin-treated) antitoxin is used. It is desirable, nevertheless, as with all antitoxins, vaccines and toxoids, to have at hand 1:1,000 sterile adrenaline hydrochloride for immediate injection in case a reaction occurs.—*Clinical Journal*.

The Tired Tibia.—This is not very well known to medical practitioners and many will be surprised to hear that it can not only get too tired but can actually crack without any special violence. We all know about marching fractures of the foot and we must now look out for similar stress or fatigue fractures in the tibia. They occur about the junction of the upper and middle third and the main symptom is pain. This probably comes on acutely, very often in relation to some especially vigorous exercise. It is relieved by rest and may not be serious enough to warrant medical attention. On examination there is perhaps slight swelling and some strictly local tenderness. The X-ray may be normal, and may be returned as normal several times until callus appears. This is where the difficulty of the condition comes in. There is no violence. There is a normal X-ray. Ergo, there is no fracture. Ergo, once more, there is some curious disease of possibly serious significance, e.g., a periosteal sarcoma or a—let's do a Wassermann anyway and, of course, a blood sedimentation, and anything else within the scope of the particular laboratory available. That has been the sequence of thought and action in some cases, and it is hard to find fault with it. But it leads nowhere. The best thing to do is to see the radiologist personally and get him to try a few views outside his standard positions. After all a localized tenderness on a bone is a very suspicious thing, as the G.P. knows better than anyone else; and it's a very easy matter to miss a thin hairline sort of fracture, such as the stress fractures of the tibia.—*Medical World*.

OPHTHALMOLOGY

Treatment of Ocular Infection with Penicillin.—Both calcium and sodium penicillin salts are efficacious and well tolerated by the eye in drops or in ointment containing 500 Oxford units i.c.c. In acute infections or in perforating wounds of the eye, penicillin should be applied at 30 minute intervals for 24 hours, then reduced to 2 and finally 4 hour intervals. An average of 560 units was instilled daily in the eyes of 20 patients with blepharitis. Staphylococcal organisms were found in 18 instances and with one exception cultures become sterile in approximately 12 days treatment; 1 patient with infection of 14 years duration showed only slight improvement after 20 days. Relapse occurred in 2 instances. Improvement was marked in 10 patients with acute conjunctivitis varying in duration from 7 days to frequent acute attacks over several years. An average of 190 units penicillin was instilled daily, resulting in sterile cultures in approximately 10 days. Organisms found present included staphylococcus, pyogenes, diphtheroids, and streptothrine. Corneal ulcers of 3 days to 4 months duration in 10 patients healed in approximately 9 days following application of an average 160 units penicillin daily. *Bacillus* of Petit, staphylogenes and albus were isolated from lesions. Perforating injury of the eye occurred in 14 patients; treatment with penicillin prevented gonophthalmitis in 5 of 6 cases. Staphylogenes was most frequently found on culture; the conjunctival sac became sterile in approximately 10 days. Although infection cleared, 3 patients developed chronic cystitis and excision was necessary. Hypopyon in 3 patients disappeared under penicillin treatment; an acute streptococcal infection in 1 patient was completely controlled in 4 days by this drug. Response to treatment with 620 units penicillin instilled daily was rapid in 3 patients with lacrocystitis of pneumococcal and or diphtheroid origin, and 5-9 days lacrimal sac became sterile.—B.M.J.

Primary Diphtheria of Conjunctiva.—Morrison differentiates three types of diphtheritic conjunctivitis: (1) the rare catarrhal form, (2) the more common pseudomembranous kind, and (3) the typical membranous type. A child aged 7 months, whose eyes were red and discharged pus for several days, was not helped by irrigations. The lids were edematous and red but not board-like. Smears showed staphylococci, and a culture revealed that the organism was staphylococcus aureus. Sulfathiazole ointment 5 per cent. applied locally three times

a day and sulfathiazole orally every four hours day and night were given. Two days later the condition appeared unchanged. There was a grey transparent conjunctival membrane which could not be wiped off or torn away from the lids. The least manipulation of the conjunctiva caused bleeding. A culture was taken on Loeffler's medium and the child was given 5,000 units of diphtheria antitoxin. Within twelve hours the lid edema was gone, the child opened its eye spontaneously and no membrane could be seen. The culture contained organisms morphologically characteristic of diphtheria bacilli. This was not a true membranous type but rather pseudomembranous conjunctivitis, as the lids failed to assume a boardlike hardness and the membrane failed to involve the bulbar conjunctiva.—J. A. M. A.

Corneal Dystrophy.—Corneal opacities of non-inflammatory origin were clearly recognized by Cronouw in 1890. Summarizing the copious literature on the subject and reporting on 129 patients, Buckler was able to correlate clinical and genetic factors and establish three forms of corneal dystrophy: (1) Recessive corneal dystrophy, appearing early in life and running a severe course, the corneal lesion being 'macular or nodular'—i.e., fairly gross opacities tending to cover the whole of the cornea, (2) dominant reticular corneal dystrophy, running a less severe course, but still heavily affecting vision, the lesion consisting essentially of interlacing lines and nodules and tending to be confined to the centre of the cornea, (3) dominant granular type, the mildest of the three varieties, in which there are irregular discrete granules tending to be confined to the centre of the cornea and generally not making their appearance till middle age. The basis of these dystrophies is unknown and Mutch was able to establish the negative fact that there is no correlation between corneal dystrophy and blood grouping.

The attacks of pain and injection to which patients with the recessive nodular type and the dominant granular type are prone may make the diagnosis of corneal dystrophy as distinct from an inflammatory corneal reaction a matter of some difficulty. The clear recognition of these pitfalls is essential if much futile and perhaps harmful treatment is to be avoided. So far the most helpful therapeutic approach, tentatively advocated by Frances, Chelli and Streiff, in corneal grafting for the more severe forms.—B.M.J.

OBSTETRICS and GYNÆCOLOGY

Continuous Caudal Analgesia.—Lull reports observations on 927 patients delivered under continuous caudal analgesia. Selection of the patient is a most important consideration. Contraindications to the method are (1) gross deformities of the spine, particularly of the sacrum, (2) tu-

mors which narrow the spinal canal, (3) local infection around the sacral hiatus, (4) skin infection such as boils or carbuncles anywhere on the body, (5) a history of sensitivity to the analgesic agent, (6) profound anemia, unless supplemented with oxygen inhalation, (7) in placenta previa because

of the relaxation of the cervix and the possibility of bleeding, (8) floating head, (9) syphilis with probable central nervous system lesion, (10) obese persons, (11) dwarfs and midguts, because of low lying dura, (12) pilonidal cysts. Cardiac disease, upper respiratory infections and premature labor are ideal indications for the use of caudal anesthesia. It has been used with excellent results also in pre-eclampsia and in 1 or 2 cases of eclampsia. About 62 per cent of women are suitable for this type of anesthesia. The method is safe for mother and baby if the patient is surrounded by proper safeguards and is competently supervised from the standpoint of both anesthesia and obstetrics. Equally important beneficial factors besides the relief of pain, are the excellent condition of the baby at the time of birth, the delighted mental attitude of the mother, the minimal blood loss, the easy termination of the third stage of labor, and the return of the patient to her room in good physical condition showing no signs of exhaustion or fatigue. The method is one of the greatest advances in obstetric practice.—J. A. M. A.

The Cause and Treatment of Stress Incontinence in Women.—Stress incontinence is a condition in which a sudden rise in intra-abdominal pressure causes a leakage of urine from the bladder. Normal micturition is accomplished in women by active contraction of the detrusor muscle of the bladder together with the accessory abdominal muscles. Part of the detrusor muscle is increased in thickness at the corners of the trigone of the bladder, Mercier's bar and Bell's muscles. The latter pass down inside the internal sphincter along the floor of the urethra. Then pull the sphincter open when they contract, and there is no relaxation on the part of the sphincter, which is attached to the lower ramus of the pubic bones, on the other hand, relaxes. A failure of this mechanism may occur in several ways and is generally due to birth injury.

1. **Cystocele.**—When the patient strains the cystocele drugs on Bell's muscle and pulls open the sphincter.

2. **Rupture of Bell's muscle.**—Secondary hypertrophy of the bladder wall occurs with increased intravesical pressure.

3. **Rupture of the internal sphincter.**—(Partial or complete). This naturally causes inability to retain urine when the intravesical pressure is increased.

4. **Detachment of membranous sphincter from the pubic bones.** This leads to loss of function of this sphincter.

5. **Neurological.**—Subacute combined degeneration of the cord spinobifida.

A prolapse of the bladder can be seen on examination. Rupture of Bell's muscle can be diagnosed on cystoscopy when the patient strains in an effort to empty the bladder. Weakness of the internal sphincter can be detected by estimating the resistance offered on withdrawal of a self-retaining catheter. If a membranous sphincter has lost its attachment, the urethra is abnor-

mally mobile. Examination of the spine and central nervous system should be made in all cases. The general condition of the bladder and urine should be ascertained. If the membranous sphincter has lost its attachments, however, a special procedure is necessary. A flap is raised from the anterior vaginal wall over the urethra and the membranous sphincter is identified. A catgut stitch is passed on a curved needle round the membranous sphincter to include the periosteum of the lower ramus of the pubic bone about one inch from the midline on either side. The stitches are then tied and vaginal sphincter repaired. The urethra should now be fixed in the normal position. A sound should be passed to make sure that the lumen has not been occluded.—*Clinical Journal*.

Antepartum Administration of Quinine.—Reports in the literature indicate that daily administration of small doses of quinine during the antepartum period has a favorable effect on labor and the puerperium. Marchetti and his associates investigated this problem on 500 patients and on an equal number of controls. The 500 women to whom quinine sulfate was given included 290 primiparas and 210 multiparas; the controls, 269 primiparas and 231 multiparas. Approximately three weeks before the expected date of confinement each patient selected to receive the drug was given an envelop containing twenty 15 grain (0.1 gm.) capsules of quinine sulfate. She was instructed to take one capsule three times a day, so that the total daily dosage amounted to 45 grains (0.3 gm.). Quinine did not shorten the duration of labor. On the contrary, it was lengthened among the primiparas. No relationship was noted between the number of doses or the amount of quinine administered and the duration of labor. In the quinine series the percentage of women who delivered before the expected day of delivery was slightly higher than in the control series. It appears that quinine does not make labor easier. In the quinine series labor was terminated spontaneously in 82.6 per cent., by forceps application in 11.4 per cent. and by breech extraction in 5.2 per cent. of the cases. In the control series it was terminated in 90.8 per cent. spontaneously, in 6.6 per cent. by forceps application and in 2.4 per cent. by breech extraction. Eight, or 1.6 per cent. of the patients to whom quinine was administered manifested some idiosyncrasy to it. No adverse effect of quinine medication was noted on fetal mortality. No significant variation was observed in the amount of blood loss during the delivery in the two series. Subinvolution was recorded more frequently in the control series than in the quinine series. The incidence of puerperal morbidity was 6.2 per cent. and of puerperal infection 4.6 per cent. in the quinine series, and 8.0 per cent. and 6.8 per cent. respectively in the control series. It is concluded that the use of quinine in obstetrics may prove to be of little value.—J. A. M. A.

Correspondence

Comments on a Case of 'Acute Obstruction by Faecal Masses'

To The Editors, *The Antiseptic*, Madras.
Sirs,

I have read with great interest in the July issue of the 'Antiseptic' the case report of Dr. Sinha that a hard faecal mass is often a cause of obstruction. I have come across two such cases during my practice, in one the obstruction was complete i.e., no flatus was even passed.

Formation:—Contents of the small intestine are poured out through the ileocaecal valve in an almost fluid condition and the formation of faecal masses takes place in the large bowel where they have to stay long. If as a result of constipation or some other cause they have to stay there for an abnormally prolonged period further absorption of water goes on and these masses get still more hardened. In persons with abnormally excitable nervous system these hard masses acting as an irritant cause reflexly painful spasm of the gut which results in constipation, known as spastic constipation. In most cases the irritant which gives rise to exaggerated reflexes is hard faeces which may have been retained as a result of constipation. Excessive smoking or chewing of tobacco may also give rise to similar spasms. Faecal retention is a common cause of flatulence and intestinal colic. The attack is generally ushered in after a heavy meal due to gastrocolic reflex.

What rural medical practitioners can do?

1. He must first of all make digital examination of the rectum and break any hard faecal masses met with.

2. Soap and water enema. It is generally entrusted to an assistant who does not exercise sufficient care. If the following instructions are carried out there is much greater chance of the enema being successful.

One ounce of good soap is dissolved in one to two pints of warm water. The temperature of the water at the time of injection should be 100° F., as the cold water is soon rejected. A funnel and a tube is preferable to the commonly used enema pump.

A No. 10 rubber catheter may be attached to the tube. The patient should be in the left lateral position, his lips raised on a pillow. The catheter well vaselined is inserted 4-5 inches into the rectum. The funnel (or water can) should be raised to 12-18 inches above the level of the lips. One ounce of castor oil or olive oil should first be poured into the funnel. Water is allowed to run in slowly, the patient breathing deeply. Whenever there are expulsive cramps the anus is pressed with a towel and running of water stopped. There must be occasional pauses in running the water. It is also desirable to auscultate the colon during administration of a large enema to find whether the large intestine is free from obstruction by hearing gurgling sounds as far as the caecum. If still water is rejected perineal position may be tried or half

of the fluid be passed in the left lateral and half in the right lateral position.

If the faeces are very hard they may be softened by injecting with a syringe 2-6 ounces of warm olive oil into the rectum and retained there for several hours. Antispasmodic enemata may be given when the intestine is distended with flatus or getting cramped. For this we use oil of turpentine, Asafoetida, Bromides with Aspirin etc. Glycerine suppository or glycerine 4 oz. with an equal amount of warm water evacuate the bowels speedily by withdrawing fluid and causing irritation. Glycerine with warm olive oil may be used instead.

These enemata generally succeed.

3. Hot water bottles are given to the patients. Turpentine stupes are much better.

4. Croton oil in 3 in a lump of sugar is very useful.

5. In spastic constipation Tr. Belladonna in 10-15 combined with ext. Cascara Sag. Liq. M. 40 three times a day before food acts nicely. The dosage of Belladonna used in the case was in my opinion too small. Happy results may follow the intramuscular injections of acetyl choline 0.1 gm. every 3 hours for 3 or 4 doses when treatment by enemata and croton oil has failed. This is generally not available to Rural Medical Officers.

If stimulants are needed the following mixtures is found useful.

R	Spt. Camphor	M	xv
	Spt. Ammon Arom.		
	Spt. Actt.	a.a.	M XX
	Tr. Card co.	M	XXX
	Aq. Chloroform	ad	$\frac{3}{4}$ I ft. mist.
	Sig. As necessary.		

7. Morphine must always be combined with atropine for its antispasmodic effect in such cases if the pain is to be relieved.

8. Mag. Sulph. oz 1 dissolved in 4 oz. of water or fresh infusion of sena pods or leaves acts more quickly than saturated solution of Mag. Sulph.

Yours sincerely,

Z. A. QURAISHI, L.S.M.F. (Pb.)
M. O. I/c, Rural Dispensary.
Thaska Miranji, Dist. Karnal.

Efficacy of 'Tiriyag' in Snake-bite Cases

To The Editors, *The Antiseptic*, Madras.

Dear Sirs,

Invention of 'Tiriyag' is undoubtedly a great boon to the medical profession. Several articles on the drug have appeared in different issues of your esteemed journal and several writers have claimed it to be an infallible remedy in all cases of snake-bite. But in my opinion further investigation about its efficacy should be done before it is taken as an unfailing specific. The following points should receive our attention in this connection:

(1) **Dose of the venom injected:**—Snakes seldom get the chance to inject to their heart's content. Lt. Col. E. J. O'Meara

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(Late Civil Surgeon and Principal of the Agra Medical School) says that the green-pit viper and the Himalayan pit viper never give a dose fatal to man and in the case of echis bite about 50 to 60 per cent. of cases receive non-lethal doses.

(2) **Venomousness of the serpent:**—Dr. S. K. Ganguli of Calcutta estimates that about 25% only of all snake-bite cases are by poisonous snakes. According to Manson Bahr the mortality from snake-bite even of the most venomous varieties is about 30 per cent. only, and according to Knowles the death rate from cobra-bite, even if untreated, is about 40% only.

(3) **Sites of injury,** weather (Badaloni has shown that in cold weather the bite of the common viper is but slightly, if at all, poisonous), state of the body and the mind of the patient, and natural defensive mechanism of the body may also modify the action of the drug (Tiriyag) and thus may present some difficulties in estimating its real curative value.

(4) **Immunity.**—Jugglers who deal with snakes scarcely die of snake-bite though they are very often bitten by their pet snakes and receive repeated doses of different venoms through the punctures made by the reserve fangs of the serpents. Probably some sort of immunity is produced in these people. So, the efficacy of 'Tiriyag' cannot be properly estimated in patients who had accidents of snake-bite formerly.

(5) **The psychic factor.**—The Ojhas cure even the most dangerous cases of Snake-bite merely by singing their 'Mantras' (incantation) and on the contrary, many an unfortunate patient dies even in a non-poisonous case only due to mental shock. So this factor must not be lost sight of while we judge the efficiency of 'Tiriyag'. Of course, a cure under the treatment of an Ojha (exorcist) may be a natural one.

I hope my brethren will pay due attention to these points of controversy.

Bhelaguri,
P.O. Nakachari, } Faithfully Yours,
Assam. } D. N. DEBSARMA, F.M.B.,
11-8-44. } A.M.O., Bhelaguri, T.E.,
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Chronic Infective Arthritis

To The Editors, *The Antiseptic*, Madras.

Dear Sirs,

I am a regular subscriber to the *Antiseptic* for some years and I have read with interest Dr. Patel's contribution on Chronic Infective Arthritis and Dr. Shah's suggestion to attribute the credit to any particular line of treatment when really the treatment was a mixed one. In my opinion every rational medical man, whatever pathy he might utilise, should try to be precise in his terminology. Very frequently I notice leading medical men use the terms Ayurveda, Homeopathy etc., very loosely and thus spread misconception. This particular case is an example.

On a similar occasion at the Nasik session of the Maharashtra Medical Conference I stressed this point and I hope medical men attend to it in the interest of scientific and lingual accuracy. Ayurveda originally meant 'The science of life', Medicine, Tib, Ayurveda etc., are all synonyms. Galenism, Allopathy, Homeopathy etc., indicate at once the particular medical philosophy of that system. In the same way the term 'Aryan Medicine' would denote the tenets held by the Aryans in the science of healing. These essentially embody the thought of the Triad—Vata, Pitta and Kapha. The Aryan and Tib are complete systems of medicine, may be 'crude' according to some modern thinkers. Allopathy, Homeopathy etc., indicate particular variation in Treatment just as Actinotherapy, Hydropathy etc., etc.

The term Allopathy was designed by Hahnemann who activated and modified an old method and which he designed as Homeopathy. The so-called Allopath of today is not so in toto. He can be properly described as a follower of the royally recognised system of medicine. So long as the old authoritative writers on Aryan or Tibbi medicine have laid down clearly that every thing in the world is a medicine, and so long we see in their books the descriptions of many foreign substances we need not for a moment waste time in calling Gold, Quinine, Cibazol, Salvarsan, Digitalis Ajwan, etc., etc., as Ayurvedic or non-Tibbi. Most of us at present are making the two words Ayurvedic and Indigenous as synonyms. The royally recognised system of to-day to be rational enough is utilising drugs from almost all the countries in the world. That does not mean for a moment that it is following the different systems of medicine. A drug does not become essentially Ayurvedic or Tibbi; it can be allopathic or homeopathic according to the relations of its effects towards any particular disease or syndrome. Quinine was originally a foreign drug and was therefore avoided by some staunch patriots. Now it is very largely grown in India: However it is still stamped as a non-Ayurvedic. Iron, Arsenic, Nux Vomica and a host of drugs are freely used by the so-called allopaths, the homeopaths, the Ayurvedists and Tibbis. Under such condition to which particular pathy could these substances belong? Evidently to all or none. It all depends in what particular way the drug is used in relation to the disease for which it is used. To give even a rough idea it will take a lot of time and space. One has to go before his mind a clear picture of the different pathies and think out the principles underlying the vexed question of pathism in medicine. Before the seemingly different tenets of several pathies are aligned. It would be better if the medical men only do not use the words as they are understood by the lay public. A casual glance at the medical dictionary would be a great guide.

Yours faithfully,
Dr. D. APTE, M.B., B.S., Poona.

Book Reviews

A Text Book of Bacteriology—R. W. FAIRBROTHER, D.S.O., M.D., F.R.C.S., Director of Clinical Laboratory, Manchester Royal Infirmary; Lecturer in Bacteriology, University of Manchester; Late Research Fellow in Bacteriology, Lister Institutes, London; Major, R.A.M.C., 1942. 4th Edition, 463 pages, illustrated. [William Heinemann Medical Books Ltd.]

This book is an outline of the medical aspects of bacteriology subjects such as bacteria as agents of disease, and the application of bacteriological methods in the prevention, diagnosis and treatment of disease are therefore treated in greater detail than in most other text books of bacteriology. In this, the fourth edition, the author has added a new chapter on Sulphonamides: their pharmacology, toxicity and mode of action. Reference to Penicillin has also been made. The Chapters on "Filterable viruses," "Coli-typhoid-dysentery groups," "Immunity," "Staphylococcus and Tuberculosis" are well written. The printing is good, the paper and binding and the general get-up are excellent. The subject matter is well printed and the author deserves our congratulations. It can be safely recommended to medical students.

A Text Book of Dietetics—L.S.P. DAVIDSON, B.A., M.D., F.R.C.P., F.R.S.E., Professor of Medicine in the Edinburgh University and Physician to the Royal Infirmary, Edinburgh and IAN A. ANDERSON, M.B., Ch.B., (Aberd), Clinical Tutor and Assistant in the Metabolic Wards, The Royal Infirmary, Aberdeen, 1942, Second impression, 324 pages. [Hamish Hamilton Medical Books, London]. 10 sh. 6 d. net.

This book is based on a course of lectures on the physiology of nutrition and the practice of dietetics given by the authors for several years to the medical students in the University of Aberdeen. It deals lucidly with the new knowledge of nutrition and its application in medicine and gives to the general practitioner all that is of practical importance in the prevention and treatment of disease by diet. The work falls into five parts: (1) A Survey of Diets at Various Income Levels. (2) The Physiology of Nutrition. (3) Diet in Health particularly in periods of stress. (4) Dietetic Treatment of Disease. (5) Recipes, Tables and Diet Sheets. For the solution of our ever per-

plexing nutritional problem this text book offers a simple yet complete guide.

Diseases of the Nervous System.—By F. M.R. WALSHE, O.B.E., M.D., D.Sc., F.R.C.P., Physician in Charge of the Neurological Dept., University College Hospital, London. 3rd Edition-1943, pages 350; illustrated (E. & S. Livingstone, 16 & 17, Teviot Place, Edinburgh).

Clinical Neurology is largely a study in the applied anatomy and physiology of the nervous system. This has all along been invested with a legend of unsurmountable difficulty and complexity. The specialisation of function within the nervous system and the apparently innumerable masses of grey matter and pathways and the many symptom-complexes of lesions involving them, lead many students during the period of their clinical training to abandon the attempt to grapple, with what looks to them, a very complicated subject, but which perhaps in truth is the one most lucid in medicine.

Students and practitioners of medicine as well, have accepted this defeatist attitude to this subject. Dr. Walshe has attempted to present the subject in quite a different manner. He has attempted to strip the subject of neurology with all unnecessary complexities and has tried to deal with only what is possible in general practice in the matter of diagnosis and treatment.

The book is planned in two sections. In the first is attempted a general statement of the principles of neurological diagnosis with summary descriptions of the characteristic symptom-complexes of disease of the nervous system. In the second are given accounts of the commoner nervous diseases. A brief account of the common psycho-neurosis has been included.

The present edition before us is the 3rd edition and the demand for such an edition within three years may perhaps be taken to indicate the continued favour with which it has been received by the students and practitioners. In this present edition much new material has been added. There are several new photographs and diagrams. 5 new plates are inserted in the text. The book has been well got-up and well printed. This is a book which every student and practitioner must possess.

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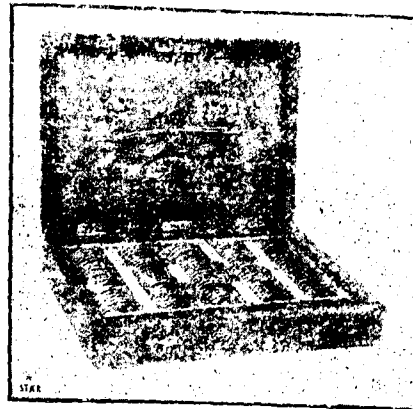
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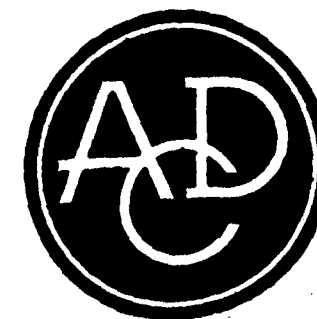
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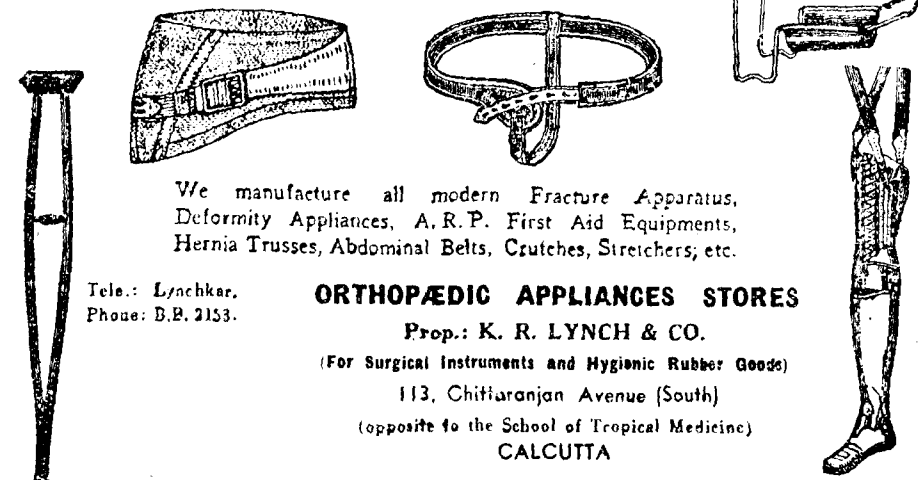
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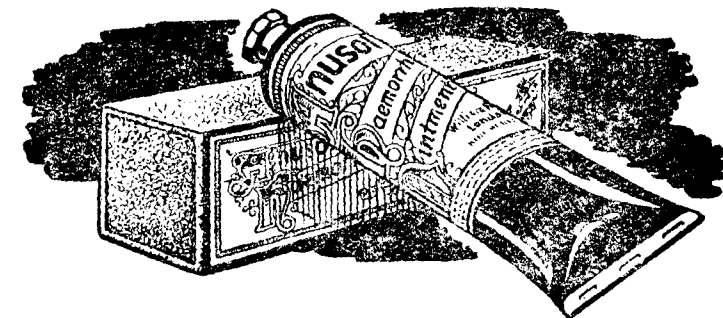
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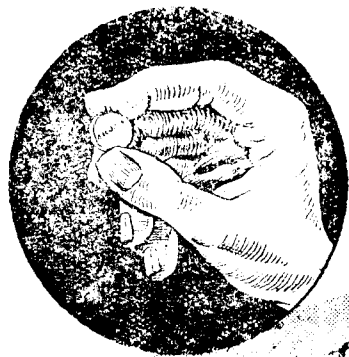
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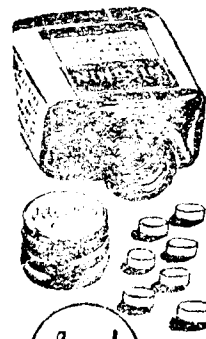
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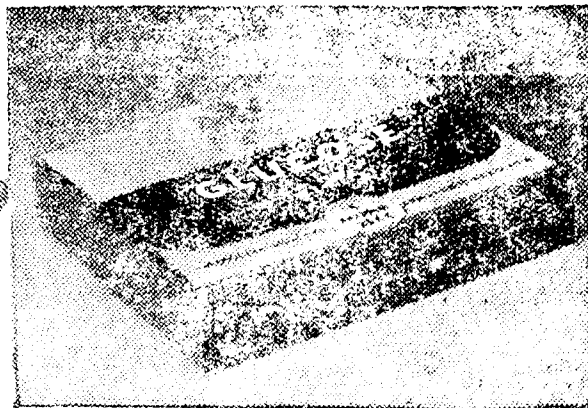
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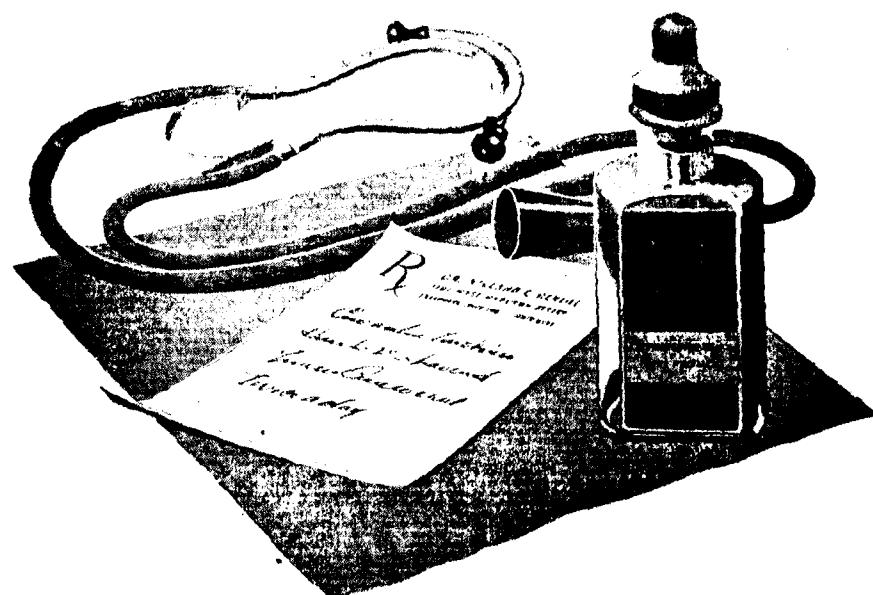
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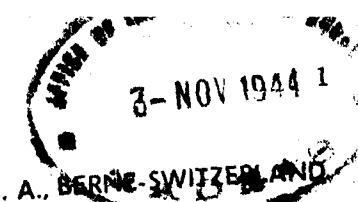
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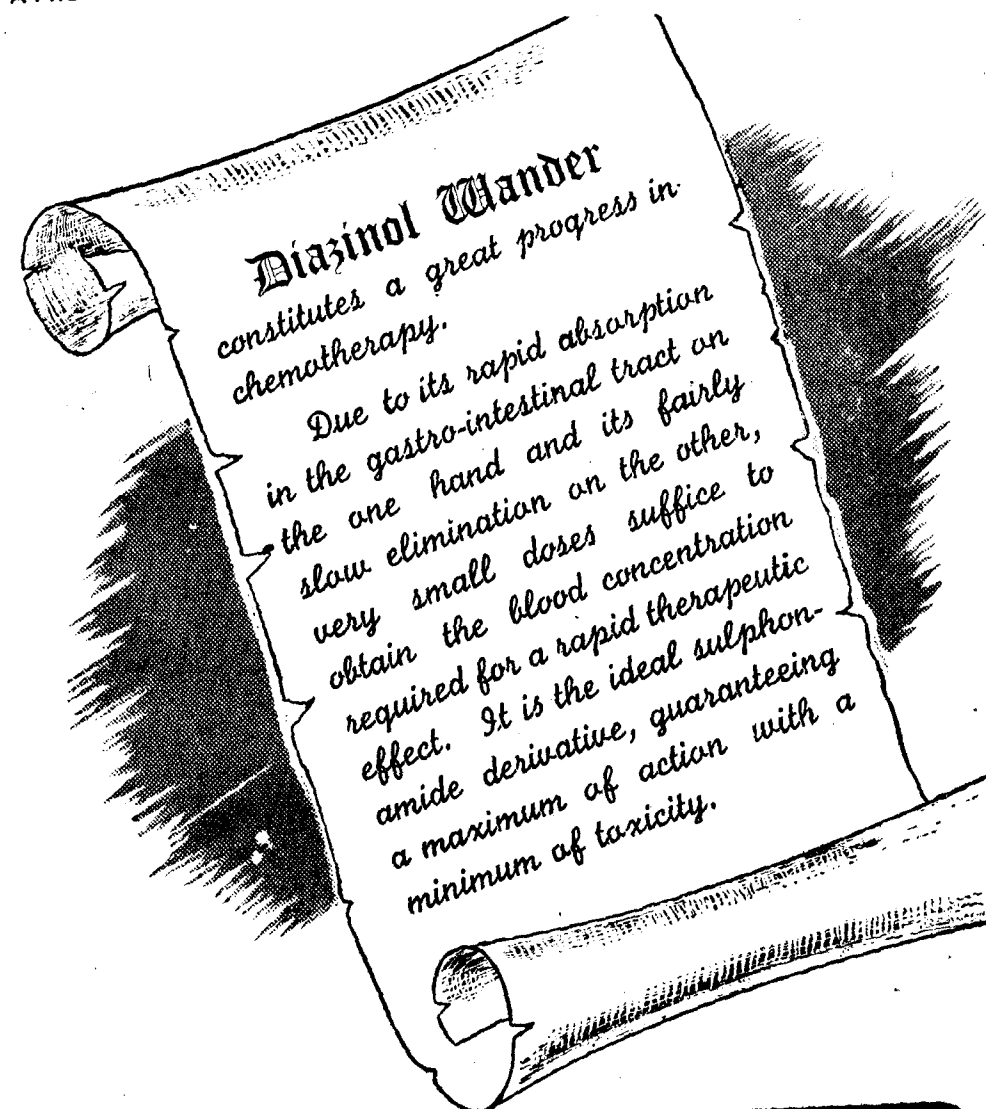


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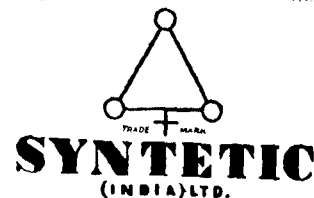
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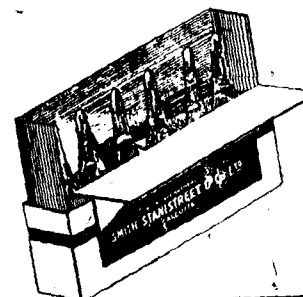
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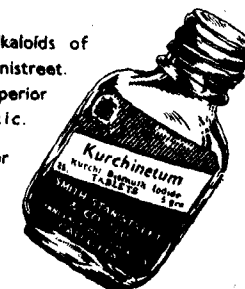
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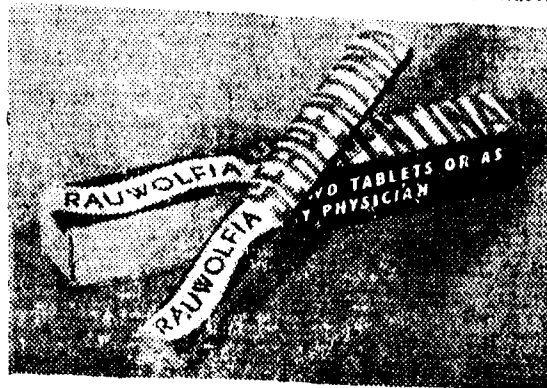


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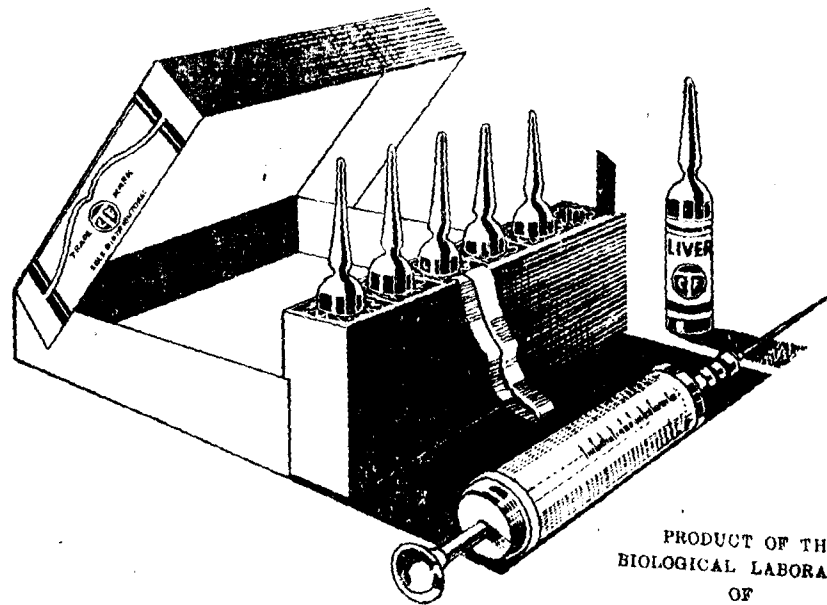
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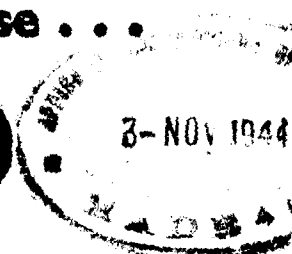
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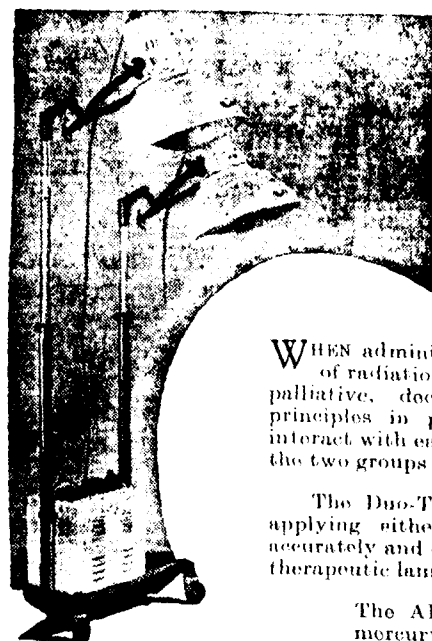
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No. 10.

Original Articles

Gastric Analysis on South Indians*

M. C. VARIYAR, M.Sc.†

LT.-COL. M. M. CRUICKSHANK, M.D., F.R.C.S., F.R.S. (Edin.), I.M.S.,

AND

A. S. MANNADI NAYAR, M.B., B.S., Ph. D. (Edin.),

(From the Department of Biochemistry, Medical College, Madras).

Part II—Pathological Cases

I. **Gastric Acidity.**—In the first paper of this series (1944) gastric acidities in normal South Indians were published. The present study relates to the gastric acidity in some pathological cases. The technique adopted was the same as in the previous paper. The majority of the cases belonged to the labouring class. Medical cases were avoided as far as possible. The diagnoses of the cases listed were confirmed by one or more of the methods—radiological, gastroscopical, pathological or operative.

The age of the patient, nature and duration of the disease together with the volume of resting juice and free and total acidity values of the samples are recorded in Table No. 1 (see page 578) which, by the way, reflects the high incidence of duodenal ulcers among South Indians. Table No. 2 (see page 579) shows the incidence of hyperchlorhydria, normal, hypochlorhydria and achlorhydria in the various pathological conditions studied. Of the 75 cases examined forty-one (54.7%) belonged to the hyperchlorhydric type (over 60 c.c. N/10 HCl per 100 c.c. gastric contents), twenty-nine (38.7%) to high normal (30-60 c.c. N/10 HCl%), two (2.7%) to normal (20-30 c.c. N/10 HCl%) and one each (1.3%) to low normal (10-20 c.c. N/10 HCl%), hypochlorhydria (0-10 c.c. N/10 HCl%) and achlorhydria (anacidity). Thus, seventy (93.3%) cases showed high acidities. Among the remaining five cases, one of the two patients with normal acidity had gastric and duodenal ulcers, while the other had duodenal ulcer and appendicitis. The low normal acidity was a case of duodenal

* Specially contributed to 'The Antiseptic.'

† Part of the thesis "Gastric Analysis on South Indians" which formed the basis of the award of the Degree of Master of Science in the University of Madras in 1941.

TABLE No. 1

DISEASE	Age	Duration of illness	Vol. of resting juice	Acidity in c.c. of N/10 HCl present in 100 c.c. of the gastric contents.									
				Before test meal	1 hr. after t.m.	2 hr. after t.m.	3 hr. after t.m.	4 hr. after t.m.	5 hr. after t.m.	6 hr. after t.m.	1 hr. after t.m.	2 hr. after t.m.	3 hr. after t.m.
1. Gastric ulcer	30	3	108	{ F. 17.8 T. 34.3	2.9	26.4	6.8	32.2	49.9	40.2	36.1	38.3	30.0
2. Gastric ulcer	40	4	15	{ F. 12.5 T. 26.0	4.3	39.0	21.7	43.3	62.7	52.2	46.2	48.8	41.8
3. Gastric ulcer	25	3	62	{ F. 35.3 T. 53.4	14.2	16.5	18.8	38.2	46.2	53.1	51.5	51.5	40.6
4. *Duodenal ulcer	31.9	5.0	68.9	{ F. 35.6 T. 48.0	12.8	24.8	40.6	51.8	58.2	64.0	49.7	47.5	47.8
5. Pylorospasm	35.0	5.0	39	{ F. 14.3 T. 27.1	7.3	8.7	18.3	24.4	28.7	38.7	57.1	59.6	60.7
6. *Duodenal ulcer	37.2	5.5	163.6	{ F. 52.9 T. 63.0	17.0	25.4	36.4	44.5	50.9	51.5	55.0	54.1	52.2
7. *Duodenal ulcer	33.6	4.8	66.5	{ F. 21.7 T. 31.7	3.7	12.7	33.9	37.3	39.5	37.7	41.6	40.5	60.2
8. *Duodenal ulcer	30.5	3.7	—	{ F. 37.5 T. 54.7	15.2	25.3	40.8	48.8	51.8	57.4	53.3	48.3	40.6
9. Appendicitis	34.0	4.6	43.7	{ F. 23.7 T. 35.8	4.5	16.8	22.7	33.4	38.9	34.2	33.4	20.9	44.1
10. Chronic appendicitis with peritonitis	35.0	2.0	—	{ F. 70.0 T. 83.0	13.0	16.0	18.0	36.0	43.0	57.0	70.0	73.0	—
11. Pyelitis	20.0	5.0	18.0	{ F. 49.1 T. 69.4	7.1	13.4	28.3	55.7	4.9	—	—	—	—
12. Post-operative dyspepsia	45.0	0.3	67	{ F. 24.3 T. 46.7	3.5	13.3	26.7	40.2	82.8	93.1	—	—	—
13. Recurrent ulcer of the jejunum	23.0	0.3	13	{ F. 25.1 T. 35.6	22.8	19.2	27.9	25.3	32.5	19.7	15.2	14.5	14.0
14. *Anastomotic ulcer	27.5	1.1	127	{ F. 63.7 T. 75.7	31.9	41.1	51.0	46.6	29.8	27.8	24.3	26.9	32.5
15. Gastric syphilis	55.0	0.3	67	{ F. 13.0 T. 45.5	Nil	29.5	36.2	49.5	35.3	53.9	32.5	44.5	43.9
16. Gastric cancer	32.0	0.3	—	{ F. 12.6 T. 7	10.4	14.3	14.3	14.1	12.3	13.9	8.7	4.5	34.9

* Indicates average values. T = Total acidity; F = Free acidity.

TABLE No. 2
Showing incidence of different types of acidities in the various diseases

DISEASE	No. of cases	Hyperchlorhydria		Isochlorhydria				Hypo-chlorhydria		Achlorhydria	
		No.	%	High normal	Normal	Low normal	%	No.	%	No.	%
1. Gastric ulcer	1	—	—	1	—	—	—	—	—	—	—
2. Gastric ulcer	1	—	—	—	1	—	—	—	—	—	—
3. Gastric ulcer	1	—	—	1	—	—	—	—	—	—	—
4. Duodenal ulcer	28	16	57.1	11	39.3	—	—	—	—	—	—
5. Pylorospasm	1	—	—	1	100	—	—	—	—	—	—
6. Duodenal ulcer	21	15	71.4	6	28.6	—	—	—	—	—	—
7. Duodenal ulcer	5	3	60.0	1	20.0	—	—	—	—	—	—
8. Duodenal ulcer	4	2	50.0	—	—	—	—	—	—	—	—
9. Appendicitis	5	1	20.0	3	60.0	—	—	—	—	—	—
10. Chronic appendicitis with rupture and peritonitis	1	1	100.0	—	—	—	—	—	—	—	—
11. Pyelitis	1	—	—	1	100	—	—	—	—	—	—
12. Post-operative dyspepsia	1	—	—	—	—	—	—	—	—	—	—
13. Recurrent ulcer of the jejunum	1	—	—	1	100	—	—	—	—	—	—
14. Anastomotic ulcer	2	—	—	—	—	—	—	—	—	—	—
15. Gastric syphilis	1	—	—	—	—	—	—	—	—	—	—
16. Gastric cancer	1	—	—	—	—	—	—	—	—	—	—
Total	75	41	—	29	—	1	—	1	—	1	—

TABLE No. 3

Mean acidity and standard deviations of the free acidities and mean total acidities.

DISEASE	Acidity in c.c. N/10 HCl in 100 c.c. of gastric contents										
	Before t. m.	1 hr. t. m.	2 hr. t. m.	3 hr. t. m.	4 hr. t. m.	5 hr. t. m.	6 hr. t. m.	7 hr. t. m.	8 hr. t. m.	9 hr. t. m.	10 hr. t. m.
	c. c.	c. c.	c. c.	c. c.	c. c.	c. c.	c. c.	c. c.	c. c.	c. c.	c. c.
1. Duodenal ulcer	35.6 ±26.5 48.0	44.7 ±19.4 36.5	40.6 ±7.0 51.5	50.0 ±20.8 60.9	46.0 ±18.9 57.1	49.7 ±19.9 60.5	47.5 ±17.2 59.6	40.6 ±11.5 50.2	47.8 ±31.5 60.7	48.0 ±17.1 60.7	39.1 ±9.3 58.7
2. Duodenal ulcer + Pyloric Stenosis	52.9 ±26.6 68.0	44.5 ±19.6 53.2	36.4 ±19.0 45.0	50.9 ±20.3 60.0	51.1 ±18.2 60.5	55.0 ±15.0 65.1	54.1 ±11.7 64.0	50.7 ±14.8 60.2	52.2 ±14.2 62.1	57.0 ±11.4 65.1	58.9 ±13.4 70.9
3. Duodenal ulcer + Appendicitis	21.7 ±11.0 31.7	37 ±3.7 16.8	33.9 ±23.7 44.2	39.5 ±20.8 51.1	37.7 ±37.9 49.6	41.6 ±30.2 51.9	40.5 ±33.6 50.9	60.2 — 70.8	— — —	— — —	— — —
4. Duodenal ulcer + Pyloric Stenosis + Appendicitis	37.5 ±13.2 54.7	15.2 ±10.2 26.7	25.3 ±17.9 38.3	40.8 ±18.6 54.5	48.8 ±19.3 64.1	53.3 ±23.4 65.6	48.3 ±16.3 61.4	40.6 — 51.6	— — —	— — —	— — —
5. Appendicitis	25.2 ±20.9 35.8	4.9 ±6.7 13.8	16.8 ±18.7 25.8	22.7 ±3.3 31.4	33.4 ±33.7 42.4	33.4 ±30.1 44.1	20.9 ±17.3 29.0	44.1 ±21.1 55.9	56.4 — 70.8	— — —	— — —

Note:—F=Free HCl; T=Total acid; S. D.=Standard deviation.

ulcer of 2 years duration. The patient who had no free acidity was a carcinoma case, suffering from cancer of the stomach of an advanced nature under which conditions a complete disfunctioning of the acid-secreting mechanism is only to be expected.

The high percentage of hyperacidity is very striking, and indicates an important correlation—direct or indirect—between the nature of the disease and the production of hyperacidity. Thus this condition was present in 57.1% of the duodenal ulcer cases and in 100% of the anastomotic ulcer cases. Also, hyperacidity occurred in 71.4% of the duodenal ulcer cases having pyloric stenosis or obstruction and in 60% of the cases in which this disease was associated with appendicitis. Hyperacidity was also found in one case of appendicitis and peritonitis, and one post-operative dyspepsia case. Table No. 3 (see page 580) gives the standard deviation of free acidity and mean free and mean total acidities seen in the different disease groups.

As the cases form a selected series in which all gastric cases were not included for study, the usual statistical analysis of normal variates is rendered inapplicable. Nevertheless, the data presented clearly demonstrate the existence of hyperacidity in a high percentage of surgically treated cases, particularly of duodenal ulcers.

It was therefore considered advisable to study the height of acidity and emptying time particularly in relation to the various diseases observed. The relevant data are presented in tables 4 to 6.

Considering an emptying time of 1½ to 2¼ hours as normal, it will be seen that 5 out of 75 cases emptied rapidly and 44 normally, while the

TABLE No. 4

Showing relation between hyperacidity and emptying time

EMPTYING TIME		No. of cases examined	No. of hyperchlorhydria cases
Rapid.	{ 1 hr. after t. m. 1½ hrs. " "	1 } 4 } 5	1 } 2 } 3 or 60% of rapid group.
Normal.	{ 1½ hrs. " " 1¾ hrs. " " 2 hrs. " " 2¼ hrs. " "	7 } 7 } 16 } 14 } 44	3 } 4 } 11 } 8 } 26 or 59.1% of normal group.
Delayed.	{ 2½ hrs. " " 2¾ hrs. " " 3 hrs. " " Later than 2¼ hours but the exact time not definitely known.	4 } 1 } 8 } 13 } 26	1 } 1 } 5 } 5 } 12 or 46.2% of delayed group.
Total		75	41

remaining 26 fall under the "delayed emptying" group. It will further be seen that 60% of the rapid emptying cases, 59.1% of the normals, and 46.2% of the delayed group had hyperchlorhydria (table No. 4).

Table No. 5 (see page 582) records the peak of acidity met with in the various diseases, and Table No. 6 (see page 583) the frequency distribution of peak acidity at different intervals. Peak acidity is each in

1 to 1½ hours in the normal cases, while it is delayed in cases of pyloric obstruction. The data also show that the largest number of cases which had maximum acidity in the resting juice and 1½ hours later, were duodenal and pyloric stenosis cases.

Summary.—1. Seventy-five cases taken from the wards of Lt.-Col. M. M. CRUICKSHANK, I.M.S., the clinical diagnoses of which were confirmed by other methods, were studied with special reference to gastric acidities. High acidity was found generally. 54·7% of the cases belonged to hyperchlorhydria, 38·7% to high normal, 2·7% to normal and 1·3% to each of low normal, hyperchlorhydria and achlorhydria.

2. Three patients or 4·0% of the cases were suffering from gastric ulcer, of which one had gastric ulcer alone, another gastric ulcer and a healed duodenal ulcer on the 1st part of the duodenum and the third gastric ulcer and pyloric stenosis. 78·7% of the cases had duodenal ulcer of which 47·5% were without complications, 1·7% had gastric ulcer, 35·6% pyloric stenosis or obstruction and 8·5% appendicitis. One looked like a case of duodenal ulcer, but was really a case of pylorospasm. Of the remaining cases, one was suffering from pyelitis, one from post-operative dyspepsia, one from recurrent ulcer of the jejunum, two from anastomotic ulcers, one from gastric syphilis and one from carcinoma of the stomach.

3. The large majority of the patients suffering from duodenal ulcer was probably due to high incidence of peptic ulcer cases in South India.

4. In a high percentage of duodenal ulcer cases hyper-acidity was present. The only patient who had achlorhydria was suffering from carcinoma of the stomach.

Reference :

M. C. Variyar and A. S. Mannadi Nayar—1944, *The Antiseptic*, XLI, p. 290.

Climatic Bubo*

M. C. RAMA AYYANGAR, B.A., M.B., B.S.,
Assistant District Medical Officer, Tinnevely.

It is also called lymphogranuloma inguinale, inguinal poradenitis, sixth venereal disease. It is caused by a filter-passing ultra-microscopic virus and is of venereal origin. It is commoner in the tropical and sub-tropical countries.

Age incidence: During the period of sexual activity.

This disease is preponderantly commoner in males and is characterised in them by inguinal adenitis which forms the bubo, attended by fever and other constitutional disturbances. In the females there is ulceration and elephantiasis of vulva (*esthiomene*) but no bubo formation because of the peculiar disposition of the genital lymphatics, the upper and the lower halves of the vulva draining separately into the inguinal and pelvic glands respectively. HANSCHALL thinks that this disease does not occur in the circumcised.

Pathology.—Naked eye examination reveals a mass consisting of an agglomeration of enlarged glands glued together by a plastic periadenitis. On section the glands show one and the same process patchily distributed in various stages. The capsule is thickened and shows recent vascularisation.

* Specially contributed to 'The Antiseptic.'

(1) But the essential lesion consists of pin-point epithelioid formations of irregularly disposed macrophages, giant cells and eosinophiles in the gland substance. The parenchyma is replaced by young fibroblasts. (2) Subsequently degenerative processes occur in the glands and section shows characteristic tiny micro abscesses studded throughout the gland substance. (3) Still later macroscopically softened areas are seen. The tiny points of necrosis coalesce and form a cavity broken up by interlacing fibrous tissue and containing glairy, sticky fluid.

Symptoms and signs.—The incubation period is 1 to 3 weeks. The onset is insidious and the *primary lesion* which is in the form of one or more small herpiform vesicles or erosions that are non-itching and painless, and situated on the glans or coronal sulcus (Fourchette in women) rarely causes any discomfort and passes unnoticed by the patient, as it heals readily and rapidly. So the first symptom may be aching in the groin, while walking, due to the inguinal adenitis which sets in 4 to 6 weeks after exposure. One of the oblique set of inguinal glands becomes affected and enlarged to the size of a hen's egg; it is elastic, freely movable, not adherent to deeper structures, or skin, and is slightly tender. Sometimes the crural glands become involved. There is no constitutional disturbance at this stage.

Next the gland becomes adherent to the skin and deeper structures and the surrounding glands that enlarge become fused with the original one. In most cases the iliac glands become involved, forming a tender swelling that can be felt on deep palpation above Poupart's ligament. This associated iliac adenopathy is very characteristic of this disease. The inguinal bubo is usually unilateral; but may be bilateral. Another striking clinical feature in the males is the *extensive inflammation of periglandular tissues with comparatively little pain and adherence of skin*. At this stage there is severe constitutional disturbance; high fever with shivering, intense headache, malaise, anorexia, vomiting and bronchitis; in some cases there are painful effusions in the larger joints. If the patient gets treatment the bubo subsides gradually.

Otherwise the patient passes on to the next stage, in which the original brawny mass becomes painful, tender, softens in one or more places and becomes fluctuant. The general condition of the patient improves.

In the fourth stage there is spontaneous breaking down of the bubo at multiple points of suppuration, leaving sinuses that discharge thick tenacious pus. Secondary infection follows quickly. Rarely the iliac set of glands may suppurate forming an intra-pelvic abscess.

Esthiomene is a condition of ulceration of vulva associated with elephantiasis of labia and is considered to be the counterpart of climatic bubo of the male.

Blood picture shows moderate leucocytosis and secondary anæmia.

Frei's Test.—The introduction of this intradermal test by FREI in 1925 is a milestone of importance in diagnosis.

Preparation of the antigen.—The pus is aspirated under aseptic precautions from a gland that has undergone softening but not sinus formation and is mixed with Saline (1 in 10); then heated to 60°C. for 2 hours on the first day and for 1 hour on the second day in a water bath; then it is tested for sterility and kept in a cool, dark place.

Walters' modification of the method of preparation of the antigen.

The inflamed gland is removed surgically and one half of it is macerated in saline (1 in 10) and heated to 60°C. for 1 hour and the necrotic material from the other half is inoculated in a guinea pig. If the result of the latter is positive, the antigen from the first half is again heated to 60°C. for 1 hour on two consecutive days and is then ready for use. 0.1 c.c. of antigen is given intradermally into the forearm of the suspect and 0.1 c.c. of Saline or Dmelcos antigen given on the forearm as control. A positive reaction consists in the production of an inflammatory dome-shaped papule (sometimes with necrosed centre) 1-3 cm. in diameter within 24-48 hours.

Wassen Test.—The inoculation of the virus in mice causes fatal encephalitis.

Diagnosis.—(1) Presence of a tiny, painless, fleeting vesicle, and more often by its absence; (2) subacute inguinal adenitis (bubo), its slow course and its tendency to multiple foci of suppuration; (3) characteristic iliac adenopathy; (4) a positive Frei's test; (5) W.R. and Dmelcos tests are negative, and (6) leucocytosis in blood smear.

Differential diagnosis.—1. *Chancroidal bubo*:—The inflammatory enlargement of groin glands is unilateral, painful, tender and in association with soft sores on the genitals. The glands soften, suppurate and break down with one central area of necrosis while in climatic bubo there are multiple areas of suppuration. The specific intradermal test (injecting the killed B. Dugesi) ito-recustiera reaction—is positive.

2. *Syphilitic bubo*:—In the primary stage the bubo is generally bilateral, painless, discrete, mobile, indolent and of India-rubber consistency and is associated with a hard, indurated painless chancre on the genital. There is no periadenitis or suppuration. The shotty hardness of the glands is diagnostic. In the secondary stage there is generalised shotty adenitis.

3. *Bubo due to herpetic and other non-specific inflammatory lesions of genitals*:—Such bubo is rare and when it occurs it is inflammatory and painful.

4. *Local injuries, septic sores and other infective processes of foot and leg*:—The associated bubo is acute, inflammatory, painful lymphadenitis.

5. *Bubonic plague*:—This is characterised by the sudden onset of a highly infectious fever with shivering, prostration, typhoid state and inflammatory glandular and periglandular swelling (femoral or axillary) appearing in 1-3 days. The buboes may be painless or very painful and may suppurate after the 7th day if patient is alive. If the bubo is punctured before suppuration occurs and stained, characteristic B. pestis with bipolar staining are seen. Liver and spleen also enlarge. There may be subcutaneous hæmorrhages. In the abortive type of plague there is bubo formation without much fever and these subside in 2 weeks.

6. *Lymphatic leukemia*:—Here there is generalised enlargement of lymph glands, all groups being enlarged at the same time. Spleen and liver are palpable. There is rapidly progressive anæmia, asthenia and tendency to hæmorrhages. Blood picture is characteristic.

7. *Hodgkin's disease*:—Starts with swelling of one group of lymph glands attended with paroxysms of fever (Pel-Epstein type). The glands are discrete, movable under the skin, painless; sooner or later other

groups become involved. Liver and spleen are palpable. In acute form the glands are soft and in chronic forms they are hard. There is generalised lymphatic enlargement. Anæmia, languor, pruritus and tendency to hæmorrhages are present.

8. The enlargement of inguinal glands in *tubercular adenitis* is rare, as the cervical glands only are involved primarily. When present the glands are matted together and caseate or suppurate.

9. *Carcinoma and other malignant diseases* of ano-genito-crural region cause secondaries in the inguinal set of glands, which become hard and fixed to surrounding tissue.

10. In *lymphosarcoma* the inguinal glands get involved only as a part of the generalised disease, so that other glands are seen affected simultaneously. It rapidly invades the surrounding tissues.

11. *Glandular fever* is characterised by sudden onset of fever, vomiting, painful enlargement of lymph glands in 2-3 days, first cervical and then axillary or inguinal. Liver and spleen enlarged. The glands subside in 5 to 10 days.

Sequelæ.—*Genito ano-rectal syndrome* was formerly considered to be due to syphilis (Fournier) in males and gonorrhœa in females; now its granulomatous nature is recognised beyond doubt. Clinically there are (1) perianal ulceration with multiple, irregular, granulomatous ulcers with thickened polypoid edges. The anus is surrounded by elephantoid tissue; (2) later a subacute lymphangitis with œdema of penis, scrotum, thighs and labia occur probably due to lymphatic stagnation. Especially if too much of lymphatic tissue is removed during the operation, an elephantoid condition of those regions develops; (3) perianal fistula; (4) fibrous, nonmalignant rectal stricture in both sexes. It is a tubular narrowing or ring-like stricture situated 2 to 8 c.m. from anus, with the mucous membrane over the spot smooth and non-ulcerated. Frei's test is positive in these patients. Their complaints are progressive constipation, futile straining at stool, frequent passage of mucus and blood.

Treatment.—In the early stages rest in bed, local application of hot boric fomentation or antiphlogistine or radiant heat to the glands. Simultaneously put the patient on Sulphanilamide orally (4.5 gms. a day during first week and 3 gms. a day during the next). Before the end of 2 weeks the symptoms ameliorate and the bubo subsides. But in some it may be necessary to give 3 gms. daily for one or two weeks more. Other preparations like Sulphapyridine, Sulpathiazole (M & B or Ciba) or Sulfadiazine (Squibb, AFD) may be used with better success, preferably the last which is the least toxic. Dose: 6 grams on the first day and then 3 gms. daily for 2 to 3 weeks, given under medical supervision and observing the usual precautions. At this stage though surgical excision of the glands is successful and the wound heals by first intention, surgical interference is rarely called for, as the bubo subsides with oral Sulphonamide alone.

If the patient comes in stage 2, in addition to oral Sulphonamides, it is necessary to give injections of Antimony salts; (1) *Anthiomaline* (M & B). This is Lithium Antimony Thiomalate, a trivalent organic compound containing 16% Antimony, of low toxicity. Dose is 1-2 c.c., given I. M. for 10-20 injections. It is supplied in boxes of 10 × 2 c.c. ampoules of 6% solution. This is most effective; (2) *Fouadin* (Bayer) starting with

1½ c.c. and increased by ½ c.c. each time till maximum dose of 4 c.c. is reached, given once in 3 days. Total dosage for 1 course is 50 c.c. or *Fantorin* (Glaxo Lab.)—trivalent preparation can be given 3 to 5 c.c. doses I. M. once in 3 days; (3) Pentavalent compounds like Stibenyl or Stibotion I. V., 10 to 16 injections can be given; (5) Sodium Antimony Tartrate 2% 2 c.c. I. V., can be tried; (6) *Neostam* (B. W. & Co.)—Stibamine Glucoside 4% solution is useful and is given I. V., once in 3 days. First dose is .05 gms. next .1, third .15 and fourth is .2 gms. and then .2 gms. repeated till a total dose of 2.5 gms. is given.

Surgical excision of early stage II cases can be done but it is contraindicated in the later brawny stage, as the wound always breaks down and does not heal.

Local heat during this stage will only hasten the breakdown of the mass and so not advocated. The oral Sulphonamide and antimony injections effectively make the bubo resolve quite rapidly leaving but a residual thickening in the groin.

In stage III cases when suppuration has commenced *protein shock* therapy produces dramatic results. T.A.B. curative vaccine I. V., once in 3 days in doses of 10, 50, 100, 200, 300 and 400 millions. Or milk or Aolan 5 c.c. I. M. can be also used bi-weekly. This pyrexial therapy this treatment is attended with drying up of the bubo and disappearance of induration. Usually excision of the bubo at this stage is followed by formation of intractable sinuses and by secondary infection with pyogenic organisms. Also surgical removal of a large mass of lymphatic tissue is to be greatly deprecated, for a chronic lymphatic obstruction and elephantoid condition of the genitals and leg ensue. Thus the natural temptation for incising the fluctuant bubo must be resisted and aspiration done at several points repeatedly.

Treatment of 4th stage consists of rest in bed, oral Sulphonamides and Eusol dressings.

Other methods of treatment advocated by some are:—(1) Injections of Frei's antigen filtered through gauze can be given I. V. or S.C. with success; (2) injection of convalescent serum; (3) injection of vaccine prepared by excising the gland, dehydrating and emulsifying it in Saline, given in increasing doses every third day; not successful; (4) some claim good results with local application of superficial X-rays; and (5) injections of Solgonal B in doses of .1 to .5 gms. I. V. or I.M. not effective.

Treatment of anorectal syndrome.—(1) Regular passage of rectal bougies in early commencing stricture if situated within 10 cm. of the anus; (2) a course or two of Foudadin or Fantorin injections; (3) in cases complicated by fistula and perirectal fibrosis, colostomy and excision of the diseased part is the ideal way of treatment.

References:

1. Manson Bahr, P.—Tropical Diseases.
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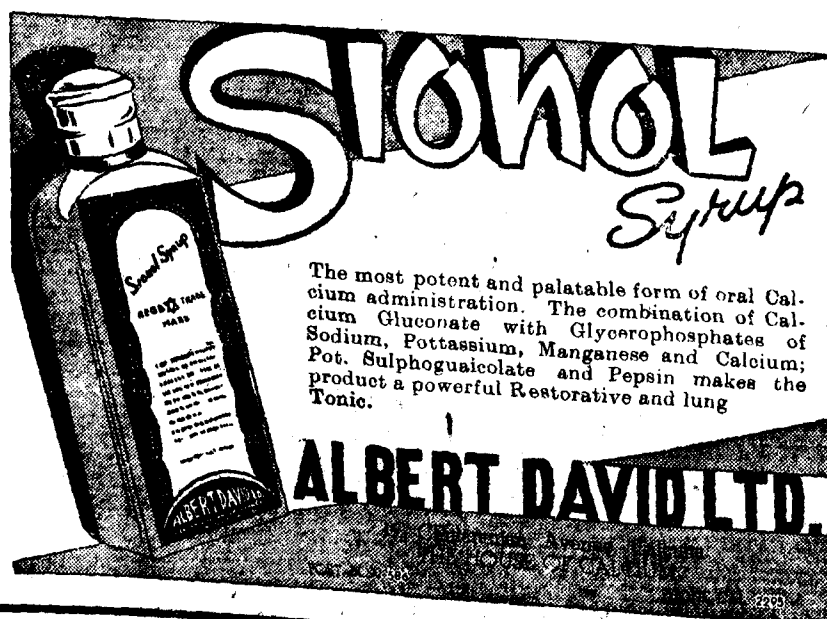
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(Continued from page 546 of Sept. 1944 issue).

Chapter XIII.—The Infant.

1. **Maxims.**—1. Do not cut the cord while it continues to pulsate or you deprive the infant of 40 c.c. of blood (1½ oz.). If the cord is not cut until after the birth of the placenta the child gains a further 60 c.c. of blood (2 oz.).

2. While the cord continues to pulsate the umbilical vein is a useful channel for "I.V." therapy.

3. If the baby does not breathe or is sluggish about breathing beware of terminating its existence by subjecting it to violent methods of resuscitation.

4. As long as the heart continues to beat, persevere with effort at resuscitation. They may have to be prolonged for an hour or more.

5. Examine the infant all over for defects, especially imperforate anus and absent or displaced urinary meatus.

6. Guard all children and especially deformed children against dehydration. The surgeon is impotent when confronted with a tiny being in the ultimate stage of dissolution.

7. Deep breathing can be stimulated by dilating the anus with a well lubricated 5th finger.

II. **Apnoea.**—Following labour conducted under opiates and/or barbiturates the respiration centre of the infant is often depressed though the heart beats steadily if somewhat slowly. Such children do well if left alone and preserved from chilling despite their cyanosed appearance. If however the heart shows signs of failing and the child becomes pale and limp:

1. If the weather is cold wrap the infant in a warm shawl.

2. Hold the child up by the legs and with a piece of gauze on a finger clear the back of its throat. Then stroke its trachea in the direction of its head or depress the infant's tongue, lift its epiglottis and slip a small rubber catheter down its trachea. Suck the trachea clear of mucous and debris.

3. **Mouth to mouth respiration:**—Cover the child's mouth with a clean cloth. Hold its nostrils with the thumb and forefinger of one hand and compress lightly its stomach with the other hand to prevent air passing back out of the nostrils or inflating the stomach. Gently, to avoid rupturing the alveoli of the infant lungs, blow mouthfuls of fresh air into its lungs and suck out the air in regular rhythm. This should only be done by some one whose mouth, throat, and lungs are not harbouring pathogenic organisms.

The above method is unlikely to fail but if it does:

4. In severe cases when the mother has had a heavy dose of an opiate or barbiturate a short time prior to delivery. Inject into the umbilical vein, if it is still pulsating, or into another vein, or into the superior longitudinal sinus 0.5 c.c. of Nikethamide (Coramine Ciba 125).

mg.). The umbilical vein should be massaged in the direction of the infant to hasten absorption. If a vein is not available give double the dose "I.M." but it is much less effective. The injection of Coramine may have to be repeated once or twice. In such an event only give half the initial dose at each repetition. Alternatively W. N. LEAK recommends 0.5 c.c. "I.M." of Cardiazol-Ephedrine (Knoll), or if this fails 0.3 c.c. of the same into the heart itself. Cardiazol-Ephedrine (Knoll) contains in one c.c. Leptazol (Metrazol) 100 mg. ($1\frac{1}{2}$ grains) plus Ephedrine 16 mg. ($\frac{1}{4}$ grain).

III. **Asphyxia.**—1. *1st degree*:—The child presents a congested and livid appearance. Respiration is in abeyance or occurs only in gasps and the heart beats slowly and feebly. This condition may pass into—

2. *2nd degree*:—The baby is cold, pale and limp. Respiration is in abeyance or gasping and the heart beats slowly and feebly. The signs of shock are similar. The child may be born in the first or second degree of asphyxia or it may be suffering from shock, in which the signs are indistinguishable from second degree asphyxia.

Treatment of asphyxia.—(1) If the weather is cold the child must be wrapped at once in a warm shawl.

(2) The child should make its first efforts at inspiration a few seconds after it emerges from the birth canal. If it fails to do so it should be held up by the feet and the trachea stroked gently towards the head. If this does not succeed or if the child makes gurgling noises a finger covered with gauze should remove mucous from the back of the pharynx. In addition a soft rubber catheter (size 3 to 6) or a mucous extractor should be used gently, to suck mucous and amniotic fluid from the larynx.

(3) When the larynx is clear of obstruction employ mouth to mouth breathing with gauze interposition as described in (II) (3) above.

(4) If mouth to mouth breathing fails treat as in (II) (4) above. (The body temperature of the child must be maintained by keeping it well wrapped up or in a warm bath if the weather is cool or cold).

IV. **Depressed fractures and intracranial injuries.**—If the depression is only slight the bone will assume its proper position if given time, and this is the safest course to take. Shock or convulsions or attacks of cyanosis or weakness in sucking power may be due to depressed fractures of the skull or to other intracranial injuries.

1. For depressed fractures TWEEDY recommends that the sharp point—and it must be sharp to avoid increasing the injury—of one blade of a 'bullet' forceps be bored through the bone at the centre of the depressed fracture. The shank is then turned at right angles to the bone and the depressed fracture is gradually elevated by pulling on the forceps.

MONRO KERR places the head of the child between his knees and compresses the head in the direction opposite to that in which the long axis of the fracture lies. The depressed fracture is thus forced out.

2. When there are slight intracranial injuries the child must be kept absolutely at rest and not even lifted out of its bed. Colostrum and milk must be obtained from the mother by manual expression or by breast pump and then fed to the child from a small spoon. If the infant is restless $\frac{1}{4}$ grain Chloral Hydrate should be given in water. Every 4 hours

3 oz. of 10% solution Sodium Chloride in water is to be injected into the rectum and retained there as long as possible to reduce intracranial tension. If there has been intracranial hæmorrhage 10 c.c. of the mother's blood should be withdrawn and injected into the gluteal regions of the child. (If the intracranial injuries are severe no treatment is likely to be of any avail).

V. **Congenital malformations.**—1. *Hare-lip and cleft palate*:—If the baby is unable to take the breast, human milk must be obtained by manual expression and fed to the child off a spoon or by means of a fountain pen filler.

2. *Imperforate anus*:—If unable to send the child to hospital introduce an aspirating needle upto half an inch and no more through the anus or where the anus ought to be. If meconium is withdrawn the case is simple. Make a crucial incision in the septum, dilate the incision with a well lubricated 5th finger and unite the mucosa to the skin by several interrupted sutures (boiled black sewing cotton is excellent). If the rectum cannot be reached colostomy is the only alternative.

VI. **Dehydration fever.**—During the first few days after birth some infants develop high fever and become seriously ill because of insufficient fluid intake. The treatment is to administer normal saline by mouth, rectum and (in desperate cases) subcutaneously, intravenously, intramuscularly, or even into the medullary cavity of the tibia (see Chapter XIV). 1 to 2 oz. (30 to 60 c.c.) per seer of body weight will be required.

VII. **Hæmorrhagicæ Neonatorum**:—(Melæna, hæmatemesis, intracranial hæmorrhage, etc.).—If available give the infant a subcutaneous injection of 0.25 mg. vitamin K, or of 5 mg. of the Sodium Salt of the Sulfuric ester of 2-methyl-1, 4-Napthohydroquinone.

Alternatively twice daily take 20 c.c. of blood from one of the parents and inject it into the gluteal regions of the infant. In severe cases give a blood transfusion of 20 c.c. per seer of the infant's body weight (remember the internal saphenous vein above the medial malleolus, the superior longitudinal sinus and the bone marrow of the tibia).

VIII. **Erythroblastosis Fœtalis.**—(Hæmolytic Jaundice). This condition, which must not be confused with the slight physiological jaundice which affects many children, is very serious and the child can probably only be saved by:

1. Being fed on milk other than its mother's.
2. Transfusion with normal Rh-negative blood (which excludes the father and mother). In the absence of facilities for typing take 50 c.c. to 70 c.c. from any healthy donor and inject it into a vein of the infant or into the medullary cavity of its tibia.

Boil your needles and syringes in Sodium Citrate solution containing 9 grains (0.6 g.) per oz. (30 c.c.). 10 c.c. of this solution is ample anti coagulant for mixing with 50 to 70 c.c. of blood. The transfusion can thus be managed with a 10 or 20 c.c. syringe.

IX. **Premature infants.**—In dealing with these it is essential to:

1. Maintain the body temperature at 98° to 99°F. To ensure this the temperature must be recorded every 4 hours.

(a) In very hot weather the child requires little or no clothing.

(b) In cold weather the clothing must be constructed so that it opens without handling the baby and yet laps over to retain the heat. It must combine very light weight with heat retention.

Dry Thyroid Extract (B.P. 1939), in doses of one tenth of a grain per lb. of body weight stimulates metabolism and thus raises the temperature but at the expense of the infant's growth producing food (Note:—This preparation is 5 times as strong as fresh gland preparations).

(c) Oestrogenic Hormone gives good results according to reports. MABEL POTTER administers Progynon 500 International Units morning and evening. Take a 0.1 mg. tablet (1,000 I.U.) of Oestroform or Ovocyclin, dissolve it in 2 drachms of water, give one drachm in the morning and one drachm in the evening until the child is progressing satisfactorily.

2. In feeding do not exhaust the child by making it suck over long. If it is weak or is not obtaining sufficient breast milk employ manual expression and give the milk off a spoon to the baby while it is in its cot. Two hourly feeds may be required.

STEEN recommends giving breast milk diluted with equal quantities of boiled water for the first few days. Commence with 1/2 to 1 oz. of breast milk per lb. of body weight daily or 1 to 2 drachms per feed. By the fourth day try giving 2 oz. of breast milk per lb. of body weight per day and by the tenth day or so the ideal of 3 oz. per lb. of body weight may be reached. Some babies cannot be advanced so rapidly and it may be twenty days before the ideal is attained.

(Gavage):—If the infant is too weak to swallow it will have to be fed (under full antiseptic precautions) by means of a soft rubber catheter which is best passed *via* the nose into the stomach and which is secured in position on the cheek by a piece of strapping. The catheter will have to be withdrawn once daily for cleaning.

3. It is of the greatest importance to guard such infants from bacterial and virus infections and above all from infections of the respiratory tract.

X. Ophthalmia Neonatorum.—Treat with an initial dose by mouth of 0.25 gramme Sulpathiazole (1/2 tablet crushed) and give a maintenance dose of 0.125 gramme (1/4 tablet crushed up very finely and given with mother's milk) according to the baby's weight as follows:—

About 7 lbs: every four hours = six doses in twenty-four hours or a daily total of 0.75 gramme (1 1/2 tablets).

About 6 lbs: every five hours = five doses in twenty-four hours or a daily total of 0.625 gramme (1 1/4 tablets).

About 5 lbs: every six hours = 4 doses in 24 hours or a daily total of 0.5 gramme (1 tablet).

The ideal method of giving Sulpathiazol is to take the total dose for 24 hours, and grind the pills into powder. Divide the total powder into 12 doses and then administer each dose with some milk every two hours. The child should be given as much water as it will drink. Sufficient bicarbonate of soda must be added to the drinking water to maintain the child's urine alkaline to litmus paper. The reaction of the urine must be tested several times a day.

Gonococcal cases respond rather better than non-gonococcal ones according to SORESBY and HOFFA, who find a high proportion of clinical cures in 3 days though over 50% of cases require up to 8 days and roughly 15% are resistant. The treatment should be continued for 3 days after clinical cure but not beyond 10 days.

Plain unrefined Cod-liver oil or Halibut liver oil drops three or four times a day are a valuable adjuvant. Probably Shark-liver oil, if not adulterated, is just as efficacious.

XI. Cord infection.—This is still too common and often gives rise to severe jaundice.

The best treatment for a septic cord is to apply very finely powdered Urea, Exsiccated Sodium Sulphate or Magnesium Sulphate to the cord and cover the area with a sterile dressing. I prefer to boil up a piece of celophane and apply it over the powder. I then apply a binder. I can, by removing the binder and looking through the celophane, watch the progress without unnecessarily changing the dressing. If the above are not available Eau-de-Cologne or Spirit (rectified or methylated) may be used as a desiccator.

Sulphathiazol should be given in severe cases in the doses recommended under (X) above.

Eales' Disease* (Angiopathia Retinalis Juvenalis)

JADAVJI HANSRAJ, D.O.M.S., (Eng.), L.M. & S. (Bom.),
Bombay.

RARITY of patients suffering from this disease and scantiness of literature even in well-known ophthalmic journals like the *American Journal of Ophthalmology*, *Archives of American Ophthalmology* and *British Journal of Ophthalmology* are ample justification for publishing a case which came under my care recently.

History of the case.—A young Hindu aged 25 years, residing at Mombasa in Africa, went to sleep as usual one night in January 1944, hale and hearty in every respect. When he got up in the morning he found to his utter surprise that vision with his left eye was very faint and a red curtain was hanging before that eye. Gradually the vision was getting less and less every hour until just M. B. was left. Fifteen days after this incident the same phenomena was observed in the right eye and within a day of the implication of the right eye he was practically blind with both eyes. Now he consulted a well-known fully qualified ophthalmic surgeon at Mombasa, who diagnosed the condition as Eales' disease. He gave the patient vitamin C, K, Calcium and even Snake Venom. After some time vision improved to a certain extent but this improvement was short-lived and he returned to his former condition of practical blindness. After three months of good treatment when he showed no improvement, the patient came to India, his native place, to seek further consultation. He went to his native place in Kathiawar and consulted some ophthalmic surgeons there. One of them diagnosed the condition as detachment of retina. It is quite natural that any ophthalmic surgeon who does not

* Specially contributed to 'The Antiseptic.'

remember this condition and does not use tonometer before giving the diagnosis would give the same diagnosis from what he sees with the ophthalmoscope. He came to Bombay later on and consulted an ophthalmic surgeon who prescribed tuberculin injections. Then he came to me for consultation on 25th June 1944.

On examination vision was found to be P.L. only, projection was good. Pupils were dilated (it was not possible to say whether dilatation of the pupils was due to interference with transmission of light stimuli or due to use of atropine by the ophthalmic surgeon who examined the patient before he came to me). On examination in the dark room anterior chamber was found to be normal. Lens did not show any opacities. Usual red glow was absent. Vitreous was found occupied with a whitish looking mass. * No blood vessels or any other detail could be seen in the retina. Tension with Maclean's was 40 m.m. and with Schiotz it was 25. The patient stated that if he sat erect for about three to four hours and if the eyes were bandaged for that time, his vision improved to a certain extent. This procedure was tried and on removing the bandage after making him sit for about four hours his vision improved definitely. Now he could see my face dimly and my neck tie. He could discern the colours of the tie. On examination in the dark room, upper part of the fundus revealed reddish glow and very faint view of the retina could be obtained; of course no details could be seen. The lower part of the fundus was as opaque as before. This phenomena clearly proved that there was blood in the vitreous. It was deemed necessary to study the aetiology of the disease as thoroughly as was possible. With this idea Dr. B. B. YODH, Hony. Physician of Ramwadi Eye Hospital, was consulted. At his examination nothing wrong was found constitutionally. At the time of my examination I found a soft aortic bruit. I suggested to Dr. YODH that a thorough pathological examination should be done, including blood count, hæmoglobin percentage, coagulation time, Kahn and Wasserman test, and basal metabolism test. All these tests could be done only at a hospital which has a very well-equipped laboratory and a well-trained pathologist. With this idea he was advised to get admission in Sir Hurkisondas Hospital. The patient did go to the hospital, but next day his relative came to me and said that the patient was very much upset and wants to leave the hospital at once. I persuaded the relative that stay in this hospital was very short, in fact only as long as thorough examination was finished. He went away promising that he will keep the patient in hospital for a few days. To my utter surprise and disappointment I heard from Dr. YODH that the patient had left the hospital before any examination could be carried out.

Etiology.—DR. HENRY EALES who first described the disease could not find any constitutional disease as causative factor but he found constipation and epistaxis in most of the patients. AXENFELD and STOCK attributed the disease to tuberculous diathesis. This theory was substantiated in 1935 by GILBERT's finding tubercle bacilli in the neighbourhood of a vein in the eye and further by the presence of active tuberculosis in other parts of the eye. DUKE EDLER in his textbook on Ophthalmology has mentioned that the disease has been produced by the injection of tubercle bacilli, quoting the authority of various continental research workers. It is not clearly mentioned by him whether the condition was experimentally produced in animals or human beings.

Septic foci in other parts of the body have been mentioned also as probable aetiological factors.

Thrombo-angiitis obliterans has also been mentioned as probable cause in some cases.

Helminthiasis, anæmia, delay in coagulation time, endocrine derangements and calcium deficiency have been put down as probable causes by various authors.

Symptoms.—It occurs mostly in males, aged 22 to 25 years. One eye is usually affected first, and the left eye is affected first in a great majority of patients. The second eye loses its vision a few days after the first eye. The attack comes all of a sudden without any preliminary signs or symptoms. Hæmorrhage in the retina and vitreous are recurring, which explains slight improvement in vision sometime after the first attack and deterioration again when second hæmorrhage takes place. When the patient sits for a few hours with pressure bandage on the eye, vision does improve and one sees with an ophthalmoscope that the upper part of the vitreous is decidedly clearer than the lower part. It shows that solid part of the blood settles down and plasma floats above. This phenomena is not described in the books that I have gone through. In fact in the case of my patient it was found entirely due to the intelligence of the patient who himself suggested this. The case which came to me for consultation showed all the signs and symptoms described above.

I will try to follow the case if possible and inform the readers of the *Antiseptic* about the further progress of this case. If the patient could be persuaded to stay in some well-equipped hospital, I will also study the aetiology of the disease more thoroughly as I am not absolutely convinced about the probability of correctness of the theories mentioned in text books.

Prognosis should be always guarded, as secondary glaucoma, retinitis proliference and detachment of retina may be the sequelæ in a number of cases. If any of these develop prognosis is bad; otherwise after a long time when hæmorrhages cease recurring and absorption of extravasated blood takes place, certain amount of useful vision is likely to return.

Treatment.—As we see that number of remedies are employed in all conditions where aetiology is uncertain, in this disease too various methods of treatments have been followed by different schools. The usual treatment prescribed is a course of tuberculin injections. In the absence of any other better and more specific treatment injection of Vitamins C, K, snake venom to increase the coagulative power of blood, Calcium by mouth as well as by intravenous injection have been tried in a number of cases. With what result we do not know.

My views are that sooner or later it will be proved that the most important factor in aetiology will be derangement with endocrines. My view is based on the following facts; sudden attack, almost all cases being young males between 22-25, recurrence of hæmorrhages and clearance after some time.

If any of our friends who are in a position to carry out full investigation of these cases meet with some case or cases, study them and publish their results, they will render valuable service not only to the patients but to the whole medical profession in general and ophthalmic surgeons in particular.

Treatment of Enlargement of the Prostrate by Steinach's II Operation

J. K. MOHANTY, L.M.P. Medalist.
S. A. S., P. O. Angul, Dt. Cuttack, Orissa.

HYPERTROPHY of the prostrate is one of the scourges of old age. It is true that the ætiology is still shrouded in mystery. To give amelioration from its miserable sufferings many a method of treatment came into vogue and receded into obscurity at different periods. At present one hesitates to declare that it has solved the problem. None the less, partial resection, through the supra-pubic or perineal route, is far from being satisfactory. The aged and worn-out patient with a pessimistic outlook and short expectation of life dreads most the prolonged stay in hospital. Many refuse operation till some grave emergency supervenes. By as to make the prognosis extremely bad or forbid operative interference find out other easier and simpler methods of treatment as well as to explore its ætiology. In recent years attention has been veered on the theory of hormonal testicular imbalance and on this hypothesis two lines of treatment have emerged, one hormonal substitution therapy to make production to restore the endocrine poise by means of Steinach's II operation. I tried the latter method of treatment in four of my cases and have data on the results of the former line of treatment. i.e., hormonal substitution therapy, though with conflicting views and findings, there are sure to report the results of these four cases:

I adopt the following procedure in operation, which is a slightly modified one than that described by ELLIOT SMITH.

Under local anæsthesia a median scrotal incision is made and each testis is brought out in turn; Tunica vaginalis is opened; the sac everted and layer of tunica vaginalis incised to deepen the groove and ensure that the ligature does not exert any tension on tunica albuginea; with a sinus forceps and under direct vision against a strong artificial illumination, the rays of light passing through the structures and a opaque tube to the surgeon's eye (in order to recognise and avoid blood vessels) a silk ligature is passed through the digital fossa, so that it occupies the groove between the globus major and testis; the ligature is tied with a surgeon's knot. I think the success lies in avoiding blood vessels and tension on tunica albuginea.

Main modification introduced by me.—(1) Single scrotal incision instead of two inguinal ones; (2) eversion of the sac; (3) use of ordinary but strong artificial illumination such as torch and an opaque tube in place of costly diaphanoscope; and (4) invariable use of local anæsthesia. The appended tables show the case notes of the four treated patients. Table 1 (see page 597) shows the clinical condition of the patient on admission. Table 2 (see page 598) shows their condition on the day of discharge.

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TABLE 1

Summary of clinical notes of the cases at the commencement of treatment

of treatment	Condition of prostate urethra and bladder	History of previous retention	Estimation of non-protein nitrogen or urea of blood or serum	Cardio-vascular system	Special Note
6	7	8	9	10	
'39	Prostate enlarged, moderately smooth, non-adherent, harder than normal. Urethra - no stricture. Bladder - no stone-wall - no hypertrophy. Signs of prostatism since 1½ years.	Once 4 months back	...	Normal	Pyorrhœa Elephantiasis (filarial) left forearm, no lymphangitic fever since 3 years.
40	Prostate - enlarged, very big, fairly hard, smooth, non-adherent, urethra - no stricture. Bladder - no stone-wall - hypertrophied. Urine dribbling continuously since 3 weeks. Other signs and symptoms of prostatism since 2 years.	Twice	Blood urea 64 mgm. per 100 c.c. on 18-10-'39	B. P. : Syst. 168, Dia. 90 heart-hypertrophy.	Was for 5 months in a big hospital, refused operation. Testosterone injection with some relief.
40	Prostate - enlarged, smooth, fairly hard, non-adherent, urethra - no stricture. Bladder - no stone, wall-hypertrophied, signs and symptoms of prostatism since a year. Supra-pubic scar of previous operation.	Once	Blood urea 56 mgm. per 100 c.c. on 9-5-'40	B. P. : Syst. 176, Dia. 95. Heart-hypertrophy.	In a hospital under went supra pubic cystotomy. Refused prostatectomy as he began to pass urine for urethra.
42	Prostate - enlarged, fairly hard not adherent, smooth urethra - no stricture. Bladder - no stone, wall - hypertrophied, signs and symptoms of prostatism since 3 years.	Twice	...	Heart-hypertrophy.	...

Treatment of Enlargement of the Prostate
J. K. Mohanty

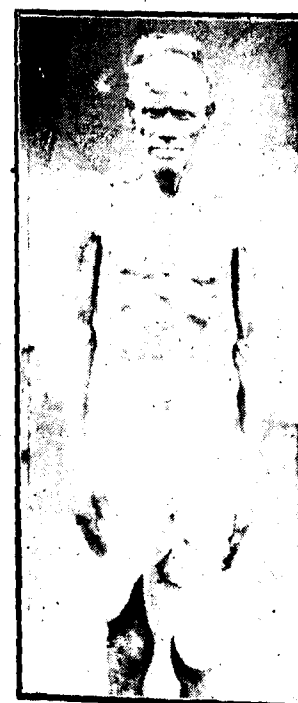


Photo of Case No. 4 taken 7 weeks after the operation. No rejuvenating effect is discernible.

[vide page 598]

gs.—All the four patients are doing well and are in keeping with their age. No urinary trouble in any excepting case No. 42 who suffered from frequency of micturition attended with burning pain on 2-12-'42. The patient could not come personally to me. His son came and reported the matter on 3-12-'42. I gave him simple Alkaline mixture 9 doses, with necessary instructions. On 9-12-'42, his son again came and reported that the patient came round alright with that medicine. Since then he is doing well. Last time I heard from him in the 2nd week of February 1943.

Treatment of Enlargement of the Prostrate by Steinach's II Operation

J. K. MOHANTY, L.M.P. Medalist.
S. A. S., P. O. Angul, Dt. Cuttack, Orissa.

HYPERTROPHY of the prostate is one of the scourges of old age. It is true that the ætiology is still shrouded in mystery. To give amelioration from its miserable sufferings many a method of treatment came into vogue and receded into obscurity at different periods. At present bold operative treatment is the main-stay for this malady. None the less one hesitates to declare that it has solved the problem. The rate of mortality in different methods of operation, whether total enucleation or partial resection, through the supra-pubic or perineal route, is far from being satisfactory. The aged and worn-out patient with a pessimistic outlook and short expectation of life dreads most the prolonged stay in hospital. Many refuse operation till some grave emergency supervenes. By this time cardio-vesicular and urinary damage progresses to such an extent as to make the prognosis extremely bad or forbid operative interference for radical cure. From time to time medical men are therefore trying to find out other easier and simpler methods of treatment as well as to explore its ætiology. In recent years attention has been veered on the theory of hormonal testicular imbalance and on this hypothesis two lines of treatment have emerged, one hormonal substitution therapy to make good the deficient testicular hormone and the other to cause its increased production to restore the endocrine poise by means of Steinach's II operation. I tried the latter method of treatment in four of my cases and have followed them upto date. It is remarkable that almost with a plethora of data on the results of the former line of treatment, i.e., hormonal substitution therapy, though with conflicting views and findings, there are meagre reports on the results of Steinach's II operation. For this I venture to report the results of these four cases:

I adopt the following procedure in operation, which is a slightly modified one than that described by ELLIOT SMITH.

Under local anæsthesia a median scrotal incision is made and each testis is brought out in turn; Tunica vaginalis is opened; the sac everted and tied as in a vaginal hydrocele operation. Digital fossa defined, visceral layer of tunica vaginalis incised to deepen the groove and ensure that the ligature does not exert any tension on tunica albuginea; with a sinus forceps and under direct vision against a strong artificial illumination, the rays of light passing through the structures and a opaque tube to the surgeon's eye (in order to recognise and avoid blood vessels) a silk ligature is passed through the digital fossa, so that it occupies the groove between the globus major and testis; the ligature is tied with a surgeon's knot. I think the success lies in avoiding blood vessels and tension on tunica albuginea.

Main modification introduced by me.—(1) Single scrotal incision instead of two inguinal ones; (2) eversion of the sac; (3) use of ordinary but strong artificial illumination such as torch and an opaque tube in place of costly diaphanoscope; and (4) invariable use of local anæsthesia.

The appended tables show the case notes of the four treated patients. Table 1 (see page 597) shows the clinical condition of the patient on admission. Table 2 (see page 598) shows their condition on the day of discharge.

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TABLE I

Summary of clinical notes of the cases at the commencement of treatment

Case No.	Age	whether acute retention was present	Amount of residual urine and date of examination	Date of commencement of treatment	Condition of prostate urethra and bladder	History of previous retention	Estimation of non-protein nitrogen or urea of blood or serum	Cardio-vascular system	Special Note
1	2	3	4	5	6	7	8	9	10
1	64	Yes	1 oz. 3 dr. 17.9.'39	12.9.'39	Prostate enlarged, moderately smooth, non-adherent, harder than normal. Urethra-no stricture. Bladder-no stone-wall-no hypertrophy. Signs of prostatism since 1½ years.	Once 4 months back	...	Normal	Pyorrhœa Elephantiasis (filarial) left forearm, no lymphangitic fever since 3 years.
2	62	No	3 oz. 20.2.'40	18.2.'40	Prostate-enlarged, very big, fairly hard, smooth, non-adherent, urethra-no stricture. Bladder-no stone-wall-hypertrophied. Urine dribbling continuously since 3 weeks. Other signs and symptoms of prostatism since 2 years.	Twice	Blood urea 64 mgm. per 100 c.c. on 18.10.'39	B. P.: Syst. 168, Dia. 90 heart-hypertrophy.	Was for 5 months in a big hospital, refused operation. Testosterone injection with some relief.
3	66	No	2½ oz. 10.7.'40	8.7.'40	Prostate-enlarged, smooth, fairly hard, non-adherent, urethra-no stricture. Bladder-no stone, wall-hypertrophied, signs and symptoms of prostatism since a year. Supra-pubic scar of previous operation.	Once	Blood urea 56 mgm. per 100 c.c. on 9.5.'40	B. P.: Syst. 176, Dia. 95. Heart-hypertrophy.	In a hospital under went supra pubic cystotomy. Refused prostatectomy as he began to pass urine for urethra.
4	72	Yes	...	26.6.'42	Prostate-enlarged, fairly hard not adherent, smooth urethra-no stricture. Bladder-no stone, wall-hypertrophied, signs and symptoms of prostatism since 3 years.	Twice	...	Heart-hypertrophy.	...

Follow up findings.—All the four patients are doing well and are in good health quite in keeping with their age. No urinary trouble in any excepting case No. 4 who suffered from frequency of micturition attended with burning pain on 2-12'42. The patient could not come personally to me. His son came and reported the matter on 3-12-'42. I gave him simple Alkaline mixture 9 doses, with necessary instructions. On 9-12-'42, his son again came and reported that the patient came round alright with that medicine. Since then he is doing well. Last time I heard from him in the 2nd week of February 1943.

TABLE 2

Table showing treatment, progress and condition of patients at the time of discharge

Case No.	Date of commencement of treatment	Date of operation	(1) Post-operative treatment (2) Complication (3) Progress	Date of discharge	Condition of the patient at the time of discharge	Date since which the patient began to pass urine without any difficulty
1	2	3	4	5	6	7
1	12.9.'39	20.9.'39	Continuous bladder drainage per urethral catheter for 6 days, and daily wash with lotion acriflavine.	18.10.'39	No residual urine, prostate definitely softer and smaller, no urinary difficulty, flow of urine normal.	From 28.9.'39
2	18.2.'40	24.2.'40	do.	18.3.'40	No residual urine, prostate softer and smaller, no urinary difficulty, flow of urine thick and forceful, bladder wall hypertrophy reduced, urine clear, B. P. Syst. 1 Dia. 80.	From 12.3.'40
3	8.7.'40		do. and rise of temp. on 2nd & 3rd day of operation. M & B 693 internally for 4 days. A small stitch abscess.	16.8.'40	Urine clear, no residual urine, prostate softer and smaller, thickness of bladder wall much reduced, no urinary difficulty, flow almost normal. B. P. Syst. 156, Dia. 84.	From 28.7.'40
4	26.6.'42	27.6.'42	(i) do. (ii) Nil. (iii) Suffered from malaria during convalescence.	27.8.'42	Urine clear-no residual urine, prostate softer and smaller, thickness of the bladder wall much reduced, no urinary difficulty, flow thick and forceful.	From 13.7.'42 Photo taken on 16.8.'42

I had the occasion of examining case No. 2 on 16.2.'41 and No. 3 on 19.8.'42, i.e., nearly one year and two years after the operation respectively. Both of them were fairly in good health; there was no urinary trouble; prostate though softer and smaller than at the time of discharge remained somewhat bigger in size. There was no rejuvenating effect. The appended photo of case No. 4 taken seven weeks after the operation testifies to that effect. But I noted a remarkable change in mental condition of case No. 3. At the time of discharge he was forgetful especially of recent events, irritable, whimsical, childish, self-centred and somewhat indifferent to the sorrows and joys of his near and dear ones. But when I met him in August '42, i.e., 2 years after the operation, I noticed total change in his behaviour, manners and mental condition including memory and willpower and that for the better.

Discussion.—The ætiology of the enlargement of prostate is not yet known. The theory of hormonal testicular imbalance put forth as the cause of this condition is still in the hypothetical stage. No doubt the prostate is one of the necessary sex organs and related hormonically to the testis. But the exact nature of their relationship is not yet understood. S. ZUCKERMAN (1938) as the result of experimental work suggests that there are two hormones at work, both secreted by the testis. One is the male and the other female (œstrogenic). If the œstrogenic hormone becomes predominant—and he presumes it is inclined to do so in elderly men—the prostate hypertrophies. A. S. PARKES and S. ZUCKERMAN actually succeeded in producing enlargement of the prostate in immature monkeys by injecting Oestrin (1935). H. BURROWS found the administration of Oestrin to male mice resulted in prostatic enlargement. Further proof of the action of Oestrin in causing prostatic enlargement in human subject is provided by the fact that the prostate of male infant is enlarged considerably at birth and later diminishes in size when removed from the influence of maternal Oestrin (1936). Experiment has shown that œstrogenic hormone when injected, appears to cause a normal dog's prostate to enlarge. Developmentally and embryologically at least a part of the prostate (prostatic utricle), is homologous with the uterus of the female, both developing from the same organ of the indifferent embryo, the lower united end of the Mullerian duct. Follicular hormone causes development and proliferation and enlargement of prostate (or prostatic utricle) the homologue of uterus.

On the other hand, when follicular hormone is given to a prostatic patient there is no aggravation of symptoms (1938). PILLAY (1943) has found that female hormones when given does not increase the size of the prostate even in the elderly men. Report of GESCHICKER et al (1935) shows that the anterior pituitary-like gonadotropic hormone produced hypertrophy of the prostate in a monkey with urinary obstruction.

From these conflicting reports and findings it is clear that the relationship of the prostate and testis is not so simple as it is supposed to be by some, nor the effect of female hormone on prostate is so simple and direct.

The next question is the source of female hormone (œstrin) in the male. The consensus of opinion is that male hormone is secreted by the interstitial Leydig's cells of testis. Which cells then secrete female hormone? It is believed that testis is a mono-sexual organ and this belief is supported by embryological findings. Of course it is a fact that female hormone has been found in the circulation and excretion of the male in recent years but its exact source in the male body has not yet been found. These are the points which await further light.

If we accept the hypothesis that predominance of female hormone is the cause of the prostatic enlargement, it does not enable us to understand the rationale of the Steinach's No. II operation. How this operation can affect the enlarged prostate is difficult to say, but evidence is accumulating to the effect that it relieves the symptoms of prostratism with reduction of size of the prostate.

One view is that the interstitial cells of the testis hypertrophy and the increased testicular hormone produced thereby brings about recession of prostatic enlargement. Others are of opinion that as the ligature is tied

in the neighbourhood of a sympathetic ganglion, its effect is a reflex one through the sympathetic system.

It is reported that PAUL NIEHAN'S of Zurich (1940) has treated more than 600 cases by this operation with satisfactory results. ELLIOT SMITH reports (1940) twenty cases benefiting from this operation in his hands. MEHTA (1940) gives clinical reports of 10 cases cured by him with this operation. The records of my cases corroborate and support their findings.

The other side of the picture is presented by S. G. MACDONALD (1937). He sounded a different and pessimistic note. Cases of prostatic obstruction subjected to Steinach's II operation came to his care, in which he found gross kidney damage and malignant changes in prostate. MUDALIAR (1941) tried this operation in a few cases but the results were disappointing.

Conclusion.—The operation is very simple and can be performed by any practitioner. Mortality is nil. There are contradictory reports as to its efficacy. But the majority of workers present a favourable clinical result. Faulty technique might be the cause of failure. Presentation of clinical reports, so far, is neither impressive nor voluminous and the method deserves extensive trial and scientific follow-up.

At the moment we are not concerned with the various hypotheses of the rationale of the operation. It is first necessary to substantiate its effectiveness.

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I am also indebted to Dr. G. C. PATTANAIK, M.B., B.S., D.T.M., Civil Assistant Surgeon, Angul, during whose absence I performed operation on case No. 4 admitted into his hospital. The post-operative treatment of this case was carried on partly by him and partly by me under his valuable guidance.

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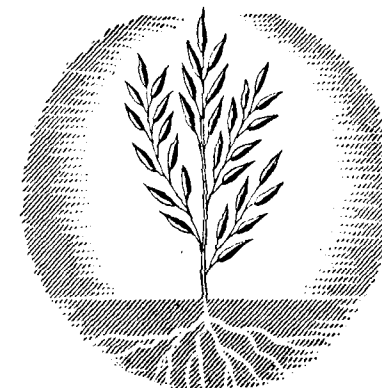
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CH. KRISHNAMURTY, L.M.P.,
Assistant District Medical Officer, West Godavari, Ddore,

MY only excuse in venturing to speak to you about malaria is the little experience I was forced to gain in the course of my service in hyperendemic and endemic localities during the last thirty years. I happened to serve in areas where the spleen index was over 90% amongst children, and had the privilege of twice visiting the same place at an interval of twenty-two years and it was a pleasure for me to compare the conditions, and in fact, an Agent to the Governor, now a member of the Board of Revenue, was so much interested to hear from me the conditions as they existed at my first visit and the second. Chill, fever, malaria and Quinine have become watchwords with most of us. It is unfortunate why every fever with a chill is often labelled as malaria and why Quinine is consciously or unconsciously prescribed as the first thing in every case of such fevers. A dose of Quinine does more harm than good when the temperature is on. It adds to the patient's discomfort and it gives him greater headache, giddiness and dizziness. It prevents parasites from being spotted out in the blood and sometimes in hyperendemic localities, it precipitates black water fever even. It is a waste at this stage. It has always been my practice in institutions I was in charge never to give Quinine as soon as fever is reported. It was a little difficult to change the practice of my predecessors in many places. A rational procedure would be to take a blood smear where possible; clean the liver and bowels, give a diaphoretic to reduce the temperature and create an alkaline stratum and then give Quinine or any of its salts in solution. I have seen it is often unnecessary to give more than 5 grains a day under such conditions, as every grain given is thoroughly absorbed. In fact, in several stations, and particularly in my last station, Markapur, I used for over 2½ years tota-quinine mixture 5 grains a day for five days and the results were exactly similar as when 15 to 20 grains a day were used per day. It is an enormous saving particularly in these days when there is so much scarcity of Quinine and its high cost. One can save over 65% of the money and I have actually done so in many places with no loss of efficiency. There may occasionally be exceptions where small doses may not be sufficient and such cases are fortunately few and far between. I do not propose to bore you with the types of malaria or their descriptions. I will only try to place before you some hints in its treatment. In this connection I wish to point out that all the strains of all the types of malaria whether it be B.T., quartan, or M.T., are not all alike everywhere either in their onset or in their reaction to treatment. Malarial strains in the coastal areas, in the hills and valleys of the Jeypur Agency, or in the Ceded districts, or the Deltas of Kistna and Godavary, all seem to react differently. Malaria in Assam and in the evacuees from Burma mostly appears to be of a pernicious type.

For over three hundred years Cinchona and its salts have been a panacea in the treatment of acute malaria. The method and manner of their administration differed from time to time depending upon the investigations of research workers. Dextro-rotatory alkaloids of cinchona were found to be more parasitocidal than Quinine and other levorotatory alkaloids. The rate of cure without relapses was greater with cinchona than with Quinine. Cinchona and its alkaloids are best absorbed during

* A paper read before a Medical Conference, and sent to 'The Antiseptic' for publication.

the alkaline tide. Solutions with mineral acids were found to cause gastric and renal irritations. Solutions with vegetable acids were found more effective as Quinine is absorbed as a carbonate. A smaller dose of Quinine or Cinchona is found sufficient when the liver and bowels are cleaned with a cholagogue and a saline. These findings brought about the famous Acton's treatment and Sinton's treatment. A report of the Malaria Commission has given us some startling disclosures in treatment. They observed that there is no drug or combination of drugs capable of producing a cure without relapses. To treat a primary attack, treatment with Quinine for five days to one week is necessary. Plasmochia should not be given during the paroxysmal period. To aim at clinical prophylaxis a dose of 6 grains a day for all the time a patient stops in malarial tracts and for several months after he returns from the endemic locality is recommended. This appears rather hard. I have some experience of quinine prophylaxis having had to do 3 years of agency service during the last 30 years.

I was taking a small dose of 1 grain a day towards evening for all the time I was in the agency and for some months after I returned to the plains. I may say I never had any acute attack. Probably smaller doses will quite well do for poor Indian physique as is the case with all other patent drugs. Clinical prophylaxis has great advantages. It protects against severe attacks and produces a certain amount of immunity. The amount of Quinine necessary to be taken daily and the period it has to be taken has varied from time to time. While thirty to sixty grains a day was considered necessary twenty-five years ago for at least a week and 10 grains a day for at least a month thereafter, it is now the established practice not to give more than 20 grains a day and for not more than 5 to 7 days during a primary attack. As it was prefaced in the beginning of this paper tota-quinine, a combination of total alkaloids with 15% Quinine Sulphate is less costly, more effective, and much less unpleasant in its after effects, but some people complain of diarrhoea, or sickness and prefer Quinine instead. Again the average illiterate patient has a psychology all his own that unless the mixture is rosy red, it is not Quinine at all. The question of preventing relapses with quinine therapy has gone out of use. The only method of preventing relapse is by raising the resistance of the individual. Until the advent of Plasmochin, the destruction of gametes of the S.T. infection was not solved. Quinine could kill only the asexual forms of the subtertian, sexual and asexual forms of the benign tertian and quartan. The amount of plasmochin necessary to kill gametes of the S.T. has been stated variously by various workers. The dose varied from four to fifteen tablets of 0.01 grams. The dose varied after the patient becomes apyrexial, i.e., usually not before the fourth day.

So many papers have been published, more than 600, regarding the efficacy of synthetic ante-malarial remedies and their gametocidal activities and the gist of many of them are the findings noted above. Atebrin is another drug having the same action as Quinine and it is stated that 12 to 15 tablets is enough to establish a clinical cure for both forms of B.T. and quartan or asexual forms of S.T. Like Quinine it has no action on the creasents and here again plasmochin should come to its rescue. It is unsuitable for clinical prophylaxis as it produces yellowish discolouration of the skin. Atebrine is regarded as superior to Quinine for treatment of acute attacks of S.T. infections and for those with a previous history of black water fever or for pregnant ladies or for those

with a Quinine idiosyncrasy. As is usual with everything the synthetic anti-malarial remedies, Atebrine, and Plasmocaine had a rousing reception when they first appeared more than a decade ago. It was found that Quinine was better than Atebrine. Atebrine was found to inflict irreparable damage to the liver, besides the other temporary ill-effects like an yellowish tinge of the skin and nails, mental excitements and so on. Atebrine and Plasmocaine being enemy products are not procurable now. But parallels are manufactured and they are all acridine derivatives.

The question of treatment of relapses is still a baffling one. To say one should depend on powers of resistance or raise one's powers in this direction is almost acknowledging a defeat. It is the B.T. or a mixed B.T. and S.T., that is the main cause of relapses. It is remarkable to see the aboriginal tribes and even those immigrants with long residence in malarial tracts being comparatively immune from fever. It is the new arrival that is troubled most and that during the first year or two. Protection is needed for the new arrival and it is here that prophylaxis with other measures aimed at the destruction of the mosquitoes and the larva are most needed. Those with long residence or those who are natives of malarial tracts acquire immunity against malaria. If a new arrival wants to protect himself against relapses he should pass through one or two attacks uninfluenced by Quinine.

A combination of Salvarsan injections at monthly intervals with Quinine treatment is an efficacious method of preventing B.T. relapses. Salvarsan is believed by some to be a specific in B.T. relapses. It is a general hematinic and raises the patient's resistance. The best way is to give 3 grams of Quinine with 0.1 gram of Plasmocaine thrice daily for seven days consecutively, rest for four days for elimination. Five such courses have to be given. A combination of Quinine and Plasmocaine not only destroys both forms of the parasites of the subtertian and the others but also counteracts the effects of Plasmocaine.

A series of amusing papers was published in October 1934 issue of the *I.M.G.* bearing on the treatment of malaria. Quite a lot was said far and against parenteral administration of Quinine. One doctor has given out that where the temperature does not rise over 101°F. during the first twenty-four hours, the case yields to treatment with Quinine by mouth within forty eight hours and where the temperature is over this point intramuscular injections are said to be needed. Quinine by mouth when administered properly is absorbed sufficiently quickly within fifteen minutes. Except when the stomach rebels and the patient is unconscious or when its action is urgently needed as in pernicious types, there is no justification for parenteral administration. The intramuscular and intravenous injections of Quinine have their own places. It is stated that intramuscular Quinine injections cause local necrosis, paresis and even tetanus. Provided the technique is aseptic, none of these need be feared. Unless the patient is moribund, there is no necessity to give it (Quinine, intravenously). Quinine given intravenously produces a sudden fall of blood pressure and threatening cardiac failure. It is essential to combine Adrenalin and Glucose with Quinine and give it slowly to avoid such dangers. It must be remembered that one injection is not enough. The injections have to be repeated every six hours until the patient is conscious and thereafter Quinine should be continued by the mouth. Unless there are distinct contra-indications the method of choice for giving Quinine should be by mouth alone.

Naga Sore*

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NAGA SORE is rare in this Ilaga. During my stay of about 5 years at this place, these were the first cases to be seen and treated. The characteristic features conformed very nicely to the details of the description given by Dr. PANJA and GHOSH in the *Indian Medical Gazette*, of January, 1944.

1. The first case was seen in September, 1943, a young Sikh Jat, with a run-down health. The ulcer was of about 15 days duration. He remained in hospital for 18 days.

2. The 2nd case was admitted in October 1943. He was a Sikh Jat, with marked anæmia. He had ulcer on leg of about 20 days duration and stayed in hospital for 15 days.

Both these cases had to leave the hospital with incomplete recovery on account of family circumstances.

3. The 3rd case was a 55 years old aged Chamar, who was financially in straitened circumstances, and consequently lived in bad hygienic conditions. Oro-dental hygiene was poor. He stayed in the hospital for two months and 3 days. He had a traumatic history of ulcers on legs, tendons were exposed.

4 to 8. In October five more cases came, two were anæmic women, with enlarged spleen, who had come from water-logged areas. All had ulcers on legs and ankles and stayed in hospital for 8 to 26 days.

9. This case came in November and was indoor here for 3 months. He was an aged fellow who did not respect even the fundamentals of elementary hygiene, had an ulcer on lower end of the leg which had gone deep to expose the extensor tendons.

10. This was an orphan boy of about 14 years of age, with straitened means. The ulcer was on the ankle. Stay in hospital was for two months.

11. This case was a middle aged Chamar of very poor means, with ulcer on foot in which phalangeal bones were affected as a result of necroses, great toe and 2nd phalanx were to be severed during the treatment. He was fed on hospital diet and fattened up.

Treatment.—It varied with individual cases but the sheet anchor always lay in repeated scrapings, carbolic acid applications for the exuberant granulations and dressings with Mag. Sulphas powdered (in cases not scraped) with copper sulphate solution (in cases not touched with carbolic acid) and with Eusol in the rest. I had to face successes and disappointments. Ultimately I began to treat cases with powdered Sulphanilamide and the marvellous results which followed such a procedure were nothing but dramatic. The worse cases which I had to confront were Nos. 3, 9 and 11, which during their course even tried the patience of the patients. Further acute necroses of phalanges was wonderfully stopped in case No. 11. Even some of the cases were shown to the Civil Surgeon, Ludhiana, and the Inspector-General of Civil Hospitals, the Punjab, Lahore, on their visits.

* A survey of 11 cases treated in the Civil Hospital, Samrala, District Ludhiana.
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The Phenol and Copper Sulphate liquid solution introduced in later cases was showing superficial burns due to the non-solubility of Phenol in water.

The points of interest which were noticed in all the cases invariably are summarized below:—

(1) *Site*.—All ulcers were localized to legs, ankles and feet.

(2) Glandular involvement at groins was absent inspite of the extensive lesions.

(3) *Seasonal prevalence*.—The cases were only seen between September and December.

(4) *History*.—A trauma was the exciting cause in most of the cases.

(5) *Look*.—All ulcers exhibited nearly the same appearances with peculiar smell, a dirty base with greyish granulations and a tendency to go deep and deep with plenty of discharge.

(6) *General health*.—Lowered vitality and poor health were the constant features.

(7) *Diet*.—Liberal diet played its role well in the control of ulcers.

My regret is that microscopic examinations were not carried out to label the characteristic of the infecting micro-organisms.

(8) *Rarity of the cases in this Ilaga*.

I have to record my grateful thanks to Major N. A. Qureshi, P.C.M.S., Civil Surgeon, Ludhiana, for the interest shown in such cases on his visits and the permission to send these case notes for publication.

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The Use of Sulphonilamide in Puerperal Sepsis And other Gynæcological Conditions*

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IN India, and mostly in the Punjab, the death rate from puerperal sepsis has always been one of the most formidable obstacle to a reduction of the maternal mortality rate. It is regrettable that with all the new feats and so many remedies at our hands and disposal, and with the untiring zeal of medical research workers in investigating new methods and lines of treatment, the death rate from puerperal sepsis is so high that one cannot imagine it.

Amongst the causative organisms producing puerperal sepsis, one of the most virulent and commonest is hæmolytic streptococcus. Though this fact has been realised for many years, little or no advance has been made in the treatment of hæmolytic streptococcal infection until recently. Drugs and sera given, orally, intramuscularly, or intravenously, have at one time or another been heralded as being beneficial in the treatment of such infection. There are some followers who switch their faith in these remedies. Experience shows that until the advent of the new sulphanilamide drugs, hæmolytic infections were not favourably influenced in their course by other methods.

In 1928, when I was in charge of the Indian Family and Cantonment General Hospital at Ahmednagar, Deccan, I used anti-streptococcal sera

* Specially contributed to 'The Antiseptic.'

in many cases of puerperal sepsis, and I found that not only was the infection unchecked, but in some cases the patients' condition appeared to be adversely affected by the administration of these preparations. It has also been noticed that before the introduction of sulphanilamide preparations, it was not uncommon for the puerperal patients, who eventually recovered to get recurrent exacerbations of fever after the initial fall of temperature, and quite a number developed inflammatory masses in the pelvis contiguous to the uterus which delayed convalescence. Among the striking facts which is almost due to the introduction of sulphanilamide preparations and treatment, was the rapid fall in temperature by crisis, within two or three days of treatment, the absence of recurring pyrexia once the temperature had fallen, and almost complete lack of residual pelvic inflammatory masses.

From this it follows that one essential factor in the successful use of sulphanilamide is that the patient must be infected by the hæmolytic streptococcus. Having established this one criterion it seems that the extent of the disease, or virulence of the organisms, although naturally influencing the progress, is merely a guide, as to the dosage indicated in a particular case. Not only the success can be looked for in the local pelvic infections, but cases of septicæmia, even when showing clinical signs of peritonitis, apparently are capable of responding as well.

At this stage I should like to mention that apart from the streptococci many other organisms may cause puerperal infection, but as a rule the infection in these cases is not likely to be so severe. Investigations show that these organisms may be present in the normal vagina, before the onset of labour, so that it is quite possible that many of these infections (with organisms other than the hæmolytic streptococcus) may be endogenous in origin. Sometimes excessive trauma, by diminishing local resistance, may be a big factor in bringing about infection. It is therefore of utmost importance that all cases of puerperal infection should not be treated haphazardly with sulphanilamide preparations. To obviate the risk of complications, one must always begin with, by taking a swab from the vagina and urine for the adequate bacteriological investigations. In the absence of such examination, treatment with sulphanilamide, not only will bring the drug into disrepute, but will also seriously affect the reputation of the doctor.

Doses of Sulphanilamide in puerperal infection of hæmolytic type.—To achieve speedy and good results one should begin with 1 gm. daily for every 20 lbs. weight, a dose equivalent to 6.65 gr. for a woman weighing 9 stones. Usually 3.4 grms. (45.60 grains) a day is sufficient. In severely ill cases larger doses may be employed, according to the tolerance of the patient. The treatment should be continued for a few days after the temperature has subsided. Local treatment of the infected wound is of equal importance. It is therefore very necessary that all the infected wounds should be attended to very carefully, and in acute cases measures should be adopted for the free drainage of lochia. A patient should be made to sit up in bed so that the lochia may drain more freely from the vagina and oxytoxics (such as Ergot and Quinine) may be given, in the hope that uterine contractions will derive the infected secretions from the uterine cavity. To promote free flow of such infected matters, use of intra-uterine Glycerine by means of a soft rubber catheter has proved very good. The value of general hygienic measures and real good

nursing along with the above mentioned treatment should not be forgotten. Constipation is usually found to be very troublesome in these cases. This should be met with mild soap and water enema. Pulv. Glycyrrhizæ Co., in one drachm doses at bed time with lukewarm water or milk answers quite well. Should signs of diarrhœa occur everything should be stopped. The diet should be mainly carbohydrate, and as palatable as possible. Fluids should be given freely with the hope of flushing the kidneys.

Other gynæcological conditions treated with Sulphanilamide.—Here I start with leucorrhœa or vaginitis first. In women whose genital organs are functionally active, leucorrhœal discharges may come from either the vagina or the cervix uteri, or from the body of the uterus. The so-called (white flux) is a condition particularly common in the tropics, and one of the great embarrassments to the general practitioners, because in India proper examination is rarely permitted. Leucorrhœa occurs almost as frequently in the virgin as in the married women.

The causative organisms in leucorrhœa are the streptococci, B. Coli, Fungi Protozoa, Trichomonas, or even the ova of worms in the majority of cases of leucorrhœa. In married women leucorrhœa should be considered under two heads for treatment with Sulphanilamides.

1. *Puerperal vaginitis*.—This is the commonest kind of vaginitis in puerperal vaginitis. After delivery involution of the vagina is often deficient. In delivery the vagina is bruised, stretched, and often torn, and from these injuries result imperfect involution and inflammation of the vagina. The cervix often is inflamed also, and there is erosion of the same. The "whites" that escapes is mostly pus.

2. *Gonorrhœal vaginitis*.—To distinguish this from other kinds is its acuteness, the sudden onset, the thick yellow abundant discharge, and the redness, and tenderness of the parts, the causative organisms of course being the gonococcus.

Treatment with Sulphanilamide.—Treatment of the above mentioned gynæcological conditions with regulated doses of Sulphanilamide has proved a great success for the past 15 years. I treated nearly 40 cases during the last one year, and nearly all of them recovered. With the oral treatment I have been using 2% solution of the drug for vaginal wash. This dried the secretion within 5-6 days. Of the other gynæcological conditions that respond favourably to Sulphanilamide treatment are peri and parametritis, and salpingitis. Before launching on treatment with Sulphanilamide it is of the highest importance that in all cases an adequate bacteriological examination of the discharge should be made.

Related substances.—Two other related compounds need mention, Proseptasine and Soluseptasine. The former is the benzyl derivate of Sulphanilamide, that is P-benzyl-amino-benzene sulphonamides:



It is supplied in the form of tablets each weighing 5 grms. and intended for oral administration. The dose recommended by the makers in puerperal sepsis is 7.4 tablets every 4 hours until the temperature drops. Subsequently one tablet is given every 4 hours for 4 days or longer. The other product Soluseptasine is intended for parenteral use, either intravenously, or intramuscularly as the case may be. In some cases one has to combine the two.

How to Examine a Case of Acute Abdomen in Females?*

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IN women, acute abdomen, besides being due to same causes as in men (except those confined to male sex *e.g.*, torsion of an undescended testis), may also be due to obstetrical and gynaecological conditions; hence acute abdomen in women presents many difficulties in diagnosis and a thorough examination of the case with regards to its minute details should be done, in order to arrive at an early and precise diagnosis. An attempt is made in this paper to help the practitioner as regards the procedure of routine examination and significance of some of the steps.

I. **History.**—1. *Of the present illness*, with special reference to the onset and the order of appearance of the symptoms.

(a) *Pain* is the outstanding symptom; note its (i) severity; (ii) character, griping, burning, stabbing, etc.; (iii) whether it is continuous, *e.g.*, paroxysmal in intestinal colic, constant but also in paroxysms in biliary colic; (iv) site *e.g.*, in appendicitis pain and tenderness are most marked or confined to right iliac fossa, while in salpingitis generally both sides in the lower abdomen are tender and painful, though this may be unilateral if the infection has spread from the appendix; (v) mode of onset—whether sudden or gradual, *e.g.*, sudden in biliary colic (within a few minutes its climax) perforated peptic ulcer (it is intense and agonising, has given way), hæmorrhage, torsion (*e.g.*, of ovarian cyst), or strangulation; (vi) relieved by anything *e.g.*, relieved by pressure in intestinal colic; and (vii) whether it shoots up or down *e.g.*, shooting up to the right shoulder in biliary colic—shooting down the groin and ovary in renal colic.

(b) *Other symptoms*:—Vomiting, diarrhoea, constipation, cough, fever: Note the details of these symptoms, *e.g.*, fever with rigor or without rigor. Ask whether any flatus is passed or not, *e.g.*, flatus is not passed in obstruction. In acute abdomen supervening in a case of continuous fever of some duration, there is possibility of typhoid perforation.

2. *Of past illness*:—In children inquire whether suffered from measles or small-pox, as both may in their early stages simulate acute abdomen. History of dysentery may give a clue as to the possibility of amebic hepatitis or typhilitis. Also note history of past illness pointing to ulcer, recent delivery, abortion, or gonorrhoea may give clue to the possibility of salpingitis.

3. *Menstrual history*:—Dysmenorrhoea may simulate acute abdomen, hence history of painful periods is important. If there is a history of one or two periods missed and there is slight vaginal discharge of dark blood, it may be a case of ruptured ectopic pregnancy.

4. *Occupation*:—Plumbism gives rise to intestinal colic.

5. *Whether pregnant or not*:—If a woman is pregnant, we have to think of the additional causes of acute abdomen operating during pregnancy, *e.g.*, rupture of ectopic gestation, concealed accidental hæmorrhage, acute hydromnios.

* Specially contributed to 'The Antiseptic.'

II. **General examination.**—Note—(1) age—intussusception in children, biliary colic in stout women over forty; (2) emaciated—malignant disease in old; (3) expression—anxious drawn face, pallor, air-hunger, restlessness, sweat on the head, etc.; (4) jaundice—in cholecystitis, though absence of it is not a point against cholecystitis; (5) signs of dehydration—due to severe vomiting or diarrhoea; (6) decubitus—in appendicitis the patient draws up legs and keeps them flexed: in simple intestinal colic the patient would be rolling in her bed, while in many other types of acute abdomen, the patient would be down with an anxious expression.

III. **Examination of the abdomen.**—1. *Inspection*:—Note (a) whether bloated or retracted—rapid and marked distension is a special feature of intestinal obstruction and obstruction in the large bowel gives early distension and it is marked in the flanks, while obstruction in the small bowel gives only fullness and it is mainly central. Enlarged abdomen may also be due to free or encysted fluid or enlargement of the uterus. If there is free fluid,—flanks bulge and front is flat, while in ovarian cyst flanks are flat and front bulges; (b) any localised swelling—and whether it moves with respiration; (c) note the breathing—shallow or quick. Exaggerated abdominal breathing in diabetic ketosis; (d) any visible peristalsis, *e.g.*, in acute intestinal obstruction; and (e) in new born inspect the anus—imperforate anus.

2. *Palpation*:—Note (a) rigidity and (b) tenderness:—Rigidity combined with tenderness always means inflammation of the underlying peritoneum; board-like rigidity is present in cases of peritonitis and perforation; (c) feel for any mass—note its position, shape etc.; if it is in the lowest part of the abdomen, catheterise and then examine. In later weeks of pregnancy, gravid uterus can easily be made out and if it is distended, tender and hard, it may be a case of concealed accidental hæmorrhage; and (d) examine the hernial apertures thoroughly.

3. *Percussion*:—When the fluid is free, the dullness alters with the position of the patient. In ovarian cyst, it does not alter with the position of the patient. Loss of liver dullness in the midaxillary line means free gas in the peritoneal cavity or right pneumothorax.

4. *Auscultation*:—Increased peristaltic sounds are audible in acute obstruction. In perforation and peritonitis, there is silence all over the abdomen. In appendicitis no gurgling sounds are heard owing to spasm of the ileo-cæcal sphincter. Friction may be heard over liver or spleen in some cases of peritonitis and with embolism of spleen.

IV. **Pulse, temperature and respiration.**—Fever is usually present in all inflammatory lesions, but absent when there is only obstruction. It is not likely to be high except in cholecystitis, appendicitis in children, pyelitis and malaria. In obstruction it may be subnormal, but a slight rise accompanies onset of peritonitis and an abrupt fall follows perforation. If the temperature and pulse be normal we may exclude inflammatory conditions. The temperature alone is not sufficient guide in this respect, but in general terms no serious abdominal condition exists without the pulse rate exceeding 90 or 100. A normal pulse practically excludes intestinal obstruction. Note pulse-respiration ratio.

V. **Examination of other systems.**—(1) Chest Examination—*e.g.*, pneumonia may simulate acute abdomen, so also spontaneous pneumothorax

and coronary thrombosis, (2) examination of nervous system—jerks, A. R. pupil etc. for tabes; (3) eyes—note their tension, pupil—for glaucoma; (4) examination of the mouth in children—Koplick's spots for measles; and (5) examination of gums—blue line in lead colic.

VI. **Enema.**—In acute intestinal obstruction, the enema will have no result, though at the commencement the bowel below the obstruction may empty itself. If the obstruction is low down and not far from the anus, it may not be possible to introduce more than a small quantity of fluid. In doubtful cases a second enema is necessary.

VII. **Examine the pelvis per vaginam.**—It will help in defining whether a painful area is low down or high up. Note any tenderness, swelling, etc. By bi-manual examination, the size, shape, and position of the uterus can be made out. Tumours, tubal or ovarian swellings, can also be felt. The bladder and rectum should be empty.

VIII. **Laboratory examination.**—1. *Urine examination* :—(a) Ketone bodies—e.g., cases of severe diabetic ketosis before onset of coma may simulate acute abdomen. (b) Albumin—in pyelitis: In accidental hæmorrhage in pregnancy, urine contains albumin.

2. *Blood examination* :—Microscopic for malarial parasites—as malaria may simulate acute abdomen.

3. *Stool examination* :—Naked eye—frequent small quantities of blood-stained mucous in cases of intussusception. Microscopic examination for eggs of round worms, amœbia, cysts—as round worms, amœbic hepatitis and typhilitis may simulate acute abdomen. In conclusion, it may be pointed out that if one wants to avoid grave mistakes in diagnosis of cases of acute abdomen, a thorough examination is necessary. Diagnosis, if it is to help treatment, should be sound and complete.

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Cases and Comments

A case report of a patient addicted both to Opium and Canabis Indica

PREMSINGH RATHORE, M.B., B.S. (Madras),
Manek Chawk, Ratlam.

I AM herewith sending you the case sheet of a patient addicted both to Opium and *Canabis Indica*. Previous history of dysentery and syphilis.

Patient, aged 30 years, Hindu, addicted to take 30 grains of Opium in the morning and 10 tolas of *Bhang* (*Canabis Indica*) in the evening. He was suffering from attacks of asthma and chronic bronchitis.

On examination the patient was weak, anæmic and emaciated.
Digestive system :—Spleen palpable, 2 fingers.

Respiratory system :—Expiration prolonged, rales and rhonchi on both sides.

C. V. system :—Nil particular.

Nervous system :—Nil particular.

OCT. '44] A PATIENT ADDICTED BOTH TO OPIUM & CANABIS INDICA—P. R. 611

To cure him of *canabis indica* habit, I gave him one tablet of *Amphetamine* (Benzedrine tablet) at 4 p.m., about one hour before his time of taking Cind. He successfully avoided it that day. Encouraged by this I gave him one tablet at 2 p.m. the next day and he did not feel any craving. From the next day onwards he was given one tablet every morning at 8 a.m. Within a week he was completely alright. On the first day he could not sleep, perhaps due to late taking of the tablet.

Patient was so much encouraged that he requested me to cure him of *opium habit*. The ill-effects of sudden withdrawal of opium are due to the formation of *Oxydimorphine*, an acid-irritating substance in the tissues. The important withdrawal symptoms are: cerebral excitement, restlessness, relaxation of bowels, pain in the stomach, burning sensation in the back, pain in the limbs, etc.

I decided therefore to try the effect of large doses of vitamin C & B₁ along with Calcium. Hence the following treatment was adopted:

1st day: Opium was given in full dose 30 grains; 2nd day: Opium 25 grains; 3rd day: Opium 15 grains; 4th day: Opium 5 grains; 5th day: Opium nil.

1. R Vitamin C tab. 50 mgs. 5; vitamin B₁, tab. 20 mgs. 1; Calcium Sandoz Gran. two tea-spoonsful; Glucose D four tea-spoonsful; Aqua Lemonis one tumblerful. Mft. mix. To be taken 4 times a day.

2. Inj. Calcium Sandoz 10% 10 c.c. Inj. Glucose 25% 25 c.c. intravenously.

3. Inj. Hepastab Forte 2 c.c. I.M. (Hb. % 60%).

The above treatment was continued for a fortnight. The patient was well. His Hb. rose to 100% and he no more required any opium or *Cannaba Indica*.

The patient did not complain of anything during the first four days, but on the fifth day at about four o'clock in the morning he had loose motions and severe pain in the abdomen. The patient was very restless and so thinking it to be a withdrawal symptom I injected Morphine $\frac{1}{4}$ gr. and Atropine $\frac{1}{100}$ gr. When I examined him next morning the pain was still there and the patient had half a doz. loose motions. As the patient suffered from amœbic dysentery in the past and as this form of dysentery was very common in Central India, I gave him inj. Emetine Hydrochloride gr. 1 and followed it with Kaolin, creta mixture. The pain subsided within a few hours and the frequency of stools was reduced very much.

So he was given a course of six Emetine injections followed by a course of Carbarson Capsules (Lilly) one twice a day after meals for 10 days. He was alright.

During the period he was taking Amphetamine he used to have attacks of asthma, both in the night and day. The night attacks were controlled by giving two tablets of *Asthamindon* before retiring to bed. And during day his attacks were cut short by giving him injection Adrenalin 1 in 1000 1 c.c. But after stopping opium, the frequency of attacks was reduced and during the last 10 days he had not a single attack of asthma.

At times he was given Soneryl tablet or Gardenal tablet to induce him to sleep.

Points of interest.—Amphetamine (Benzedrine tablet) proved successful in stopping the habit of taking *Cannaba Indica* in such a large dose, 10 tolas a day (1½ ounces) at a time.

2. The role of vitamin C and B₂ along with Calcium and liver in prevention of formation of Oxydimorphine as judged by the absence of many of the withdrawal symptoms even when the dose of opium was reduced so rapidly.

3. The absence of asthmatic attacks after the stoppage of opium.

M & B 693 in Measles

KAMAL KRISHNA CHATTERJEE, L.M.F.,
M.O. Garh Lakhanpur, Surguja State, E. S. A.

THE well-known Sulphapyridine M & B 693 tablets are not only a specific for the cocci infection for which they are said to be. They also play an important part in many infectious diseases, the causative organism of which is still unknown.

Recently I had occasion to treat 15 patients with measles in the early stage with M & B 693 tablets. The age of the patients were from 10 months to 8 years. In each case the drug was started orally after the second day of the appearance of rash and in doses varying from ½ to 1 tablet (5 grm. tablet) every 4 hours for the first two days with alkaline mixture and from the next day the same dose t.d.s. until the fever and all catarrhal (specially naso-pharyngeal) symptoms subsided. In simple cases the temperature came down to normal on the next day of its administration and after the second day in severe cases. Only in one case the temperature came down to normal after 4 days of its administration as this case had developed bronchitis along with the appearance of rash. In all cases the distressing acute symptoms varying from severe coryza to acute bronchitis showed signs of improvement after the second or third dose. In one case Ch. tonsillitis, aggravated after the appearance of rash, responded to this drug very well.

The most interesting points of the cases are that not a single case had developed any graver complications, viz., broncho-pneumonia or dysentery as these two were very common in the recent epidemic which took away many lives in this part of the country.

I therefore, request the readers to give a trial to this remedy as a preventive against the complications of measles and I think every case will be success.

References :—Antiseptic Vol. 38, No. 2, Page 108.

An Unusual Case of Foreign body Removed per Rectum

BHANUSHANKER K. CHHAYA, M.B., B.S.,
Assistant Surgeon, Jubilee Hospital, Bhuj-Kutch.

A YOUNG sailor, aged 25 years, resident of a port in Kutch was admitted in the Jubilee Hospital, Bhuj-Kutch, on 23rd March 1944 with history of abdominal pain and fever.

On examination a hard swelling was detected in the left inguinal region rather lower down. Abdomen was distended and tympanitic. Swelling was definitely intra-abdominal, but there were no marked rigidity, vomiting or any rise in the pulse rate. Pulse 78 per minute. Respiration 20 per minute. Temp. 100° F.

On account of the above facts and the duration of a week that he gave, it was decided that it was not a case of any abdominal emergency.

Careful inquiries were made from the patient and he admitted of having introduced iron rods inside his rectum.

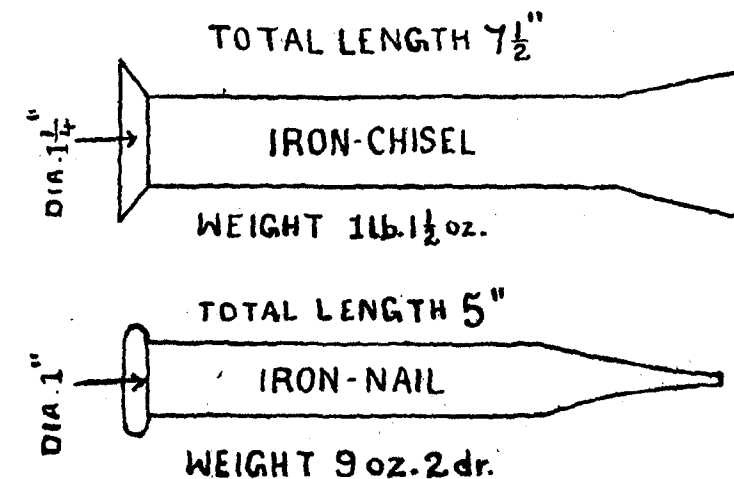
Though unbelievable as it seemed X-ray screening examination was done and to our surprise it revealed two distinct shadows of foreign bodies obliquely lodged in the left iliac fossa.

Patient was prepared for operation as usual and on the 25th of March was put on the operation table in the lithotomy position. Rectal examination with finger was then done and the tips of the foreign bodies were distinctly felt high up.

Thereafter under general anaesthesia with chloroform two foreign bodies (iron chisel and a nail) were removed per rectum one by one by Dr. K. T. TASKER with great caution and care.

After treatment was done with ordinary Liquid Paraffin at bed time, tonic mixtures etc. Patient passed a solid motion in the morning of the third day and his general health was getting better every day.

The description of the foreign bodies :



As a matter of fact there is nothing very abnormal in this case, but it just shows a novel side of human nature (in introducing such foreign
[618]

bodies in rectum) and importance of careful medical examination with all aspects because such a case can well be mistaken for a case of an enteric fever or that of an acute abdomen.

I am grateful to Dr. K. T. TASKER, M.R.C.S., L.R.C.P. (Eng.), L.M. (Dub.), M.B., B.S. (Bom.), Chief Medical Officer, Kutch State, Bhuj, for his kind permission to publish this case.

Case Report of a Foreign body in the Left Bronchus

CH. KRISHNAMURTHY, L.M.P.,
Asst. District Medical Officer, West-Godavari, Ellore.

A CHRISTIAN GIRL, aged about 12 years sought admission here on 8-6-1944 at 10-30 a.m. with a history of having swallowed a live fish. The girl was playing with the fish in her mouth and it appears to have slipped inside about 24 hours before admission. The patient on arrival was in acute distress and restless from difficult breathing. The face was cyanosed and the intercostal spaces were heaving in and out with every breath. There were coarse crepitations over the whole of the left lung and they were spreading to the right lung hour after hour. The patient's condition was getting worse. In spite of lack of proper facilities, it was decided to perform a low tracheotomy and attempt at removal of the fish. A low tracheotomy was done under C₂ E₃ by Dr. SIVARAM, M.B., B.S., Superintendent, Government Headquarters Hospital, Ellore, and with a laryngeal forceps introduced through the tracheotomy opening, the fish was caught at the first attempt and brought out. It measured 5" by 3". All the S/S of respiratory distress disappeared like magic soon after the fish was removed. A tracheotomy tube was put in for 24 hours and M & B 693 prescribed internally. The girl made an uneventful recovery and was discharged cured on 23-6-1944 with the wound completely healed.

My thanks are due to DR. G. SIVARAM, M.B., B.S., Superintendent, Government Headquarters Hospital, Ellore, for his kind permission to report the case.

Case Report of Coarctation of Aorta

CH. KRISHNAMURTHY, L.M.P.,
Asst. Dist. Medical Officer, West-Godavari, Ellore.

G. S. came in with signs and symptoms of decompensation viz., pain in the precordium, dyspnoea and palpitation. History of rheumatic fever and syphilis. On examination it was found that he had no pulsation in the left radial, brachial, inguinal, or in the abdominal aorta. He had a systolic murmur at the base and the apex, that at the apex being conducted towards the axilla and angle of scapula. There was enlargement on the left side. X-ray examination showed a boot-shaped heart.

Cases of coarctation are rare and are due to narrowing of the arch of the aorta beyond the origin of the left sub-clavian. Rest, digitalis, Bromides and tonics relieved him.

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Composition & Chemical Formula:—

Each Ampoule of 5 c.c. contains:—

Hexamine	2.0 Gm.
Sodii Salicylate	0.8 "
Caffeine Sodii Salicylate	0.2 "
Aqua Bi-Distil (Sterile) to	5.0 "

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1. Infectious Inflammation of Urinary Passages.

E.g., Cystitis, Pyelitis, Pyonephrosis etc.

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One Ampoule of 5 c.cm. is injected every other day until urine remains permanently clear with acid reaction.

2. Infectious Inflammation of Bile Passages.

E.g. Chole-Cystitis.

One Ampoule of 5 c.cm. is initially injected daily when symptoms decrease, 5 c.cm. is used every other day.

3. Rheumatic Affections.

CASYLOTROPIN lessens the Swelling, leads to a rapid cessation of Pain diminishes the liability to Pericarditis and other complications of rheumatic cases.

One Ampoule of 5 c.cm. is injected twice a week or once a week according to the severity of the case.

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When Casylotropin is injected, the Hexamine is possibly split up in the system into Formaldehyde and Sodium Salicylate into Salicylic Acid. These split-up products act as formidable enemies to the causative pathogenic germs or bacteria responsible for the indicated diseases. The Caffeine moiety of Casylotropin keeps up the Heart and act as a mild diuretic.

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About 75% swelling of knee-joint and the acute agonising pain of the Rheumatic patients are said to have been removed by one or two doses administered intravenously by the Medical Officers of District Hospitals in Bengal. One course of 6 injections on an average, cured the patients permanently.

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Readily Soluble Organic

Comp. of Iron gr. 1 (0.0648 gm.)
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Alkaloid gr. 5 (0.3234 gm.)
Organic Salt of Arsenic

(equivalent to Arsenious
Acid) gr. 1/100 (0.00065 gm.)

Urethane q. s.
Aqua (Bi-Distil and Sterilised) to 2 c.c.

Use:—Ferarchin is to be used in (i) acute
& Chronic stages of Malaria including Malignant type with enlarged liver and spleen.

(ii) In anæmia arising out of repeated
attacks of Malaria.

(iii) Ague and all other fevers with the
exception of kala-azar.

Therapeutics:—It has been established
by clinical tests that:—

(a) Ferarchin stops malarial fever even
in cases where oral administration and
injections of quinine bi-hydrochlor fail.

(b) Acts directly upon Liver and spleen
to cause their abnormality to sink and
even a most indolent liver is made to
resume its normal function.

(c) Removes anæmia, increases red blood
corpuscles, and causes a fresh supply of
normal blood in the system.

(d) Stimulates in short, the whole system
—a completely broken down system of
malarial patients being reorganised.

Contra-indications:—
Ferarchin should never be used in case
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Doses:—2 c.c. of the solution is to be
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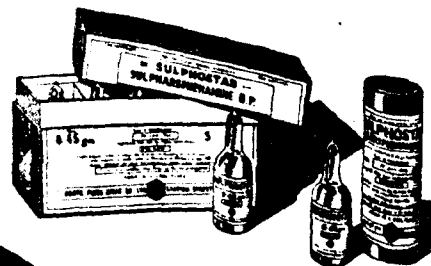
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0.025 gm.	0.30 gm.
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0.10 gm.	0.60 gm.
0.15 gm.	0.75 gm.
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No. 10.

Surgery in Pulmonary Tuberculosis

INCREASING interest and attention are being devoted both by the patients and by their doctors to the value of surgery in the treatment of pulmonary tuberculosis. From the view that was once held that the only thing a surgeon could do in thoracic surgery was to drain an empyema and that to interfere in other diseases of the chest was something of the nature of a "grim adventure which tempted only a few," considerable progress has been made in this field and now surgery has come to stay in the treatment of diseases of the chest in general and of pulmonary tuberculosis in particular. Two things, however, have to be remembered. Firstly, that of the many thousands of cases of tuberculosis, only a few become eligible for surgery, and secondly, that in this dreadful disease surgery only occupies a secondary place and becomes subordinate to the control and general treatment of medical and sanatorium control. It must not be forgotten that surgery has a real place in treatment and can be of real advantage if properly utilised.

The efficacy of the collapse methods in the treatment of pulmonary tuberculosis is now accepted by all. These methods include all operative procedures which aim at placing the diseased lung or portion of it at rest and thus bring about arrest of the disease and restoring the patient to normal health. In the treatment of any disease rest and immobilisation are required to allow the defensive mechanism of the body to deal with the disease, and tuberculosis is no exception to this rule. Whether surgery should be attempted in all and every case, or whether it should be reserved for cases in which the disease is quiescent in character and limited in extent, or whether it should be undertaken for all patients who have reached their maximum improvement under medical care and whose future is not very rosy, is a point on which there is still a lot of controversy. To take the middle way would be the most advisable. It would also be necessary to take into consideration the general condition of the patient and the extent of the disease.

The essential varieties of collapse therapy are artificial pneumothorax and thoracoplasty.

Artificial pneumothorax still holds the most important place in the treatment of pulmonary tuberculosis. It is an easy and simple procedure. This is perhaps not the place to give greater details with regard to the methods of induction and maintenance. So long as selective and adequate collapse is carried out its results are good. Many have survived the duration of three years. Some, it is true, have developed pleurisy and empyema, but these are few.

Where however the fusion of the pleural layers prevents the successful performance of the collapse, thoracoplasty is the method of choice. It is the ideal method of localised and permanent collapse. The present day method consists of the excision of the upper six or seven ribs with an apicolysis which allows retraction of the upper lobe. The operation is usually conducted in two sittings, it is well borne, there is no deformity, and the results are usually gratifying. Sometimes, however, there is a "flaring up" of the tuberculous process in other parts of the lungs and occasionally there is infection of the wound as the result of the massive collapse of the lung. The writer has seen some very good results in advanced cases where thoracoplasty had been done by South Indian tuberculosis specialists.

Extra pleural pneumothorax is meant to bring about collapse of the upper lobe of the lung when ordinary intrapleural pneumothorax is not successful due to adhesions and also where the age or condition of the patient and the nature of his disease contra-indicate thoracoplasty. The operation consists in setting the apex of the lung free over a wide area by blunt dissection after resection of a short length of rib. The space formed is filled with air under pressure and treated subsequently with frequent refills.

Phernicectomy is simple and sometimes effective where artificial pneumothorax has not been completely successful. It is mostly regarded as a supplementary procedure. Crushing of the phrenic nerve produces a temporary paralysis for four or more months and may help in the period prior to thoracoplasty in "cooling down" an angry lesion. The central and lower zones of a lung are more benefited by this procedure.

Direct drainage of cavities is practised by some workers with considerable success. All the operative procedures so far discussed have been based on the principle of collapse. But in this operation of closed suction drainage of cavities, consideration is given to the theory that distension of cavities has a place in their formation and that if internal pressure is relieved, the lung tissue will re-expand and cavity will become smaller and also if continuous suction is maintained it may even lead to obliteration of the cavity. In the operation, the cavity is sought and explored by a fine trocar and cannula passed into it through the pleural layers and lung tissues. Drainage is obtained by means of a fine catheter and suction by a motor maintains a constant negative pressure favouring the closure of the walls of the cavity. The usual site for drainage is in the first inter-space just below the clavicle and this method is of special value in large sized cavities without much surrounding infiltration. The results of such treatment have been promising.

There are many other procedures which have a limited sphere of usefulness. The aim of all these have been to produce closure of a cavity and the simultaneous development of an air-less condition in the lungs.

A description of the foregoing procedures does not really give a true picture. Our readers should not go away with the impression that these surgical procedures are like specific treatments. In tuberculosis, more than in any other disease, the individual factor has to be taken into account. The selection of the case is important. The activity of the disease must be taken into account. The environmental effect and the cleverness of the operating surgeon are important factors. The wise surgeon will not operate on tissues "which behave like celluloid to the flame of tuberculous process." He must ensure "that an asbestos like quality has developed in the patient's tissue." The capacity to discover this will be the secret of the success of a thoracic surgeon. On it will mostly depend the life of the patient.

Gleanings From Medical Press

SURGERY

Sulphathiazole-proflavine powder in the treatment of wounds—Experimental trials have shown that in addition to a powerful action on pyogenic cocci, proflavine enhances the anti-staphylococcal action of sulphathiazole (J. McIntosh and F. R. Selbie, *Lancet*, May 6, 1944, I, 591) and is also active in serum. A powder consisting of 1 part of proflavine and 99 parts sulphathiazole, is dusted over the surface of the wound, the best means being by insufflation with a blower, the amount used being just sufficient to give a slight coating on the surface (equivalent to 0.5 gm. per 4 sq. in.). Good results can be obtained by applications on alternate days. The powder has been used with success in clinical trials at the Middlesex Hospital in which a variety of injuries were treated, including a chronic pyocyanous and diphtheroid infection of an arm wound; in two days the infection was eliminated and satisfactory healing occurred. A varicose ulcer was given three applications of 2 gm. It became sterile in five days and successful skin grafting was carried out. The use of the powder in the treatment of war wounds is recorded by G. Y. Feggetter (*Ibid.*, I, 593). In fresh wounds a thorough surgical treatment was first carried out and then the powder applied by insufflation. Some wounds were sutured after the application of the powder; these healed by first intention; others required the insertion of a drainage tube but looked clean in seven days, and in the case of compound fractures the wounds were completely healed in ten days on removal of the plaster of Paris. Wounds that had been left open and in which superficial sepsis had developed, were treated with the sulphathiazole-proflavine powder and soft paraffin gauze applied. The wounds were left without further dressing for four to seven days, and it was found that the infection cleared up quickly leaving a clean granulating surface. No toxic effects were noted in either series, but the powder should not be employed too often over a long period in the treatment of indolent wounds, as the granulation process may be

adversely affected. This action on the tissues is of value, however, in the process of normal healing, as excessive granulation is kept in check. It was noted that in infected wounds, which commonly show excessive production of granulation tissue, the granulations dried up rapidly under the action of the powder, thereby promoting healthy healing. Seven cases of slowly healing wounds, in which some breakdown had occurred, were treated; healing by first intention occurred in each case.—*Practitioner*.

Injuries of the ureter and their management—Accidental injury to a ureter at operation may result in fistula, peritonitis, and renal infection. Such injuries should be repaired immediately. The ends of a completely divided ureter may be united over a T tube or over a ureteral catheter passed upward to the renal pelvis and downwards into the bladder. No tension should occur at the anastomosis and but few sutures should be used. These should not penetrate the mucosa and should be tied lightly. A patch of fat at the suture line helps keep the joint water-tight. Extra-peritoneal or transperitoneal drainage is indicated. If this procedure is not feasible, the ureter may be reimplanted in the bladder, transplanted into the bowel or to the skin or nephrectomy may be performed. Rupture of the ureter, with urinary extravasation, cellulitis, and abscesses, was observed in patients following surgical introduction of instruments within the ureter. In 2 other instances accidental injection of a caustic fluid, mistaken for opaque medium, caused severe damage to the ureter and the renal pelvis. When infection is present, ureterostomy, pyelostomy, and nephrostomy are measures of relief, and uretero-intestinal anastomosis may save the kidney. In severe cases, nephrectomy alone will prove adequate.—*J.A.M.A.*

Types of umbilical hernia—1. *True umbilical hernia*:—In this the protrusion comes

through the umbilicus. The remains of the umbilical cord, and carries up with it a kind of fibrous collar from the linea alba from which arises an inflexible and stiff. Hernias of this kind are usually cured themselves; the fibrous tissue around the neck of the sac has an inherent tendency to contract. They are not dangerous, as long as they are very obvious reasons for operation of an umbilical hernia in adults is rarely necessary, but they often cause an infant very much trouble through the discomfort. The infant cries, and the crying increases the protrusion. The spontaneous healing, which may not occur until well on in adult life, can be accelerated in two ways. The first is by strapping with a plain piece of tape or three inches wide zinc oxide sticking plaster, applied in such a way as to close the hernial opening by holding a fold of skin over it. Bands, pads, and the common use of elastic sticking plaster all detract from efficiency, and the most important of all is the rubber belt. However, the tendency to spontaneous cure is so strong that all methods have their successes. The second method of treatment is by a subcutaneous ligature of the umbilicus. In the roaring and straggling type of baby this will often succeed in curing the condition high away when strapping fails.

Para-umbilical hernia.—Here the protrusion is not up the middle of the umbilicus, but slightly above or less often below. There is no fibrous collar, and the hole in the linea alba is wide, with weak soft margins. This type of hernia is much less common than the first. It has no tendency to spontaneous cure, an operation is necessary if a good abdominal wall is desired. Strapping and subcutaneous ligature are both useless in its treatment, but a simple longitudinal overlapping of the two rectus sheaths, performed through a transverse incision, is very satisfactory. There is no hurry about operating, as the soft margins of the hernial opening do not cause discomfort, and it can be postponed to 6 years old with advantage.—R. H. J.

Intervertebral disk problem in the navy.—Lesions of the lumbo-sacral disk are indicated by paraesthesiae of the lateral foot and posterolateral leg by slight paresis of the achilles muscle group, by hyperaesthesia of the lateral foot and posterolateral leg, usually by a diminished or absent ankle-jerk, and by radiating phenomena produced by paravertebral pressure or percussion at the lumbo-sacral interspace. Lesions of the 4th lumbar disk are differentiated from those above by paraesthesiae of the great toe and anterolateral leg, by slight paresis of the extensor of the great toe or by the tibialis anterior, by hyperaesthesia of the great toe and anterolateral leg, by a rarely diminished ankle-jerk, and by radiating phenomena produced by paravertebral pressure or percussion at the 4th lumbar space. Myelography is advisable and partial hemilaminectomy with adequate exposures is used routinely. Spinal fusion is not recommended by navy personnel because of the increased morbidity.—U. S. Naval M. B.

Polycystic disease of the kidney.—The most common cystic disease of the kidney of clinical importance is congenital polycystic disease. It is probable that all cysts of the kidney are of congenital origin except the small ones seen in arteriosclerotic kidneys. Virchow believed that they were retention cysts due to developmental errors. Recently it seems to have been shown that in the early fetal period development is not abnormal, but subsequently isolation of nephrons as cysts takes place. A strong familial tendency is known to exist.

In 97,875 total hospital admissions at the Sinai Hospital, Baltimore, Maryland, there were 3,644 urological cases. Of these, polycystic kidney was found in 18 (1:204 urological cases). Bell reported 1 case in every 500 autopsies. The disease is found in two periods of life. About 70% of cases are found in adults up to middle life. The remaining 30% is found in infants.

Pathology.—The kidneys retain their normal shape but are usually enlarged from 2 to 3 times their normal size and occasionally are greatly enlarged (2-7 kilograms). Unilateral involvement is never accepted clinically because nephrectomy invariably has been followed by "recurrence" in the supposedly healthy remaining kidney even when inspected at the time of operation and into a series of cysts which may communicate with each other but never with the renal pelvis. The surface is grossly nodular owing to the large cysts. The parenchyma is the seat of progressive atrophy due to the dilatation of the cysts. The contents may be thin or thick, colorless, turbid, or even dark brown from hemorrhage, or have been found to contain uric acid, hippuric acid, calcium oxalate, leucine, cystine, tyrosine, blood fat, cholesterol, etc. Infection is not uncommon. Microscopic examination reveals cubical or flattened epithelium covering the thin fibrous cyst walls which contain interlobar and interlobular arteries. There is also nephrosclerosis, fibrosis of glomeruli, and disappearance of the tubules. Rupture of the vessel wall due to hypertension or trauma often causes hemorrhage into the cysts with occasional subsequent rupture into the renal pelvis with attacks of pain and hematuria perirenal hematomas have followed rupture on the surface. Communication between the spleen and kidney (cyst) has been reported. Other anomalies of the urinary tract are occasionally associated with polycystic disease of the kidney.

Symptomatology.—Many of the infants afflicted by the disease are stillborn. At times the tumor masses are so large that labor is difficult and the maternal parts are injured. The condition is seldom recognized during life in children unless infection, hematuria, stone, or obstruction demand intervention. During youth the compensatory hypertrophy of the kidney balances the continuous dilatation of the cysts. In adult life this is no longer possible and the patient gradually presents the picture of

tumor and renal insufficiency. Progress may be slow and many persons live their allotted span, gradually developing symptoms of nephrosclerosis. Hematuria occurs which as in tumor is intermittent in type and of long duration. Hypertension is found in 50% of the cases. Infection may occur with fever, costovertebral tenderness, albuminuria, pyuria, dysuria, and frequency.

Diagnosis.—In the presence of bilateral tumors and renal insufficiency, a clinical diagnosis is possible; however, in most cases it is not. Even with complete urological findings the diagnosis may be doubtful. Ritchie in 88 cases found a clinically palpable tumor in only 21, and bilateral tumor in only 8. Plain x-ray plates may show renal enlargements that are not palpable. Pyelography gives the most information, greatly elongated renal pelvis and calices with characteristic compression defects by the cysts; but the filling defects may simulate tumor of one kind or another and will vary with the stage of the disease. Cupping or a crescent-shaped calyx may indicate cystic encroachment. Bizarre spider-leg deformities are sometimes seen. When similar defects are seen on both sides, the diagnosis is almost certain.

Treatment.—The treatment is medical on the same principle as that for chronic Bright's disease. Nephrectomy is never justifiable. Surgical intervention is justified only in cases of dangerous obstruction, infection, hemorrhage, or incapacitating pain. Surgical puncture of the cysts (marcellement of Rovsing) and nephropexy or plastic operations as indicated to secure better drainage may be considered.—*Bulletin, New Eng. Med. Centre.*

Massive dose arsenotherapy by intravenous drip in early syphilis.—After investigations to establish a diagnosis of early syphilis, and to exclude the presence of fever, liver disease and severe nephritis, a series of patients were treated with mapharsen by the constant-drip method, and the results obtained, as well as the results of follow-up of a previously treated series, are recorded by Lieut. Branch Craig, Jun., and Lieut. Col. J. F. Sadusk (*New England Journal of Medicine*, March 16, 1944, 230, 314). The solution employed was made up twice daily, and consisted of 1200 c.c.m. of 5 per cent. glucose, in a Fenwall flask, with 120 mgm. mapharsen. On the side of the flask a strip of adhesive plaster marked with levels at which the fluid should be at different hours was affixed, and the flow was regulated with reference to these marks. Two flasks (total 2400 c.c.m. with 240 mgm. mapharsen) were administered daily over a period of twelve hours for five days, each patient thus receiving 12 gm. mapharsen. After the completion of treatment, investigations consisting of blood cell count, urine analysis, serological examination, determination of non-protein nitrogen, electrocardiogram and lumbar puncture were carried out. Of the seventy-four patients comprising the two series, thirty-eight have been observed for

more than six months; thirty of these patients became sero-negative after one course of massive arsenotherapy and have remained so to date. Seven remained seropositive and one relapsed. The remaining thirty-six patients had been observed for less than six months, but follow-up spinal fluid examination in seven produced a negative result in each instance. Of the total patients treated satisfactory results were obtained in 79 per cent., and re-treatment of some cases brought the figure up to 87 per cent. Dark field examination showed that local primary and secondary lesions became negative within twenty-four hours of the beginning of treatment, and within five days there was usually evidence of epithelialization and shrinking of the chancre or condyloma. Reversion of the serological examination usually occurred during the first six months after treatment, most frequently between the tenth and twentieth weeks. Toxic reactions included primary fever accompanied by shaking chill, macular eruptions, secondary fever with or without skin eruptions, vomiting, pain along the course of the infusion vein, and in some cases thrombosis of one or more veins. During the follow-up period many patients showed signs of mild secondary anemia, but leucopenia was rare. Peripheral neuritis occurred in nearly half the patients during the second and third week after completion of treatment. In only one case did the more serious toxic phenomena of motor neuritis and jaundice occur; this patient had hepatitis before beginning treatment. She made a good recovery. Five patients were pregnant at the time of treatment; four were delivered of normal infants; one had a premature infant who died shortly after delivery. The results obtained by this treatment are comparable to those of a year and a half's uninterrupted weekly injections. The advantages are that every patient completes a full course of treatment, is kept in hospital while in the infective stage, and when discharged is non-infective and usually remains so. The method has not been used in cases of late syphilis.—*Practitioner.*

Paralysis of the larynx: A study of 270 cases. O. W. Suehs.—*Texas State J. M.* 38: 665 (March) 1943.

Two hundred and seventy cases of paralysis of the vocal cords have been analyzed with reference to etiology, degree of paralysis, and prognosis.

The tension of the affected cord, rather than its position, is the best index to the completeness of the paralysis. The immobile cord was more often in the median line than in the cadaveric position in this series.

The voice cannot be relied upon as criterion for the presence or absence of paralysis of the vocal cord, because when tension of the cord remains good, the voice is often normal. This occurs even in bilateral abductor paralysis.

Carcinoma, exclusive of the larynx, is the most frequent single cause of unilateral paralysis of the vocal cords.

Thyroidectomy is the most common cause of bilateral abductor paralysis. In this series, preoperative paralysis is exceedingly rare in benign enlargement of the thyroid gland. The larynx should be examined routinely before and after thyroidectomy.

Complete paralysis, with loss of tension of the cord, is most frequently seen in infiltrating lesions such as carcinoma of the esophagus, lungs, trachea, thyroid gland, et cetera, and in conditions producing prolonged mechanical pressure or stretching as is exerted by an aneurysm. The paralysis

is usually of the incomplete abductor type when the nerve has been injured suddenly as in thyroidectomy. This has not been satisfactorily explained.

The left recurrent nerve is seemingly more susceptible to injury than the right, even when intrathoracic diseases are excluded.

The prognosis for recovery of function of the cord is poor, regardless of cause, but is best in those cases where no cause for the paralysis can be demonstrated.

The etiology often remains obscure in spite of thorough investigation.—E. N. T.

MEDICINE and THERAPEUTICS

Hyperchlorhydria treated with raw potato juice.—Excellent results are reported by M. Engelson on the treatment of hyperchlorhydria with the juice of raw potatoes, the curative properties of which are attributed to the content of solanine (and alkaloid similar to belladonna) vitamins and starch and mucoid substances which form a mechanical protection for the gastric mucosa. The dosage employed was 100 c.c. of the juice three times daily at meal times. About four large potatoes are required to procure this quantity. The potatoes with skins intact (this is important) are washed, grated, and then pressed in a cloth to extract the juice. The juice must always be prepared shortly before use. In order to prevent recurrence of symptoms the treatment must be continued for some weeks. Several authors have reported good results from raw potato juice treatment, not only in the treatment of simple hyperchlorhydria, but also in chronic cases with ulceration.—*The Practitioner July 1913 (G P.)*.

What is 'Biotin'?—Vitamin H, now known as biotin, is a crystalline, water soluble compound with the composition 2-keto-3:4-imidazolidine-2 tetra hydrothiophene-valeric acid. It was synthesized last year in America by Harris. Biotin is a member of the vitamin B-complex, and is therefore found in foodstuffs containing the latter, particularly liver, yeast, kidney, pancreas, adrenals, and cereals. Biotin is essential for the complete nutrition of many animals and possibly of man, since Sydenstricker in America has produced a deficiency syndrome in volunteers on diets poor in biotins. The physiological function of biotin is unknown. Rats given diets deficient in biotin develop a scaly, greasy dermatitis and atrophy of the fur. This has given rise to the misconception that biotin is essential for the growth of human hair, and that its deficiency results in premature baldness. There is absolutely no evidence for this. Clinical biotin deficiency is very unlikely, as biotin is widely distributed in foods. A deficiency can be produced artificially by feeding large quantities of raw egg-white. A case of biotin deficiency has been reported in an Italian who ate a large number of raw eggs a day and neglected his diet generally. Raw

egg contains a principle known as avidin which inactivates biotin.—B.M.J.

Some facts about dysentery.—Infectivity is high and the organisms may spread in a variety of ways: (a) from a case to case, as when an infected person, after using the lavatory, soils the seat or the handle of the flushing cistern; or without washing his hands, proceeds to contaminate food, cutlery, drinking vessels, etc.; (b) as an explosive outbreak when an infected food handler contaminates milk or milk products or other prepared foods; (c) contamination of food by flies. The infected flies may carry the organisms in 24 hours. The infection is maintained in the community (a) by the carrier, whom modern cultural methods have shown to be very common and who may continue to excrete the organism for weeks after he is clinically well; (c) by the healthy contact carrier, of whom there is always a fair proportion in any outbreak. In a mild form both Flexner and some infections occur in mild atypical form without blood or mucus in the stools; the symptoms may be diarrhoea or relaxed stool for one day only. These cases may be mixed. The treatment will be (a) light restricted diet; (b) the safest drug is sulphaguanidine, 4.8, daily for a child and 9-12 for an adult, given 4 hourly during the day. Begin treatment as early as possible and reduce to half doses after 4 days; continue for 3 more days. Good results are also obtained with sulphapyridine and sulphathiazole. Adequate fluids must be given; (c) isolation at home or in hospital is essential where there are other particularly younger children in the household. In mild infections sulphonamide therapy is required to obtain bacteriological cure as early as possible and so minimize the risk of spread. Sulphaguanidine will do this in Flexner injections; sulphapyridine or sulphathiazole is more effective in some infections. The earlier treatment is begun the better the chance of bacteriological cure. Intimate family contacts may be protected by small daily doses (2-3 g) of sulphaguanidine.—B.M.J.

The Clinical diagnosis of pernicious anaemia.—Progressive pernicious anaemia is

chiefly a disease which occurs in middle life, the period from thirty-five to sixty-five years of age. The symptoms common to all forms of anaemia are weakness, dyspnea, fatigability, loss of weight, and pallor. In pernicious anaemia the pallor during a relapse is of a peculiar yellow or subicteric tint. Patients with pernicious anaemia tend to have long ears—as well as certain other characteristics more or less marked in different patients, such as a square, prominent jaw. There is a generalised atrophy of the mucous membrane of the entire gastro-intestinal tract. The symptoms referable to the rest of the gastro-intestinal tract are loss of appetite, constipation, or diarrhoea, and are all probably due to a large extent to the atrophy of the mucous membranes. The gastric symptoms are often vague and are thought to be due to achlorhydria. The absence of free hydrochloric acid in the gastric secretions of patients with pernicious anaemia is constant and as far as known the free acid does not reappear, although the blood picture may be restored to normal by appropriate treatment. Complete achlorhydria constitutes the single most reliable criterion for diagnosis. It is always present in pernicious anaemia and persists even after all other evidences of the disease have been overcome by adequate treatment. The symptoms referable to the central nervous system are important since in one-fourth of the patients they are the first to appear. They indicate degeneration of the lateral and posterior columns of the spinal cord as well as of the peripheral nerves. In the majority of patients the symptoms of neural involvement are confined to slight disorders of sensation, persistent and usually symmetrical numbness and tingling of the hands and feet. Among the earliest of the objective signs is diminution of the vibration sense at the ankles, usually but not always symmetrical. The development of a marked spastic ataxia indicates degeneration of the lateral and posterior columns of the spinal cord. When the former tracts are particularly involved, spastic ataxia indicates degeneration of the lateral and posterior columns of the spinal cord. When the former tracts are particularly involved, spastic gait, increased reflexes and positive Babinski signs are usually present: with lesions of the latter tracts, loss of vibration and position sense and ataxia appear. Girdle sensations occur but lightning pains, girdle pains and abdominal crises were uncommon. Due to peripheral nerve involvement, stocking hyperesthesia or anesthesia may occur. Occasionally hyperesthesia of the soles of the feet may be very marked. Disturbance of the sensation of heat and cold is unusual. Finally absent or diminished reflexes with involvement of the sphincters of bladder and rectum, contractures and decubitus result in the advanced clinical picture. Optic atrophy occurs rarely and the disturbances in vision and auditory sense result from anaemia or retinal hemorrhages. Mental symptoms are variable and include irritability, restlessness, mild depression, confusion, delusions, hallucinations,

and maniacal outbursts. Dizziness and tinnitus result from circulatory weakness secondary to the anaemia. The blood picture in pernicious anaemia in relapse shows the number of red blood cells markedly reduced while the haemoglobin is relatively high. Thus the colour index is above one. The leukocytes are reduced unless infection is present and the reduction is most marked in the neutrophils. The reticulocytes are low but the platelets are normal in number and quality. The icterus index is moderately elevated. Blood smears show a marked degree of anisocytosis and poikilocytosis with a high proportion of deep staining macrocytes. All the facts derived from the clinical history, the physical examination, the gastric analysis after the administration of histamine or a suitable test meal, and the response of the reticulocytes to the administration of an adequate dosage of liver or other potent extract, are usually required to reach a correct diagnosis.—J.I.S.M.S.

Apomorphine in paroxysmal tachycardia.—Paroxysmal tachycardia is a fairly common functional disturbance of the heart, usually of little significance, but occasionally requiring medical treatment because of its persistence. Vagus stimulation, by mechanical or chemical means, produces the best results. Digitalis is rarely indicated. An attack should be stopped before signs of cardiac insufficiency develop. One of the most effective drugs is mecholyl. A somewhat similarly acting and equally effective drug is apomorphine, and may be available when mecholyl is not. In the author's experience over several years, apomorphine has been preferred to mecholyl by patients who have at different times received both drugs. To date, it has never failed to stop an attack. Since the treatment has not found wide use in this country, judging by the lack of mention in the literature, a brief discussion may be of value.

Schone attributes the effectiveness to both a vagus action and a direct action on the cardiac muscle, basing his opinion on electrocardiographic tracings of human and experimental animal hearts. In the perfused cat heart, there was indication that the coronary circulation was reduced during the administration of the drug, which led Schone to the conclusion that coronary sclerosis would be a contraindication to its use.

The treatment is simple. Apomorphine is given subcutaneously in a dose of 1/20 to 1/10 grain (3 to 6 mg.). Within 5 minutes, when nausea begins, a finger on the pulse will detect a slight irregularity, which changes quickly to regular rhythm with markedly reduced rate. Following vomiting, the patient relaxes and within a few hours feels well. No harmful after effects have been noted in any of the author's cases.—NEEDEL, L. J., Lieutenant Commander (MC) U. S. N. R.—U.S.N.M.B.

Silico-Tuberculosis.—O. Auerbach and M. G. STEMMERMAN (*American Review of Tuberculosis*, 1944, 2, 115), investigated 63 cases

of silicosis. Fifty-four of the 63 had associated pulmonary tuberculosis. The authors compare the 54 cases of silico-tuberculosis with 200 unselected cases of chronic pulmonary tuberculosis. 64.8 per cent. of the silico-tuberculous group were between 40 and 59 years of age, while in the chronic pulmonary tuberculosis group 50.5 per cent. appeared between the ages of 30 and 49. Forty, or 74 per cent., were Whites, and 14, or 26 per cent., were Negroes. The greatest number of cases of pulmonary tuberculosis were among the rock drillers and coal miners. The coal miners numbered 12, and 5 per cent. of these worked on hard coal. The 17 rock drillers worked on subway construction in New York City, where there is a high proportion of free silica. In 8 of the 54 the occupation was not stated owing to the patient being too ill or not being properly questioned owing to the pulmonary tuberculosis having obscured the pneumoconiosis, or a considerable period of time had elapsed before the onset of tuberculosis. The length of exposure varied from one year to over twenty. When the length of exposure was under two years there was little correlation between this factor and the extent of the pneumoconiosis, four in this group having moderate, two minimal and one marked silicotic involvement, but when the exposure was of 20 years' duration or more the silicosis was marked in five, and moderate in three.

Tuberculosis developed in 13 while working in dusty trades. The majority developed tuberculosis in from two to over twenty years; 77.8 per cent. died within two and a half years. In the control group 63.5 per cent. died within the same period.

In one case the silicosis was associated with a bi-lateral miliary dissemination, the foci being larger and more numerous in the apical and ventral aspects. The ordinary picture of chronic pulmonary tuberculosis was not altered by the silicosis. The silicosis and tuberculosis were independent processes. The massive fibrosis does not show any histological evidence of tuberculosis, and the central cavities in fibrotic areas are caused by ischemia dependent on obliterative endarteritis. The most extensive tuberculosis occurs in minimal or moderate silicosis. The three characteristic lesions of chronic pulmonary tuberculosis are:—

- (1) Caseous lobular pneumonia.
- (2) The cavity.
- (3) Acinous nodular foci.

In (1) the central areas may cavitate or may heal by calcification, or the central area of caseation may be replaced by hyalinized connective tissue simulating silicotic nodules. Number (3), when it heals, results in fibrosis with surrounding areas of emphysema. It is very rarely observed in silico-tuberculosis.

Tuberculous broncho-pneumonia develops between the silicotic foci. It caseates, extends to the silicotic patches, and may convert them into caseous material, but in the silicotic foci the elastic fibres are destroyed but not in the areas of caseation due to tuberculous pneumonia. In the authors' cases cavities were more frequent in the lower lobes than in those with chronic tuberculosis without silicosis. They are found in the apical portion of the lower lobe. The number of cavities in the silicotic group is 2.9 per cent. and in the non-silicotic 2.6 per cent. Cavities occurring in the upper lobe develop in the posterior lateral aspect 2.3 cm. above the base of the lobe. The size of the cavities varies from 5 mm. to 8 cm.

Cavities in the upper lobe extend into the lower lobe more frequently in the silicotic group owing to the non-obliteration of the interlobar fissure by connective tissue. In silico tuberculosis the inner wall of the cavity is lined by a zone of caseation in only part of its circumference. In other portions it is lined by silicotic masses which form the entire thickness of the cavity wall owing to space being lacking for the development of the granulation tissue and peripheral inflammation of the non-silicotic group. Trabeculae common in the non-silicotic are absent in the silicotic owing to the obliteration of the pulmonary arteries. Deaths from hæmorrhage were twice as common in the silicotic group owing to the arterial walls being weakened by destruction of the elastic fibres. The gland showed no evidence of gross caseation, but on microscopical examination were found to contain small areas of caseation mainly in non-silicotic portions. The nodes were greatly enlarged, slaty black in colour and cut with great resistance. Fifty-three of the 54 had tubercle bacilli in the sputum and only the laboratory can decide whether a patient with silicosis has tuberculosis in addition. X-rays help when they show definite excavation. In eight cases an artificial pneumothorax was attempted and failed. Four patients underwent thoracoplasty and all four died, two after the first stage and two after the third stage of operative treatment. Collapse therapy is unsuitable owing to the fact that silicotic lungs are heavier, show no tendency to collapse owing to the smaller degree of destruction of elastic tissue. The cause of death was pulmonary tuberculosis in 41 or 76 per cent.; four died from cardiac failure, or 7.5 per cent.; two from tuberculous meningitis or 3.5 per cent.; three after operation, or 6 per cent.; two from toxæmia, or 3.5 per cent.; and two from uræmia, or 3.5 per cent.

THE COMPLICATIONS OF THORACOPLASTY.—It is related that some years ago a distinguished American chest surgeon came to Europe to try to discover why all his patients who submitted to thoracoplasty, died. Mandel Weinstein and Stephen Tyan (*American Review of Tuberculosis*, 1944, 3, 238) explain that the reason for the spread of the disease is the aspiration during and secretions. The patient lies on his side with the diseased lung uppermost, allowing

infected material to pour into the healthy lung, and diminishing or abolishing cough, expectoration, ciliary and peristaltic movements of the bronchi.

The bronchi contain plugs of matter similar to those in tuberculous cavities and set up disease in the contralateral lung or in previously healthy areas of the homolateral organ. A tuberculous spread occurs within the first three post-operative days. The temperature rises to 102° or 104° F. The pulse and respiration are raised, the latter being due to greater concentration of carbon dioxide, and the general deterioration in the condition of the patient due to the increased production of tuberculo-protein.

During the year 198 thoroplastic operations were performed. Nineteen spreads occurred with four deaths. Twelve occurred after the first stage, six after the second, and one after the third. Negroes are more than twice as frequently affected as Whites, and all four deaths occurred among the coloured patients. Five of the nineteen spreads occurred in the homolateral lung, ten in the contralateral lung, and bilateral spread occurred in four. Selected pneumothorax

in the controlled contralateral lung for bilateral disease did not prevent the formation of a spread in that lung. The spread occurred most frequently in the lower third of the lung, then in the middle third, and lastly in the upper third. Six of the nineteen spreads were of mild severity, five were of moderate severity, and eight severe. Only one spread occurred after local anaesthesia; all the others after cyclopropane inhalation anaesthesia, but it should be noted that only twelve patients were submitted to local anaesthesia. The larger and the more numerous the cavities the greater the probability of spread.

Care should be taken before operation to detect cavities and broncho-pulmonary fistulae in the contralateral lung. Pre-operative postural drainage should be instituted. After operation narcotics and sedatives should be sparingly used and patients should be encouraged to turn from side to side and use their arms and legs. If tuberculous spread and anoxia occur oxygen chemotherapy and bronchoscopy should be employed, but if paradoxical breathing develop a Drinker respirator is often life saving.—*Medical Officer*.

OBSTETRICS and GYNÆCOLOGY

Stilboestrol in obstetrics.—The outstanding use considered for Stilboestrol is for the relief of menopausal symptoms and the effect upon the vagina in gonorrhœal infections or in certain senile changes. There are several important uses in obstetrics for stilboestrol. They may be listed as follows:

(1) A test for pregnancy.—When the presumptive signs and symptoms of pregnancy are present 10 to 25 mg. of stilboestrol are given by mouth and if nausea does not follow within 6 hours the possibility is that the women is pregnant. Another test for pregnancy or pseudo-pregnancy is to give stilboestrol mg. 1 every night till bleeding starts or until the diagnosis can otherwise be established. If there is pregnancy no bleeding will occur and the pregnancy will not be disturbed. If there is amenorrhœa from other causes bleeding should occur in 14 to 21 days.

(2) Treatment of nausea of pregnancy:—Stilboestrol 5 gms. every night increasing 5 mg. each night till nausea stops. The nausea is thought to be due to a reaction to the rising or changing oestrogenic content in the blood.

(3) Treatment of threatened or repeated abortion:—Stilboestrol has something definite to offer here. Karnaky has outlined the treatment found best. 25 mgm. of stilboestrol every 15 to 30 minutes until cramping or bleeding stops. Then 10 mg. every hour for 6 doses, 25 mg. should be repeated if bleeding or cramping re-occurs. Ten mg. should be continued daily. The dosage may be increased to 100 mg. a day if required. The effect of the stilboestrol is apparently to stimulate endometrial proliferation when

the foetus is present and thus help placental stabilization. This improves nutrition for the foetus.

(4) Treatment of retroverted pregnant uterus:—Besides the usual treatment, knowing that trouble may be expected in some cases when the uterus is in the posterior position, prophylaxis is more definitely indicated. This consists of 5 to 10 mg. of stilboestrol daily until the uterus has risen above the premonitory of the sacrum.

(5) Test for ectopic pregnancy:—One of the unusual uses of stilboestrol is when it is given during the early stage of pregnancy when bleeding is present, as a test for ectopic pregnancy. Given the positive diagnosis of pregnancy with bleeding, stilboestrol is administered in adequate doses and if bleeding does not stop promptly one is justified in making a diagnosis of ectopic pregnancy—if the physical findings fit in with this condition.

(6) Surgery during pregnancy:—When an emergency is faced and the abdomen must be entered during pregnancy any additional safety factors are welcomed. Stilboestrol mg. 25 to 100 is given daily preceding the operation and following for several weeks. Observing the instructions for threatened abortion should be helpful.

(7) Treatment of postpartum bleeding:—Stilboestrol is used in these cases of bleeding by giving 25 mgm. every 15 to 30 minutes until bleeding is controlled, then 10 mg. every hour for 6 hours. After the bleeding has been controlled, daily doses of stilboestrol should be given—5 to 25 mg. preferably in the evening. This method of treatment can be started immediately without regard

for the presence or absence of potential infection. It may be used along with other drugs such as ergot or sulphathiazole when indicated. What apparently happens in these cases is that the stilbœstrol in large doses has a very unusual effect on the endometrium after the fetus has been expelled. It apparently causes trophic changes and shrinking of the endometrium and bits of placental tissue are expelled.

(8) Suppression of lactation:—Stilbœstrol mg. 5 t. d. or 10 mg. at bed time for 3 days has been found effective in relieving engorged breasts and suppressing lactation.

(9) Treatment of extra-uterine placenta:—This condition is encountered when one has had a term or near term abdominal pregnancy in which the fetus has been removed and it is thought to be not advisable to remove the placenta at the time of the first operation. The placenta is left in situ when a large amount of bleeding would be expected to accompany an attempt to remove it. Rapid, complete separation of the placenta and the reduction of hæmorrhage is accomplished by the administration of large doses of stilbœstrol.—G. P.

Discussion on new developments in the investigation and treatment of sterility.—By V.B. Green-Armytage, K. Walker, E. W. Wittkower (and others), *Proceedings of the Royal Society of Medicine*, 36, 105-112, Jan. 1943.

Childless marriages are not infrequently unhappy partnerships. Any new developments, therefore, in the investigation and treatment of sterility are of especial importance both to the individual and to the community as a whole.

At a meeting of the Section of Obstetrics and Gynecology of the Royal Society of Medicine, the discussion was opened by the Gynecologist to the West London Hospital, the late Professor of Obstetrics, Gynecology and Surgery at the University of Calcutta. The importance of uterine and endocrine development, and/or the condition of the cervix, in cases of primary infertility were compared with the relatively rare finding of tubal occlusion. The speaker described two groups each of twenty healthy young married women observed over a period of two years. Those in Group 1 were persuaded to live an absolutely normal sex life, while those in Group 2 had from the beginning of married life made use of chemical douches or occlusive caps with medicated pessaries, or they stated that their husbands used condoms or adopted *coitus interruptus*. It was observed in the group of women leading a normal sex life, that five cases in whom the uterus was normal in size and shape, rapidly conceived. In fifteen the uterus and ovaries were palpably small and immature; of these, nine grew to normal size in 4½ to 6 months and conception occurred after an average of 7½ months of married life. Those women (Group 2) practising some form of contraception were examined after a period of one to two years. In ten

cases the uterus was palpably small and hypoplastic and in five there was a small annular erosion around the external os.

These observations suggested that human semen contained a substance which, absorbed from the vagina, might assist the full development of the female genitalia. Animal experiments were therefore carried out in the Pearson Foundation Research Laboratory under the direction of Professor Silberstein at the West London Hospital. The preliminary results showed that the intramuscular injection of human semen into immature ovariectomized female rats caused hypertrophy of the uterus. It was suggested that the substance responsible for this effect is probably testosterone or a hormone allied to it, as was suggested by Noble (1939). Further experiments are required before it can be stated whether or not the action of this hormone is local, or central through an action on pituitary secretion.

The conclusion was reached that "anything or any method which prevents, retards, or alters the normal degree of physiological absorption of human semen from the vagina, carries with it during the early months and years of marriage the risk of future sterility." The importance of a viscid, opaque, yellow, infected cervical mucus plug as a cause of sterility was also stressed.

The second speaker, who is Surgeon in charge of the genito-urinary department of the Royal Northern Hospital, London, discussed the importance of the male in sterility, and referred to the method of testicular biopsy, which he and his co-workers first used to differentiate between cases of azoospermia due to a blockage in the ducts and those resulting from aspermatogenesis. More recently this diagnostic procedure had been extended to other types of infertility. Three groups of abnormalities in the seminiferous tubules may be distinguished. (i) A limitation in the intensity of epithelial activity which sometimes extends to the reduction of the epithelium to a single layer of indifferent cells. (ii) Maintenance of epithelial activity with incomplete differentiation. For instance, numbers but may be present in large spermatids. (iii) The existence of a differentiation which is faulty. Out of 77 husbands examined, fertility was satisfactory in 23.4%, doubtful in 37.6%, markedly incomplete in 18.2%, and in 20.8% there was complete sterility.

The third speaker described the results of a psychological investigation of sterility, and the characteristics of a personality type prevailing among sterile women. The vast majority of such patients were diffident in manner, juvenile, or younger than their years in appearance, and without marked secondary sexual characteristics. They were often more ambitiously dressed than others of their class, or so differently, especially in relation to their use of make-up, that their total appearance could be best described as doll-like. Individuals of

this type had frequently been the youngest or only children, obviously over-attached to the family rather than to either parent. Intensely shy, especially with adults, they disliked school because of the roughness of other children and preferred to stay at home, even in adolescence. Many of them as adults are interested to an unusual degree in their personal appearance, and obviously desire to attract, but neither before nor after marriage have they ever experienced any genuine adult sexual feeling. In fact, they are almost completely frigid and, corresponding to this, incapable of any deep affection. A small sub-group of patients complaining of sterility are obese women with strongly marked maternal attitudes. The speaker concluded that in a holistic approach to the problem of sterility a certain significance must be attached to mental factors.—*British Medical Bulletin*.

An investigation of the effect of ergot alkaloids in promoting involution of the postpartum uterus.—By C. Moir & C. Scott Russell, *Journal of Obstetrics and Gynecology of the British Empire*, 50, 94-104, April 1943.

In this paper from Nuffield Department of Obstetrics & Gynecology, Oxford, the authors first review the history of the medicinal use of ergot.

Ergot and its alkaloids:—Ergot of rye administered by mouth stimulates uterine contraction. This fact was known as far back as 1582. Its use, however, by the medical profession dates from 1808 when the New York Medical Repository published a letter by Dr. John Stearns in which he praised the value of a decoction of ergot powder for hastening lingering parturition. Following this lead, the medical profession quickly accepted the new drug, using it sometimes wisely, but often dangerously, as contemporary writings show. Before long the "pulvis ad partum" was renamed the "pulvis ad mortem": it had become evident that the "incessant and urgent" uterine contractions stimulated by incautious use of the drug could lead to fetal asphyxia or even to rupture of the uterus. These were bitter experiences, but the lesson was well learned, and at the present day ergot is not given in normal cases till after expulsion of the fetus.

In 1906 Barger and Dale isolated and described ergotamine, and at an early date Dale discovered that the alkaloid was capable of counteracting the effects of sympathetic stimulation.

In 1918 ergotamine was isolated by Stoll. More recently, the senior author of the present paper showed (Moir, 1932) that crude ergot extracts, which had been regarded by pharmacologists as inert, had a definite action on the puerperal uterus. Further investigations resulted in the isolation of a new alkaloid to which the name "ergometrine" was given by its discoverers (Dudley and Moir, 1935; Dudley 1935). In

the U.S.A. the name ergonovine was applied to the new alkaloid, which is also marketed under several trade names.

Though five alkaloids of ergot have been isolated and no less than fourteen molecular complexes described, the active alkaloids can be simply arranged. There is, on the one hand, the group represented by ergotamine and ergotamine. These alkaloids are very sparingly soluble in water, are slow to act, especially if administered by mouth, but, once absorbed, are rather persistent in effect. If given in excess, they produce various toxic symptoms, notably the peripheral gangrene which characterises chronic ergot poisoning. Standing in sharp contrast is ergometrine. This alkaloid is readily soluble in water, is remarkably quick in action even if given by mouth, and is non-toxic in dosage greatly exceeding that used in clinical practice.

These alkaloids have the effect of stimulating powerful contractions in the uterus at first of short duration but following each other in such rapid succession that the uterus as a whole has no time to relax and a state of spasm prevails. Later, as the effect diminishes, individual strong contractions alternate with intervals of relaxation.

Uses in obstetrics:—There are two main uses of ergot in obstetrics. One is to stimulate uterine activity in cases of postpartum hæmorrhage; the other is to promote—so it is supposed—the involution of the postpartum uterus. For the first indication, the value of the drug has been amply proved: for the second indication, uncertainty regarding its usefulness still prevails. The present authors report fresh observations on the rate of involution of the postpartum uterus and the possible influence of repeated ergot administration.

Effect on height of puerperal uterus:—Some years ago (1936 and 1937) patients delivered at the British Postgraduate Medical School, (Hammersmith Hospital) were divided into 3 groups in order to determine whether ergot therapy would influence the involution of the uterus. The patients in the 1st group were given ergometrine 0.5 mg. by mouth 3 times daily for the 1st week of the puerperium. Those in the 2nd group received ergotamine ("femergin") 1 mg. 3 times daily by mouth for a similar period, and those in the 3rd group were observed as controls. From 589 case records that were found suitable for analysis, the height of the uterine fundus above the symphysis pubis on the 2nd, 4th, 6th, and 8th days was noted and the arithmetical means for the 3 groups of patients were obtained. The standard deviations in all 12 sub-groups lay between 0.6 and 0.8 inch [1 inch = 2.54 cm.].

By subtraction, the average involution of the uterus in successive 2-day intervals was obtained; the difference between corresponding figures in the 3 groups never exceeded 1/10 of an inch.

These findings were of considerable interest; they were, however, open to the serious criticism that the measurements had not been made by one observer throughout.

It was, therefore, decided that further and more accurate measurements should be made. This latter investigation was made in the *Radcliffe Infirmary*, Oxford. The subdivision of cases was similar to that used in the earlier experiment, but to ensure, as far as possible, that the bladder and rectum were empty, each patient had received special preparation. On the 2nd morning an enema was given and the height of the uterus was measured immediately after the bowel and bladder had been emptied. On the 3rd night an aperient was given, followed by a further enema next morning unless the bowel had already been satisfactorily emptied. The bladder was again emptied immediately before the uterus was measured. The same preparations were made before the 3rd measurement. If there was any suspicion that either the bladder or rectum had not been emptied, the patient was considered unsuitable, and the readings were discarded.

Four difficulties quickly became apparent. The first 3 pertained to the measurements, the last to the condition of the bowel and bladder.

(i) It is impossible to measure the height of the uterus above the symphysis pubis more accurately than to the nearest $\frac{1}{2}$ inch; to obtain even this precision a thin subject is necessary. In some cases the uncertainty amounts to nearly 1 inch.

(ii) The uterus can be moved downwards or upwards in the abdomen, sometimes by as much as 1 inch.

(iii) Towards the end of the 1st week of the puerperium the uterus, in some cases, tilts backwards; it is then more difficult to measure its height than it was in the early days of the puerperium.

(iv) It is not always possible to be certain that the bowel and bladder have been completely emptied, however carefully the patient has been prepared. The last-mentioned difficulty is illustrated by a chart showing the distortion of the uterine involution curve by the varying fullness of the rectum.

Comparison between the average height of the uterus on successive 2-day intervals showed a similar rate of involution in the 3 groups. These observations, therefore, did not give any support to the usual belief that ergot, administered over a period of days, hastens uterine involution.

Effect on lochia:—The effect of ergometrine and of ergotamine on the amount and character of the lochia was also studied. Consecutive normal cases were divided into 3 groups as before. All discarded sanitary pads were placed by the nurses in special bowls and examined personally at approximately the same hour each morning. Over 100 cases were recorded.

It was soon discovered that some women after childbirth hardly soil the sanitary pads, most of the lochia escaping when a bed-pan is used for the purpose of emptying the bowl or bladder. Examination of the pads alone may thus give an entirely false impression of the amount of lochia passed. The co-operation of the nursing staff was,

therefore, obtained, and each time a bed-pan was used an entry was made on a special chart recording whether the lochial discharge was absent, scanty (small clots), moderate (medium clots), or profuse (large clots). While this arrangement had the disadvantage that the charts were filled by different observers each day, it was a decided improvement on the methods employed in any previous investigation of which the authors have knowledge. From the pads personally inspected and the special charts kept by the nursing staff, a reasonably reliable record of the amount and character of the lochia passed during the previous 24 hours was obtained.

The following guarded conclusions were drawn:

- i. The normal variation in the quantity and character of the lochia is very great.
- ii. The practical difficulties in collecting all the discharge and in estimating its amount are so numerous that, unless wide variation is constantly observed, records of lochial discharge do not give any trustworthy indication of the effect of drugs on the uterus.
- iii. Administration of ergometrine did not produce any constant change in character or quantity of the lochia.
- iv. Administration of ergotamine ("femergin") did not produce any constant change in character or quantity of the lochia.

Discussion.—The authors then discuss briefly certain recent papers (Der Brucke, 1935; Davis, Adair and Pearl, 1936; Kushner and Wahrsinger, 1938; Lounsbury, 1940) purporting to support the long-held view that ergot administration promotes uterine involution. In all the examples they believe that the claims made have not been substantiated. In no case does it appear that the difficulties of the investigation had been fully appreciated, nor is there evidence of adequate safeguard against the inclusion of fallacious recordings.

Involution should be regarded, not as the disuse-atrophy of an unwanted organ, but as a physiological process requiring an unimpeded blood supply. If at any stage of the puerperium activity is forced on the uterus, the steady involution of that organ may well be hindered, for an active muscle does not atrophy. The ergot alkaloids bring about a series of contractions so rapid that the uterus as a whole has no time to relax. Each muscle-fibre is, however, performing many times its previous amount of work. It is a mistake to suppose—as is sometimes done—that ergot causes the uterus to become firm in an inactive or static sense. Uterine muscle is not leather in a tanner's vat: it is living tissue, and a "firming" is the result of greatly increased work of muscle-fibres.

Those who prescribe a course of ergot to patients suffering from puerperal uterine infection do so in the twofold belief that the drug will check any tendency to sub-involution, and that it will expel infected material from the uterine cavity. In patients pre-

sending symptoms of uterine sepsis, pathogenic organisms are living and multiplying in the uterine wall, and mere contraction of the organ will not get rid of them. Violent activity may, on the contrary, disseminate infection. It is a cardinal rule that all inflamed organs should be kept at rest, and if this is the correct treatment for, say, a septic finger, it is difficult to understand why matters should be reversed for a septic uterus. Further, if by the uterine contraction the blood supply is appreciably reduced, there will also be a diminution of the supply of leucocytes, of natural antibodies, and, on occasion, of chemotherapeutic substances. Ergot therapy may thus have a harmful influence.

Conclusions:—The long-held belief that

News and Notes

The Dr. Sir Bhachandra Krishna Kt., Memorial Fund Gold Medal of the Bombay Medical Union.—The Joint Hony. Secretaries write:

At a meeting of the subscribers of Sir Bhachandra Krishna, Kt., Memorial Fund held on the 11th July, 1924, the following resolution was adopted:—

"That from the funds collected to perpetuate the memory of the late Dr. Sir Bhachandra Krishna, Kt., a Memorial Prize Medal be founded to be awarded every year on the anniversary of his death to a member of the Medical Profession who submits a thesis or delivers a lecture on any medical subject before a meeting of the medical profession to be held under the auspices of the Bombay Medical Union, preference to be given to one who submits any original or research work especially with reference to Indigenous Medicine on Western lines."

In consonance with the above resolution, members of the profession are invited to submit a thesis or a paper by the 15th April, 1945, to the above address for submission to a Selection Committee for making the above award.

The thesis should be designated by a motto instead of the writer's name and should be accompanied by a sealed cover containing the name of the writer and his post office address. The name of the Prize, the year of competition, the subject of the thesis and the writer's motto should be superscribed on the cover.

The Dr. B. S. Shroff Memorial Gold Medal of the Bombay Medical Union.—"Treatment of burns—with special reference to the aetiological factors in shock as it occurs in

continued administration of ergot favourably influences the course of uterine involution receives no support from the investigations reported in this paper. The practice of giving the drug throughout the puerperium appears to arise from an imperfect understanding of the nature of the uterine involution on the one hand, and of the mode of action of ergot on the other. There is little doubt that vast quantities of this drug are daily used for purposes that may fairly be described as wasteful, useless, and possibly even harmful. At this time of international stress, importation of ergot is in many countries difficult and uncertain; there is, therefore, urgent need to conserve the existing supplies of this essential drug—*British Medical Bulletin*.

burns," has been selected as the subject for the above prize.

The competitor must be (i) a duly qualified member of the medical profession holding a degree or degrees and diplomas from Indian and other Universities created by statute; or (ii) a duly qualified member of the medical profession holding the diplomas of membership of the College of Physicians and Surgeons of Bombay.

Six clear typed copies of the thesis should be sent so as to reach the Honorary Secretaries, Bombay Medical Union, Blavatsky Lodge Building, French Bridge, Chowpaty, Bombay, 7, by the 15th April 1945.

The thesis should be designated by a motto instead of the writer's name and should be accompanied by a sealed cover containing the name of the writer and his post office address.

The Eleventh Andhra Medical Conference, Cocanada.—The Hony. General Secretary writes:—

This conference will be held at Cocanada, this year in November under the presidency of Dr. P. Gurumurthy. The Reception Committee appeals to the members of the medical profession to give their wholehearted co-operation by attending the conference and also contributing scientific papers.

A Medical and Scientific Exhibition will be held along with the conference. As this offers an unique opportunity for the manufacturing concerns to exhibit their products and to get into personal touch with the medical public, the companies are requested to communicate at an early date with the Hony. Secretary, Exhibition section of the conference, and participate in the exhibition.

Preparations and Inventions

Tablets 'Vitamindon B Complex'.—Manufactured by the Indo-Pharma Pharmaceutical Works, Bombay: This is a new product of the firm and is sure to be of

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Osler Hospital, Podur

The 2nd anniversary of Osler Hospital, Podur P. O., West Godavari district, was celebrated on August 27th. Dr. R. Mahadevan, M.S., F.R.C.S., (Edin. and Eng.), Professor of Operative Surgery, Andhra Medical College, presiding. The annual report of the hospital was read, giving the statistics and the nature of cases treated during the year.

A scientific section was arranged in which Dr. R. Mahadevan delivered a lecture, demonstrating with charts, on "cures and great reliefs by simple measures." The learned speaker instanced many painful conditions over different regions of the body, due to myositis, tendinitis, sometimes associated with tender nodules, neuralgias, etc., in which single injection of Procaine solution, given properly, exhibits remarkable cure. The infiltration of the analgesic solution, not merely allays pain, but sets up some tissue reaction, resulting in total organisation of the lesion. Drs. R. N. Raju and P. Ramarao, of Osler Hospital, demonstrated the following cases: (i) hydronephrosis; (ii) infected dermoid pelvis; (iii) acute mastoiditis; (iv) thiersch skin grafts.

Later the guests were entertained at tea and music at 7 p.m., and dinner at 8 p.m.

The following are extracts from the report:

The hospital was formally opened on 23rd August, 1942. We say formally, because our work here, as medical men in our village, dated back right from the time we were senior medical students and post-graduates. When we were in the village on a holiday, quite often we used to be consulted for non-emergent and emergent cases. Some of the emergent cases, referred to a surgical centre, used to reach there rather too late for any interference. Having been convinced that there is real necessity for a nursing institution, we have taken this plot of over an acre for lease and all the contrivances we made to suit our immediate needs are simple, and necessarily light and temporary. We could not do otherwise, because we had to see how we would fare with the public in inspiring their confidence and goodwill in the beginning. Our staff consists of two doctors, three skilled assistants, two nurses, one ward attendant, and one whole timed thoti. We have accommodation to nurse 20 patients. We keep ourselves available for any emergency at all hours of the day. The out-patient section works from 9 a.m. to 1 p.m. As patients come from distant villages and as villagers are not sufficiently punctual in spite of our insistence, we have been obliged to be less rigid in the limitation of work hours.

The total number of out-patients treated were 2185, and admissions 375 (181 medical and 194 surgical). Many important and major operations were performed here.

We feel, considering the shortness of the period of existence of this hospital, our

record of service to the people in this area justifies our object. Let us for a while consider the present position of medical aid and the health problems in our villages in which live 90% of our country's population. In climate, in resources, in man-power and in productivity, we are in no way wanting. But the economic standard and the percentage of literacy are appallingly low. Ignorant superstitious beliefs and the peoples' apathy towards the common social problems are too common to be detailed. We all know that the radical cure for this sad state is only political freedom. The provision of medical service, like that of an educational service, is a function of the State and the people have a right to get, irrespective of the ability or the inability to pay for, qualified and efficient medical aid, as much as they have a right to have means of living squarely and to be literate. Any scheme to provide medical service to the people must be comprehensive and nationally planned. It must have as objects:—

(1) To provide a system of medical service directed towards the achievement of positive health, the prevention of disease and the relief of sickness.

(2) To render available to every individual all necessary medical service, both general and specialist, and domiciliary and institutional.

There is a great sense of isolation for the general practitioner in rural areas, and not even the most passionate and patriotic call to "Be back to villages" will attract young men from the university, unless they are shown the facilities and conditions they are wish to have. Although they form the bulk in the pattern of the country's health services, they are not given their due share in the statutory and advisory bodies. There are no facilities within his reach for laboratory diagnosis. He has no easy and convenient access to consultant and specialist opinion. Opportunities are scarce for periodic training in an academic institution, to refresh his knowledge and make himself up-to-date with the new ideas in science. All these will have to be rectified. The method of medical education itself will have to be suitably modified, to arm the rural practitioner with the knowledge of, and the methods to deal with, rural problems. The student must be made to learn the science of medicine with particular reference to its application rather than its basic character. He is burdened with superfluous subjects which have little bearing in practice. This is a long felt desideratum.

The number of practitioners must increase from 1 per 8,000 of population to 1 per 2,000, and to accomplish such an ideal, the production of medical men will have to be augmented by increasing the number of teaching institutions. The present deplorable condition of turning down applicants for medical colleges for want of seats is suicidal.

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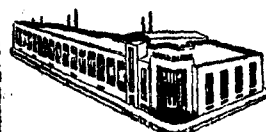
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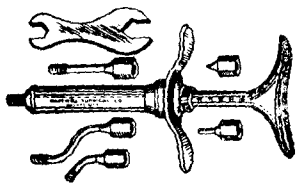
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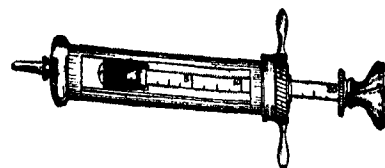
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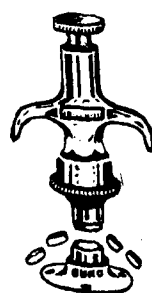
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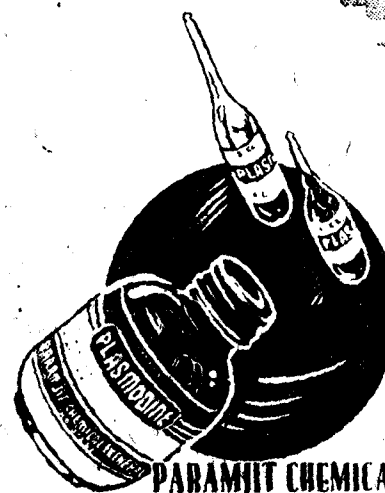


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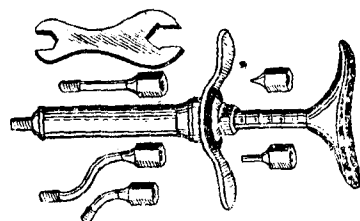
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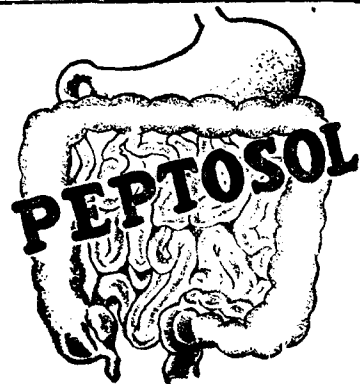
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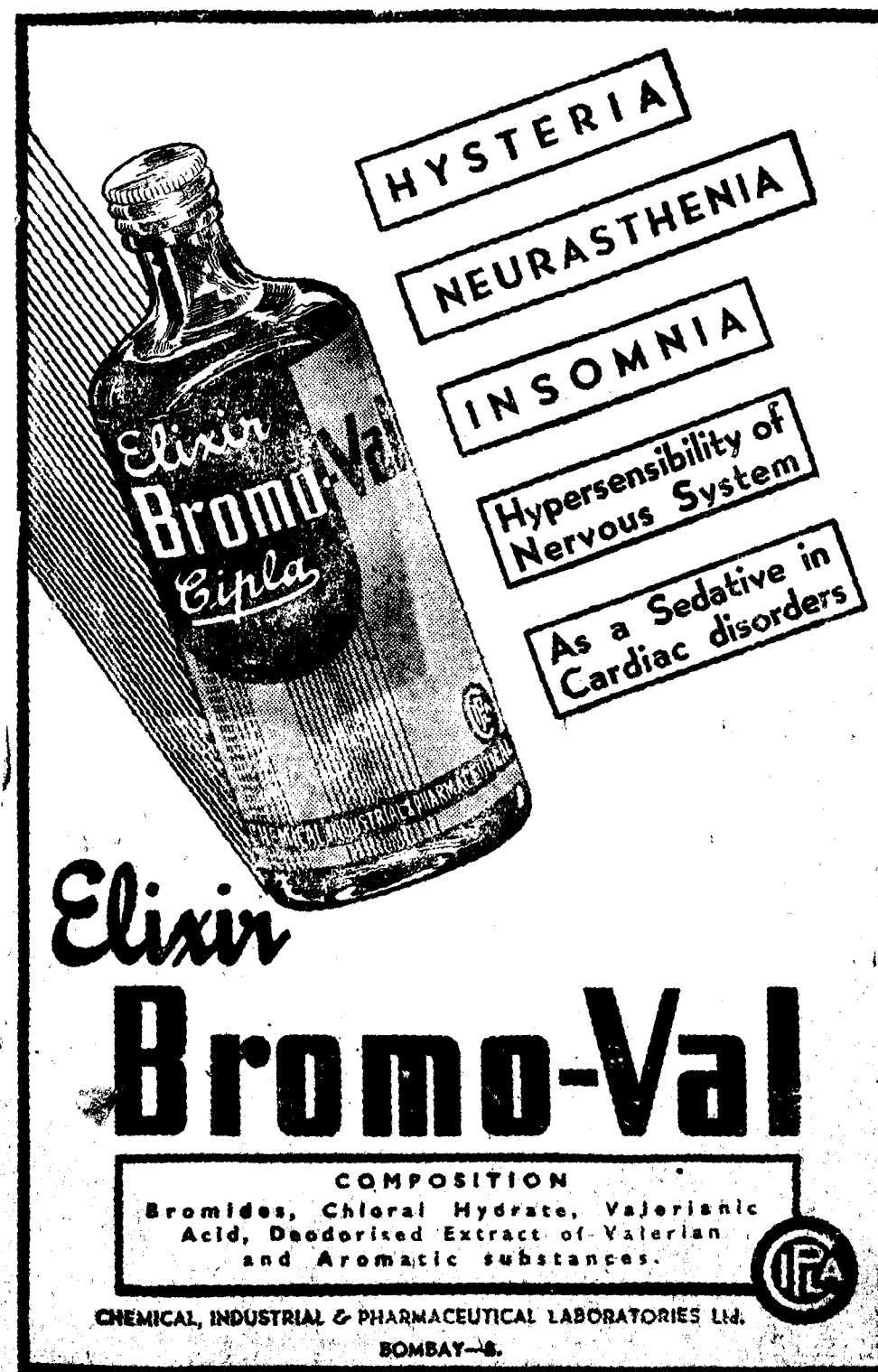
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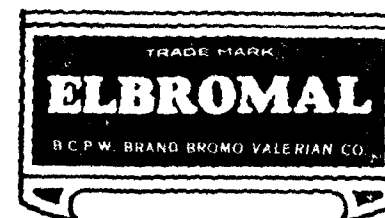
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