

The Antiseptic

385

A Monthly Medical Journal

Edited by

U. Rama Rau, & U. Krishna Rau, M.B., B.S.



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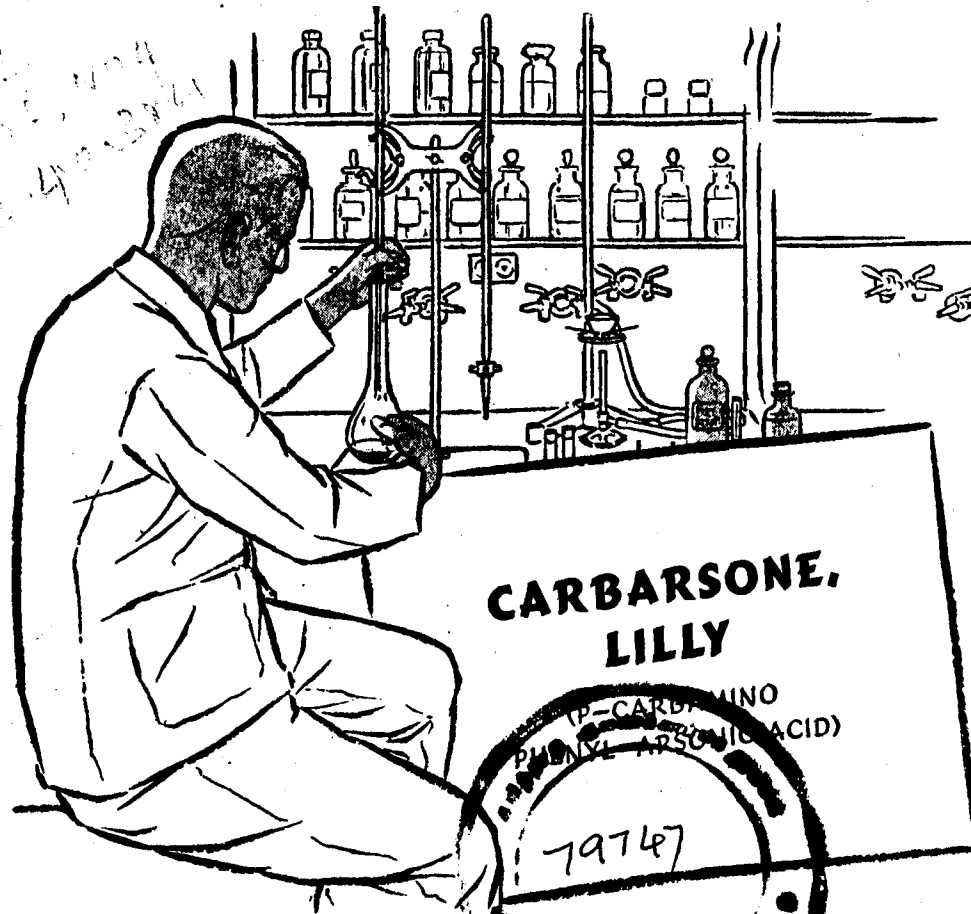
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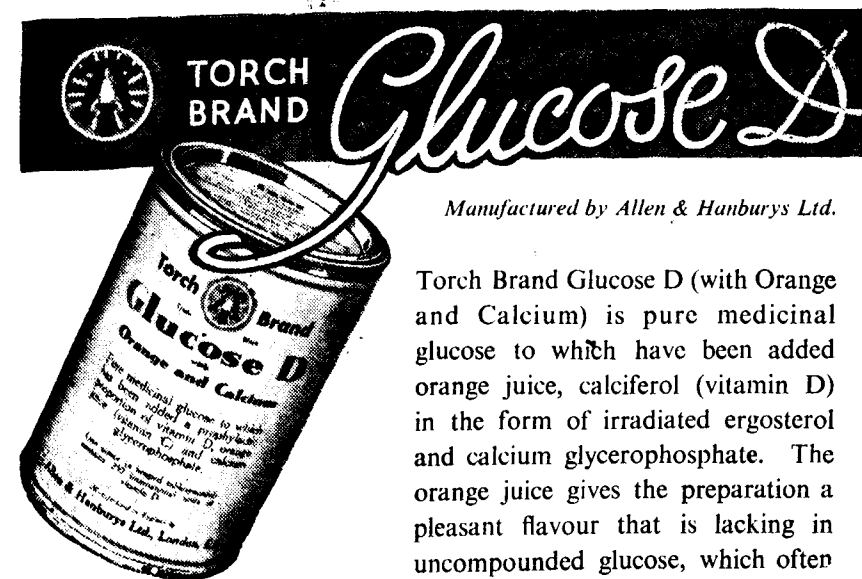
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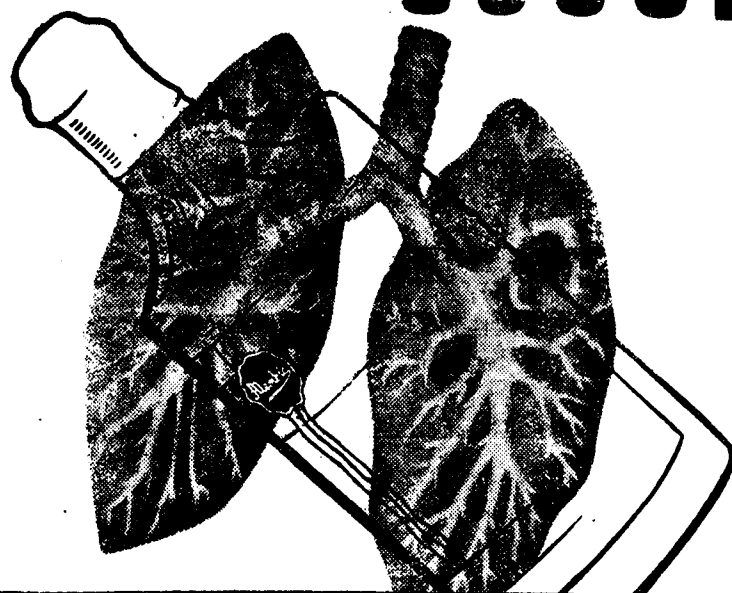
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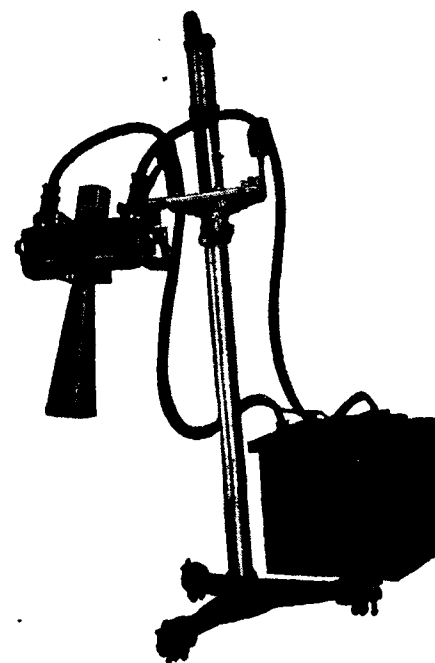
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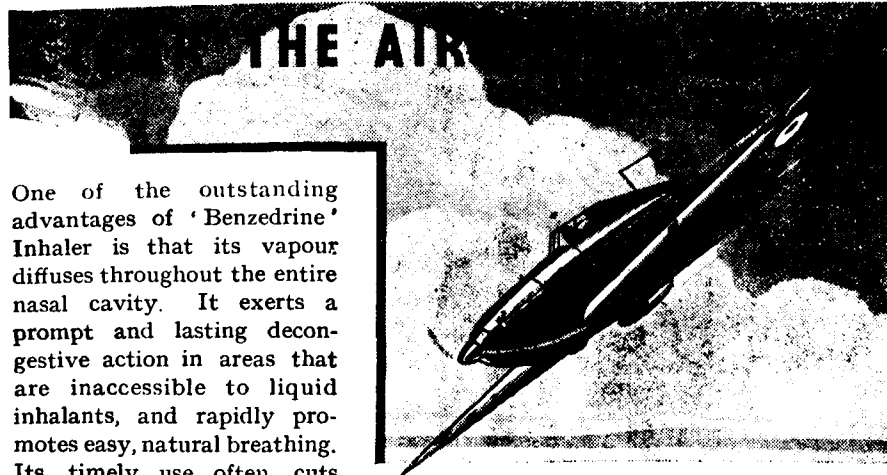


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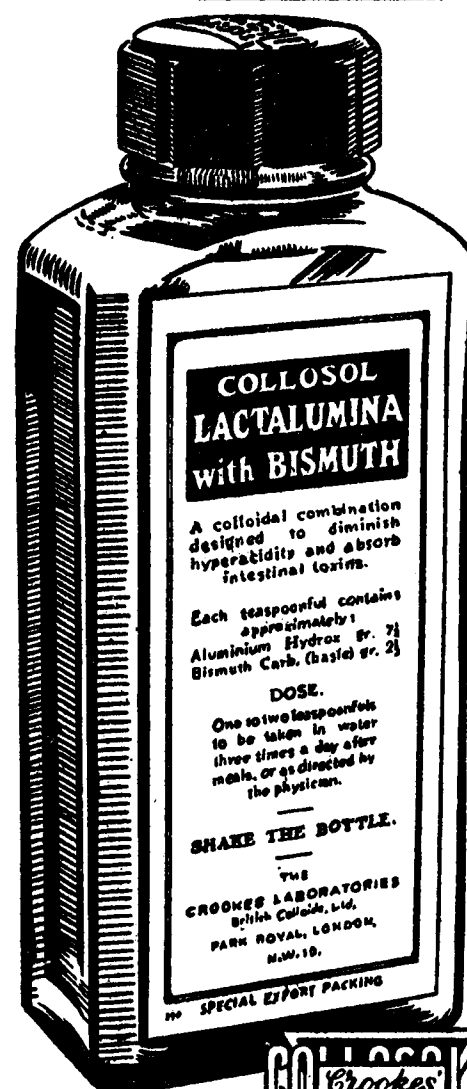
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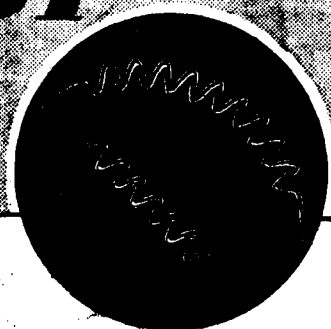
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Medical Emergencies*

BY

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THE subject "Medical Emergencies" is a vast one and as such, one cannot discuss in detail all in a short hour. I shall briefly describe a few of the most important ones, only from the point of view of a private practitioner who is called in suddenly, may be at the middle of the night, for an emergency, when he has got to make the diagnosis, most with his clinical knowledge, and least with the accessory laboratory and technical aids.

I have classified the diseases according to each system and I am describing a few only in each.

Diseases of the Nervous System.—Infantile Convulsions:—Frequently met with in practice, and resulting from diverse causes ranging from teething to meningitis, convulsions in children demand prompt relief. The first thing to do, is to open the bowels by a Glycerine enema, or by a Potassium permanganate bowel wash. If the fits are mild, they are easily controlled by a mixture of Chloral Hydras and Potassium Bromide given orally, or by a rectal administration of a suitable dose of Chloral Hydras. Paraldehyde suspended in starch mucilage is an excellent sedative administered rectally. If the fits were to be of a severe nature, $\frac{1}{2}$ –1 c.c. of Luminal Sodium, or 1–2 c.c. Dial solution, is injected deep into the gluteal muscles. No doubt one has to attend to the causal disease, for example, for fever one has got to do ice capping, for bacillary dysentery Serum has got to be given etc. Calcium Gluconate 10% 5 c.c. can also be given safely by the intramuscular route, with good results. If the fits are severe and continuous, lumbar puncture has got to be done. One meets with a good deal of encephalitis cases in practice, in which lumbar puncture proves, not only a diagnostic aid, but also a good therapeutic agent.

Convulsions in adults:—We are sometimes called in to attend to

* A lecture delivered under the auspices of the South Indian Medical Union.

'fits' in grown up persons, especially females. They are mostly *hysterical* in nature, as shown by the history, and by the bizarre nature and distribution of the symptoms and signs. The severity of the fits demands an injection of $\frac{1}{2}$ gr. Morphine with 1/100 gr. Atropine Sulphate, and the milder ones are treated only with a mixture containing a good dose of Bromides and Valerian Ammoniate.

In the menstruating woman, one often sees fits due, apparently to a hypocalcæmic condition. An immediate intravenous injection of 5 c.c. of 10% Calcium Gluconate, followed by an intramuscular injection of 5 c.c. of the same drug, with the oral administration of Calcium Lactate mixture, will be enough to control the hypocalcæmia.

"*Status Epilepticus*" often summons us in all sorts of odd hours. The history of such previous attacks, the typical fits, twitchings and froth in the mouth give away the diagnosis. If the patient is in bed, he ought to be put on the floor, all his clothes especially those round his neck, loosened, tongue must be pulled out and in order he might not bite it, a wooden wedge must be inserted between the teeth. An attempt must be made to control the fits by injection of Morphia, Dial or in the extreme by Chloroform inhalations.

Diseases of the Respiratory System.—The commonest disorder of the lungs to summon us, is an attack of *bronchial asthma*. The diagnosis of bronchial asthma is easy and we are concerned only with the *status asthmaticus*. In such a situation, the ideal thing to do, is, to strap a needle in the deltoid muscle and go on giving 1 minim of Adrenalin solution, every minute, till relief is obtained. Sometimes as much as 100 minims of the drug are required to get complete relief. There after, to prevent relapse, it is advisable to give 1-2 mins. every $\frac{1}{4}$ hour for the next hour, twice in the second hour and once an hour for another 2 or 3 hours. The other alternative is to give along with Adrenalin 5 mins., 1/100 gr. Atropine, or to give Asthmolysin (Adrenalin 0.5 c.c. and Pituitrin 0.5 c.c.) or Adrenalin 5 mins. with 0.5 gr. Ephedrin Hydrochloride in 1 c.c. Should no results be obtained with Adrenalin or its combinations, one of the following narcotic drugs should be tried. Morphia 1/6 gr., or Omnopon 1 c.c. could be given but should not be repeated for the next 4 hours, as it is habit forming and moreover abolishes the cough reflex. Ether $\frac{1}{2}$ ounce in $\frac{1}{2}$ ounce of olive oil for every 20 lbs. of body weight, per rectum could be tried. He should be put in bed and propped up in the most convenient position. After the attack is controlled, an asthma mixture should be prescribed.

"*Spontaneous Pneumothorax*" is another respiratory catastrophe that urgently requires our attention. Pulmonary Tuberculosis is the most common cause of spontaneous pneumothorax. When this disorder arises in an apparently healthy person, it is more often due to a non-tuberculous defect in the alveoli or the pleura, such as emphysematous bullæ, or a direct tear of the pleura from traction by adhesions, or congenital cystic lung. The escape of air into the pleural cavity may result from softening of superficial tuberculous foci, rupture of a cavity or the dragging effect of adhesions. If the opening in the pleura is oblique or valvular, a serious rise of intrapleural pressure may occur (tension pneumothorax).

In a well marked case of spontaneous pneumothorax, there is usually sudden and severe pain in the chest and urgent dyspnoea and cyanosis. In

the more severe cases hasty relief is necessary if fatal asphyxia is to be averted.

On examination of the patient there is immobility and marked enlargement of one side of the chest, displacement of the apex beat away from the affected side. The affected side is hyper-resonant, the breath sounds are diminished and coin sound could be elicited there.

Spontaneous pneumothorax may create considerable shock, alarm and anxiety and Morphia $\frac{1}{2}$ gr. is required for the control of these. If there is urgent dyspnoea and especially if the heart is displaced, the intra-pleural tension ought to be immediately relieved by the insertion of an aspiration needle into the pleural cavity. Later; the air might be aspirated with an artificial pneumothorax apparatus.

I may incidentally mention *pulmonary infarction*, as a rare medical emergency, especially in hospital practice. The severer forms occur due to embolism of the large pulmonary vessels by clots from the systemic venous side (especially post-operative), or by clots from the right auricular appendix or rarely fat and air embolism. The patient complains of sudden pain in the chest, of absolutely sudden onset and extreme dyspnoea. Rapid distress and cyanosis follow and unconsciousness may develop terminating in death. The pain does not radiate to the arm. The treatment consists in the administration of a good dose of Morphia, stimulants and Oxygen if available. Prognosis is always very bad.

Haemoptysis often falls to our lot as an emergency. Of the various causes cited, pulmonary tuberculosis, mitral stenosis, a few lung diseases like pneumonia, neoplasm etc., aneurysm of the aorta and chest injuries are the commonest. Copious and rapidly fatal hæmoptysis is confined only to pulmonary tuberculosis. In hæmoptysis the blood is coughed up, it is frothy and alkaline in reaction and the underlying cause might be detected with ease. When the hæmoptysis is rather more severe, the patient should be kept resting quietly in bed and should be confidently told that the bleeding will stop spontaneously later. If it is very severe $\frac{1}{2}$ — $\frac{1}{4}$ gr. Morphia should be given. He should not be allowed to lie flat on the bed but should be propped up, as he can, then only, bring out the clots better. The usual hæmostatics like Hæmoplastic serum, Calcium Gluconate or Chloride, Vitamin C, Snake Venom, Coagulen Ciba, Congo Red etc. could be given. Drugs like Emetine, or Pituitrin which are supposed to reduce pulmonary blood pressure should not be given.

Anaphylaxis is an unpleasant emergency due to allergic reaction of the patient. It is commonly met with, when one is changing the brands of Insulin or Liver Extracts for patients, or rarely after the administration of Antidysenteric or Antidiphtheritic sera. The symptoms range from a mild pruritis to a severe urticarial rash resulting in swelling of the whole body beyond recognition, or sometimes even to difficulty in breathing due to œdema of the glottis. The immediate treatment consists in administering 5 mins. of Adrenalin, followed by an intravenous injection of Calcium Gluconate.

Diseases of the Circulatory System.—Of these, the most serious one is *Coronary Thrombosis*. There is no necessity for me to go in detail, all the etiology and signs and symptoms of this disorder except that it occurs usually in males, in the 4th decade of life, especially in the professional class of people like doctors, lawyers etc., and is usually associated with

arteriosclerosis, hypertension and diabetes. Attacks of coronary thrombosis occur more frequently at rest, than during effort. The pain is almost unbearable and takes the form of a pressure, or terrible crushing or squeezing sensation at the middle of the chest around the sternum, or between the two nipples, or sometimes near the upper epigastrium. The duration of the pain is also variable, lasting from an hour or two, to several days. Restlessness and dyspnoea are very characteristic and the patient seems to be in great shock. The skin is cold, moist and takes on a grey, ashy colour. The face is anxious and cyanosed. Temperature is normal and the blood pressure might fall. Abdominal pain and tenderness might be present. Nausea, vomiting and distension may be distressing. The pulse is rapid, soft and often irregular and the heart sounds diminished in intensity. The lungs might reveal moist sounds. Fatalities may take place in 50% of cases, with great suddenness even when everything seems to be going on most favourably. Coronary thrombosis has got to be distinguished from various surgical conditions like perforating peptic ulcer, gall stone colic, acute pancreatitis etc. Pain radiating to the arms and dyspnoea help in the differential diagnosis. The extreme degree of dyspnoea and the accentuated pulmonary second sound in pulmonary embolism helps to distinguish it from coronary thrombosis. The diseases rarely mistaken are pneumonia, dissecting aortic aneurysm, spontaneous interstitial emphysema of the lungs etc.

There is hardly any other condition in the general field of heart diseases in which it is more difficult to appreciate the value of specific measures of therapy than in the treatment of acute coronary thrombosis. Of first importance is the relief of pain and the best result is obtained by a liberal use of Morphia. The amount necessary will vary from one dose of $\frac{1}{2}$ gr. subcutaneously, to many times such doses. If severe and persisting, Morphia should be repeated in another half hour or so and at times one grain or more of the drug would be necessary. From the very onset, the patient should never have any exertion. He must have absolute rest and every help for him must be given by others. Nitrites and other vasodilators are useless. The shock should be treated on symptomatic lines by warmth etc., but drugs like Adrenalin, Pituitrin or Ephedrin should not be given due to their action on the heart. Coramine and Cardiazol may be given. Oxygen is of use when there is marked dyspnoea and pulmonary congestion. It is customary of some physicians to give preparations like Aminophylline routinely during attack, especially intravenous, at the height of the pain, as they are supposed to increase coronary flow. But more clinical evidence is required in this line of therapy.

Angina Pectoris is another cardiac emergency that merits some discussion. It occurs also in males below the age of 50 years, in the professional class of people acquainted with strain and worry. It is excited by exertion, emotion, flatulence or chill. Syphilis, diabetes and arteriosclerosis and aortic insufficiency and stenosis are supposed to be the predisposing causes. An exciting cause like the exertion of walking especially up slight grades, is always present and the pain is of sudden onset, at the centre of the chest, in the sternum or to the left of the sternum. It may arise anywhere from the epigastrium to the root of the neck and characteristically radiates down the arm, through to the back, the neck, the jaw, the side of the face, or to the shoulder, more on the left side.

The discomfort is generally described as a constriction, a feeling of tightness, etc. When the attack comes on, the patient is brought to a stand still, as any slight exertion aggravates the pain. There is little or no sweating. On examining the patient, the heart might be enlarged but the sounds are feeble and the blood pressure might be high. The vital capacity of the patient is always reduced. The attack lasts from a few seconds to one or two minutes.

We are concerned here only with the treatment of the individual attacks. The patient should be instructed concerning the use of nitro-glycerine and they should always carry these pills—Tabella Trinitro-glyceralis 1/100th gr. each. The pill should be placed under the tongue and should be dissolved in about 10-20 seconds. Inhalation of Amyl Nitrate from capsules containing 3-5 mins. of the drug, acts more quickly but more violently. Half to an ounce of Whisky is of use. Occasionally the pain disappears on pressure over the carotid sinus. Morphia should be used with caution. If flatulence is present, carminatives should be administered. If cardiac failure supervenes, stimulants are advised.

Paroxysmal Dyspnoea otherwise called Left Ventricular Failure, or Cardiac Asthma, is a common cause for sudden alarm and one for which the physician may be hurriedly called. Paroxysmal dyspnoea is most apt to occur at nights and is often associated with Cheyne-Stokes breathing. It is common in hypertensive heart disease, in luetic aortic insufficiency and in diseases of coronary arteries. The patient is awakened from sleep at nights with suffocation and air hunger. He becomes agitated and develops cough. These may follow the typical picture of acute pulmonary oedema with the spitting out of abundant, frothy sputum. The patient has often a cold sweat and struggles for air. The attack, when mild may last only 15 mins. or $\frac{1}{2}$ hour and is followed by a comfortable sleep. When it is more severe, dyspnoea continues uncontrolled and the patient's life seems to be in stake. It is often mistaken for bronchial asthma and always, it is a wise policy to take the blood pressure of an elderly patient complaining of asthmatic attacks, before giving adrenalin. The ideal procedure in the treatment of paroxysmal dyspnoea is to give $\frac{1}{4}$ gr. Morphia with 1/100th gr. Atropine, continuous inhalation of Oxygen and a phlebotomy of 500 c.c. of blood. Similiar purpose might be achieved by diminishing the return flow to the heart by applying tourniquets to the four extremities and thereby producing peripheral venous stasis.

One of the sudden circulatory upsets is a *fainting spell* or *benign syncope*. It occurs commonly in aortic stenosis, and very often, in otherwise ordinarily healthy persons, the precipitating factors like the sight of blood, crowded room, sudden fright, the prick of a needle etc., might make some people faint. Sudden change of posture is another cause of fainting and it is all due to the upset of the vasomotor apparatus. Nothing much is done except to place under the patient's nostrils smelling salts, and to lower the head between the knees during the attack, and to give Ephedrine by mouth.

Adams-Stokes' Syncope is one where there is bradycardia (heart block), with syncope, and here sudden, unexpected, painless unconscious spells occur with or without convulsions. Adrenalin should be injected at once and even into the cardiac muscle itself.

Sometimes *hypersensitive carotid sinus reflexes* lead to fainting spells

On the Treatment of Acute Eye Condition in General Practice

BY

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IT is a well known fact that every year in India innumerable eyes become blind due to the incidence of acute eye conditions resulting from various specific infective diseases as well as from various accidental ocular injury. The prevention of blindness would be best tackled by promptly and properly diagnosing and treating every such acute ocular condition. The problem of prevention of blindness is a very urgent business, demanding the most scrupulous attention of the medical man as well as that of the public health worker. In this paper we shall consider the treatment of some acute eye conditions which are reported to the ophthalmic surgeon in his every day practice.

For the purpose of this communication we shall briefly discuss the treatment of gonorrhœal involvement of the eye. We shall also briefly review the scientific literature that has evolved as a result of the treatment of gonococcal affections of the eye. The line of treatment followed in my clinic for the treatment of gonorrhœal affection of the eye would also be briefly recorded in this paper.

Gonorrhœal involvement of the eye is a very dreadful ocular affection, which is responsible for the destruction of so many eyes in the world. Thanks to the investigations of CREDE and the modern chemo-therapeutic researches, the horror created by the incidence of gonorrhœal diseases of the eye is much less. The modern ophthalmologist can treat the disease with impunity and can guarantee successful results to his patient.

Incidence of gonorrhœal ophthalmia is not new in the history of medical science. It has been observed and treated by the world's first ophthalmic surgeon SUSRUTA¹. The post-Susrutian ophthalmologists of ancient and mediæval periods have given due attention to this affliction. The irreparable ravages caused by this ocular disease have been duly taken note of by these world scientists.

The ocular manifestation of gonorrhœal infection are the two well-known ocular maladies, named as gonorrhœal ophthalmia on adult purulent conjunctivitis and ophthalmia neonatorum on infantile purulent conjunctivitis².

Gonorrhœal ophthalmia (adult purulent conjunctivitis) is most commonly due to direct infection from the genitals. The disease is always acquired through secretion from gonorrhœal secretion either directly by the fingers of the patient transferring the virus from the genitals or indirectly through contact with infected towels etc. The characteristic signs and symptoms are—intense chemosis and extreme injection of the conjunctiva of the lids and the fornix, marked œdema of the ocular conjunctiva, making it swell up around the cornea; copious discharge—at first serious and bloodstreaked and later purulent. The patient complains

1. Susruta—Susruta-Samhita.

2. Bidyadhar, N. K.—'Ocular Manifestations and Complications in Infectious Diseases and their Treatment,'—The Antiseptic, Vol. xxxviii, No. 2 1941.

of a hot pricking pain in the eye. Besides these there are marked constitutional disturbances, namely rise of temperature, uneasiness and general lassitude. The preauricular glands become enlarged and tender, being more palpable on the affected side.

Ocular Complications.—The most frequent and important complication of gonococcal infections is corneal ulceration, constituting one of the most common causes of blindness. Other concomitant complications are iritis, iridocyclitis etc.

Ophthalmia Neonatorum.—This is a dreadful and at the same time a preventable ocular affection, occurring in the newborn children as the result of carelessness of the nursing staff at the time of child's birth. True ophthalmia neonatorum is commonly caused by infection from vaginal discharges or faecal matter or from dirty rags used in cleansing the eyes; while later cases of infantile purulent ophthalmia are due to post-partum infection.

The symptoms of this affection are generally the same as in the conjunctivitis gonorrhœa of adults, with the exception that they are lighter in intensity and less severe.

Complications of Ophthalmia Neonatorum.—Corneal ulceration is the most common complication which would inevitably lead on to dangerous sequelæ, if proper and effective treatment is not timely instituted. The slightest haziness of the cornea should be regarded as the danger signal for the onset of corneal involvement. When the corneal ulcer heals without perforation the result is a good deal of scarring of the cornea. In severe cases when perforation takes place, intra-ocular involvement such as iridocyclitis and pan-ophthalmitis would occur, bringing about the ultimate destruction of the eye. Anterior staphyloma and adherent leucomata are other sequelæ of ophthalmia neonatorum.

Treatment.—The time-honoured remedial measures that have been employed for the treatment of gonorrhœal involvement of the eye may be discussed under the following heads:—

- (1) Irrigations with mild antiseptic and anti-phlogistic lotions for eye washes.
- (2) Employment of mild antiseptic and antiphlogistic for eye drops.
- (3) Non-Specific Protein Therapy.
- (4) Fever Therapy.
- (5) Use of gonococcal vaccines or serum.
- (6) ChemoTherapy.

In the treatment of gonorrhœal conjunctivitis all our attention should be directed to the prevention of corneal ulceration.

Regarding irrigations, the infected eye should be frequently irrigated at regular intervals, so that no secretion is allowed to remain in the conjunctival sac. In cases being profuse discharge, the eye should be irrigated every one hour, the intervals being lengthened as the discharge diminishes. As an irrigating fluid, either a saturated solution of Boracic acid in Normal Saline is very useful, the effect being purely mechanical. Other cleansing and antiseptic solutions which may be tried are:—

in some people. This increased irritation of the carotid sinus, might be due to hypertension or arteriosclerosis or due to local irritation by glands or tumours in the neck. Atropine abolishes the attack.

Cardiac failure during the course of acute fevers is not an infrequent emergency. In the course of certain fevers like enteric, one often meets with sudden fall of temperature with rise of pulse rate, with sweats and acceleration of the cardiac action. In such condition, Glucose solution 25% 25 c.c. with Coramine intravenously, once or twice a day, and continuous Oxygen, and Glucose and Brandy orally will aid the patient to tide over the crisis.

Diseases of the Alimentary System.—*Haematemesis* is usually due to peptic ulcer and sometimes due to cancer stomach, cirrhosis of the liver or splenic anaemia. The amount of blood vomited out varies in each case. Moderate amount is not serious. In grave hæmorrhage, mortality is heavy. The patient is restless, has slow cerebation and the usual symptoms of shock are present. The immediate treatment consists in the relief of shock by an injection of $\frac{1}{4}$ gr. Morphia, and the patient is made as comfortable as possible in bed with the head kept low and the foot of the bed being raised. A hot water bottle is placed under the feet. The pulse-rate should be watched. Various hæmostatics, as mentioned under hæmoptysis, could be tried with varying degrees of success.

Intestinal Haemorrhage during the course of typhoid fever constitutes another emergency, Morphia, hæmostatics, raising of the foot of the bed, with concomitant treatment for shock and the limitation of all feeds orally to sips of Glucose water, constitute our main lines of treatment.

Sometimes the *various colics*—intestinal, renal or biliary—fall to our lot, and the best way to tackle them is to relieve the pain and give rest to the patient, by an injection of Morphia with full dose of Atropine.

Coma.—Before closing, I would like to mention a few words about the *unconscious patient*. In the comatose patient, the various possibilities to be thought of are (1) cerebral hæmorrhage, (2) alcoholic intoxication, (3) shock, (4) narcotic drugs, (5) uræmia, (6) diabetic coma, (7) hyperpyrexia (8) cerebral malaria, (9) heat stroke, and (10) a few surgical conditions like head-injuries, etc.

Alcoholic odour in the breath and the semi-comatose condition with dilated pupils and deep respiration, give away the diagnosis of *alcoholic poisoning*. Stomach wash, warmth, hot coffee and Coramine are indicated as treatment.

Shock is easy to diagnose and the treatment has been outlined before.

In *uraemia*, Cheyne-Stokes respiration, hypertension, and the presence of albumin in the urine, help the diagnosis. Diaphoretics, venesection and intravenous injection of 50 c.c. of 50% Glucose solution are suggested in the shape of treatment.

Cerebral malaria is also a fairly common condition. History of residence in an endemic area, spleen palpability and high temperature should make one suspect the condition. Even before the diagnosis could be clinched by a slide examination, an intravenous injection of 10 grs. of Quinine Bi-hydrochloride in 25 c.c. of 25% Glucose solution ought to be given followed sometime later by an intramuscular injection of 10 grs. Quinine Bi-hydrochloride and stimulants like Coramine should also be given.

In *heat stroke*, the patient complains of headache, and malaise passing into a short stage of delirium and this passes into coma, with high temperature. The patient should be treated by reducing the temperature at once by iced water, cold sponging, cold enema and thereafter diaphoretic mixture.

Cerebral hæmorrhage is of sudden onset. There is deep coma, stertorous respiration, paralysis with flaccidity of the limbs, unequal pupils with loss of conjunctival reflex and high blood pressure. Absolute rest in bed, venesection, lumbar puncture, and stimulants like Glucose and Coramine intravenously are to be adopted.

Lastly *diabetic coma* has to be identified and the correct line of treatment chalked out. The patient in diabetic coma is dehydrated, and his blood pressure is low. The intra-ocular tension is diminished. There is a history of diabetes, or an obvious surgical condition like cellulitis or gangrene might be present, the breath smells of acetone and the urine contains sugar and acetone.

It is an emergency whose treatment demands the constant attendance and care of the physician and it requires, in severe cases, skilled nursing and technical assistance which are not easily procurable outside a hospital or nursing home. It is a condition where expert treatment may make all the difference between the life and death of the patient. In the majority of severe cases, therefore, when skilled institutional treatment can be procured, it is well to transfer the patient to hospital after first-aid treatment in the form of an adequate injection of Insulin has been given by the practitioner. The sheet-anchors of treatment in diabetic coma are to eradicate the ketosis by giving Insulin and Glucose, and to combat the invariable dehydration and circulatory collapse by giving fluids. In addition, it is often wise to wash out the stomach where vomiting is occurring; to clear the bowel where constipation is present and to search for and when present to evacuate pus, or to treat any associated infection which might have been the original cause of the coma.

When the patient is able to swallow, 50 units of ordinary Insulin subcutaneously with 20 gms. of Glucose orally should be given immediately and every 2 hours, 20 units of soluble Insulin should be given covered with adequate Glucose, as long as ketosis is present. Not infrequently patients recover from ketosis but die from circulatory failure and dehydration. The patient ought to be given plenty of fluids by mouth and frequent drinks of hot tea and coffee ought to be given. Plenty of Soda Bicarb. should be given. When circulatory collapse is severe, Coramine ought to be injected. In addition Salines should be given rectally or subcutaneously. When the patient is in deep coma and unable to swallow, at least 80 units of Insulin should be administered as an initial dose, 20-50 units of which can be given intravenously with Saline. This procedure should be repeated in 3 hours if the patient has not come out of coma sufficiently to permit for being fed by the mouth.

Potassium permanganate 1 in 500; Mercury perchloride 1 in 20,000 to 1 in 10,000; Hydrogen peroxide 1 volume; or concentrated solution of Mag. Sulph.

The sound eye should invariably be protected by a BULLER's shield³.

It is to be noted that antiseptics when used should be non-irritating to the cornea. A drug such as 1% Mercurochrome or 1 to 2,500 Metaphen, instilled three times a day may hasten the process of resolution by its bactericidal effect⁴ (GIFFORD). According to MAY and WORTH,⁵ the installation of 25% solution of Argyrol or Protargol every 3 hours is of value. After the acute chemosis of the lids and the conjunctiva has begun to subside, a 2% Silver Nitrate solution should be employed and it should be continued as long as the secretion and the lid hypertrophy persist. In all acute cases 1% Atropine solution should be given at least once a day.

The use of iced applications is of value only in the early stage where is much swelling of the lids.

Next to irrigations and the employment of antiseptic, astringent and antiphlogistic eyelotions, the most important therapeutic measure in this disease is the use of foreign protein injections while a certain percentage of cases would heal up without corneal complications with irrigations and antiseptic lotions alone, there occur many cases which usually turn out refractory and it is therefore a safe procedure to employ the use of milk injections from the beginning in almost every case. Indeed PILAAT⁷ has aptly remarked as to whether or not a physician is guilty of malpraxis in cases where foreign protein therapy is not employed.

The therapeutic efficacy of Milk in the treatment of ocular affections has first been suggested by SUSRUTA. Since then this medicament has been introduced into ocular therapy by the post Susrutian ophthalmologists. In the modern period the use of Milk in the treatment of ocular affections was introduced by SCHMIDT⁸, (1915). Since then various observers have made favourable reports regarding the therapy efficacy of milk therapy (MULLER⁹, PILLAT⁷, FUCHS¹⁰, GIFFORD⁴, PARSONS¹¹, MAY and WORTH⁵, HRADECKA and KNOBLOCH¹², LUO¹³, BIDYADHAR⁶, VON SZILY¹⁴, LEE and LUM¹⁵,

3. Buller, F.—'A Protective Bandage for the Eye'—*Lancet*, 1: 690 (May 16), 1874.

4. Gifford, S. R.—*A Handbook of Ocular Therapeutics*, 1937.

5. May and Worth.—'Diseases of the Eye'.

6. Bidyadhar, N. K.—'Modern Therapeutic Agents in Ophthalmology'—*The Antiseptic*, Vol. xxxviii No. 4, 1941.

7. Pillat, A.—*Klin. Monatsbl. F. Augenh.*, 70: 289, 1923.

8. Schmidt, R.—*Med. Klin.* 12: 171, 1916.

9. Muller, L.—*Wein. Klin. Wehnschr.* 31: 933, 1918.

10. Fuchs.—'Diseases of the Eye.'

11. Parsons.—'Diseases of the Eye'

12. Hradecka, J., and Knobloch, R.—*Ceskoslov. Oftal.* 2: 190, 1935; abstracted, *Am. J. Ophth.* 20: 84, 1937.

13. Luo, T. H.—*Chinese M. J.* 50: 27, 1936.

14. Von Szily, A.—*Klin. Monatsbl. F. Augenh.* 85: 21, 1930.

15. Lee Jr, O. S., and Lum, F. K.—'Gonorrhoeal Ophthalmia: Treatment with a Sulphanilamide Derivative and Injections of Milk.—*Arch. Ophth.* 26: 208, 1941.

VON HIPPEL¹⁶, KRISHNAMURTY and BIDYADHAR¹⁷, GEIGER BURLINGAME¹⁸ and others).

The employment of artificial fever in the treatment of gonorrhoeal ophthalmia has been discussed by several observers, namely HASLER and SPECTOR¹⁹ and others. According to these observers artificial hyperthermia produced by physical means reduced the duration of gonococcal ophthalmia, however this mode of therapy is not yet in popular use.

For a number of years WILLIE²⁰ has employed the administration of Anti-gonococcal serum as an instillation into the conjunctival sac in gonorrhoeal conjunctivitis with considerable success. The application is to be made with care, after the conjunctival sac is well washed with boracic lotion and dried, and this is repeated two or three times during day and night: there is no pain or irritation and no harm is done to the cornea, Careful continual cleansing and the application of Peolengol is also recommended in addition to the Serum; while in severe cases the suggestion is made of injecting the Serum hypodermically (DUKE ELDER, *Medical Annual* 1935).

Treatment of gonococcal conjunctivitis with intradermal injection of Gonococcal vaccine has been reported by several observers (BANAJI²¹, COOPER²² and others). MAYON²³ observes that he does not believe that Gonococcus vaccines are of significant value. BARBOUR and TOWSLEY²⁴, discussing the value of Gonovaccines in the treatment of gonorrhoeal ophthalmia uphold the view of MAYON.

Chemo-therapy—The advent of Sulphanilamide and the allied products into the field of ocular therapy has revolutionised the treatment of eye diseases in general and gonorrhoeal involvement of the eye in particular. It would be instructive to review the modern investigations in connection with the use of Sulphonamides.

After the introduction of Prontosil by DOMAGK, there has arrived a thorough overhauling in the domain of therapeutics. The investigations of LONG and BLISS²⁵ showed that Sulphanilamide was of value in the treatment and control of streptococcal infections, while those of DEES and

16. Von Hippel, in Axenfeld, T.—*Lehrbuch und Atlas der Augen heilkunde*, edited by E. Hertel, ed. 8, Jena Gustav Fischer, 1935, p. 276.

17. Krishnamurty and Bidyadhar—'A Short Practice of Ophthalmology, (Ancient and Modern)', 1941.

18. Geiger, J. C., and Burlingame, R. W.—'A Statistical Survey of one Hundred and Forty Cases of Gonorrhoeal Ophthalmia'—*Am. J. Ophth.* 21: 421, April, 1938.

19. Hasler, W. T., Jr., and Speker, L.—'Artificial Fever in the treatment of Gonorrhoeal Ophthalmia'—*J. A. M. A.* 107: 102 July 11, 1936.

20. Willie, W. A.—*Brit. Jour. Ophth.* 1934, xviii, 218.

21. Banaji, B. P.—'Conjunctivitis'—*The Antiseptic*, June, 1939.

22. Cooper, N. E.—*Proceedings All India Ophth. Soc.*, Vol. vi, 1938.

23. Mayou, M. S.—'Treatment and Prevention of Ophthalmia Neonatorum'—*Tr. Ophth. Soc. U. Kingdom*, 40: 57, 1920.

24. Barbour, F. A., and Towsley, H. A.—'Experience with Sulphanilamide Treatment of Gonorrhoeal Ophthalmia'—*Arch. Ophth.* Vol. 22: 581, 1939.

25. Long, P. H., and Bliss, E. A.—'Para-amino:beuzene—Sulphonamide and its Derivatives'—*J. A. M. A.* 108: 325, January 2, 1937.

COLSTON²⁶ showed that gonorrhoeal ophthalmia might respond favourably to sulphanilamide therapy.

A good deal of scientific literature has developed in relation to the use of Sulphanilamide in the treatment of gonococcal infections of the eye as well as trachoma and other ocular disorders. The names of HAGEMAN²⁷, LEVY²⁸, NEWMAN²⁹, WILLIS³⁰, PERRY³¹, FERNANDEZ³², THYGESON³³, GOLDENBURY³⁴, GLOVER³⁵, MITCHIE and WEBSTER³⁶, BRAV³⁷, MICHELS³⁸, LEE and LUM³⁹, HEINZ³⁹, MULLEN⁴⁰, LOE⁴¹, MCKEE⁴², KIRK⁴³ and others, should be remembered in connection with the administration of Sulphanilamide in the treatment of gonococcal infections of the eye. Other ophthalmologists who have reported the efficacy of Sulphanilamide in ocular affections are RICHARD, JULIANELLE, SHROFF, GUHA, RAMBO, CHHETRE, KRISHNAMURTY and others⁴⁴. Sulphanilamide is used both for internal as well as local application. For gonorrhoeal ophthalmia and ophthalmia neonatorum Sulphapyridine is the most effective drug, M and B 693, internally should be administered in suitable dosage.

26. Dees, J. E., and Colston, J. A. C.—'Use of Sulphomide in Gonococci Infections'—J. A. M. A. 108: 1855 May 29, 1937.

27. Hageman, P. O.—'Clinical Experience in the Use of Sulphanilamide at the New Haven Hospital'—J. Pediat., 11:195, Aug., 1937.

28. Levy, G. J.—'Treatment of Infectious Diseases with Sulphanilamide'—Memphis M. J., 12: 192, Dec. 1937.

29. Newnan, H. W.—'Sulphanilamide in Gonorrhoeal Ophthalmia in Young Children'—Texas State Med., 33: 585, Dec., 1937.

30. Willis, T.—'Sulphanilamide in Ophthalmia Neonatorum'—Yale J. Biol. & Med., 10: 275, Jan., 1938.

31. Perry, C.—'Gonorrhoeal Conjunctivitis: Treatment with Sulphonilamide and Fever Therapy'—Ohio State M. J., 34: 176, Feb., 1938.

32. Fernandez, L. J., and Fernandez, R. F.—'Sulphanilamide in Gonorrhoeal Ophthalmia'—Am. J. Ophth., 21: 763, July, 1938.

33. Thygeson, P.—'Treatment of Conjunctivitis'—Arch. Ophth., 19: 586, Apr., 1938.

34. Goldenbury, M.—'Sulphanilamide in Ophthalmology with Report of a Case'—Am. J. Ophth., 2: 541, 1938.

35. Glover, L. P.—'Some Uses of Sulphanilamide in Ophthalmology'—Am. J. Ophth., 22: 180, Feb., 1939.

36. Michie, A. M., and Webster, M. H.—'Gonococcal Ophthalmia Treated with 2 (P. Amino-Benzene-Sulphonamide) Pyridine'—Lancet, 2: 373, Aug. 13, 1938.

37. Brav, A.—'Use of Sulphanilamide in Corneal Infections'—Mod. Med., 7 84, 1939.

38. Michels, N. W.—'Sulphanilamide in the Treatment of Gonorrhoeal Ophthalmia in Children, J. Pediat., 13: 127, Oct. 1938.

39. Heinz, K.—'Subkonjunktivale Injektion Von Pontosil Solubile (Bayer) bei exogenen und Endogenen Infektion des Augeninnern'—Ztschr. f. Augenti., 95: 365, 1938.

40. Mullen, C. R.—'Treatment of Gonorrhoeal Diseases of the Eye with Sulphanilamide. 3 Years Clinical Experience'—Arch. Ophth., 25: 655, 1941.

41. Loe, F.—'Sulphanilamide Treatment of Trachoma: Preliminary Report'—J. A. M. A., 111: 1371, Oct., 8, 1938.

42. McKee, S. H.—'Gonorrhoeal Ophthalmia Cured after one Week's Treatment With Sulphanilamide'—Arch. Ophth., 21:1035, June, 1939.

43. Kirk, R., McKelvie, A. R., and Hussein, H. A.—'Sulphanilamide in the Treatment of Trachoma'—Lancet, 2 994, 1938.

44. Krishnamurty, K.—'Sulphanilamide and Allied Products in the Field of Ophthalmology'—Indian Jour. Ophth., Vol. 2, No. 4; Chhatra, E. V.—'Prontosil in Ophthalmology'—Proced All India Ophth., Society, Vol. vi, 1938.

I would now briefly outline the mode of therapy which is employed in my clinic for the treatment of gonococcal infections of the eye viz:—

1. Irrigation with warm Boric lotion at frequent intervals with a view to keep the conjunctiva and the cul-de-sac free from septic discharge.

2. Antiseptic and Antiphlogistic eye lotions in shape of 1% Berberine Sulph. and Mercurochrome 1% are instilled into the eye twice daily.

3. In case of corneal involvement or when corneal involvement is threatened atropinization is done.

4. Non-specific protein therapy in the shape of whole milk is employed as a routine in all cases.

5. In certain cases in which the eye condition seems to be grave and corneal involvement becomes imminent, both milk therapy and Sulphanilamide therapy are employed with successful results. My personal observations point to the fact that besides copious and frequent irrigations of the conjunctival sacs, local applications of antiseptic lotions etc., non-specific protein therapy should be adopted in all cases of gonococcal affections of the eye. Combined milk and Sulphanilamide therapy is more effective than milk therapy alone. Hence this double therapy should invariably be advocated in all cases which prove refractory to the usual official therapy.

The scope of this paper does not allow me to deal in detail with the technique of milk and sulphonamide therapy. I would like to report my observations in this connection in a separate article. Considering the fact that gonococcal infections of the eye accounts for a very large percentage of blindness inspite of the fact that CREDE's method of prophylaxis has greatly reduced the incidence of gonorrhoeal ophthalmia, we must remember that it is the duty of the medical man to effectively treat and control the gonorrhoeal diseases of the eye, in order that so many valuable eyes would be rescued from destruction.

In the preparation of this paper I have consulted the works of many authorities to all of whom I offer my indebtedness.

Susruta Clinic,
Sonpur Raj.

Emergency Cases in General Practice

BY

KARTIC CHUNDER DUTT, L.M.S.

Calcutta.

EMERGENCY cases in general practice are most important and interesting cases. These enhance the reputation of the general practitioner if successfully handled. This is especially the case with junior practitioners. In emergency cases the relatives of the patient get no time to choose the best and experienced doctor, but are bound to call the nearest general practitioner who is available. Therefore the junior practitioner is often called to treat very serious and interesting emergency cases. Emergency cases generally occur at night. The junior practitioner must be ready with emergency bag, because, at night it may be difficult to get the necessary equipments. Emergency cases require much presence of mind and perfect knowledge of the general practitioner in special subjects.

Emergency cases occur in cases of internal hæmorrhages. Thus, in cases of cerebral hæmorrhage, embolism and thrombosis, the diagnosis is to be made when the patient suddenly becomes more or less unconscious, and cannot properly answer questions. In such cases, the pulse, temperature, and blood pressure help to arrive at a correct diagnosis and mode of treatment. In internal hæmorrhages, such as of duodenal ulcer or of typhoid fever, the pulse, temperature, blood pressure, and history of the case may be a guide to diagnosis and treatment. Hæmatemesis and melena may occur early enough in the onset. However, it should be noted by the junior practitioner that hasty diagnosis should not be made in hæmatemesis and melena. I have seen profuse hæmatemesis followed by melena in a case of ascaris lumbricoidis. A big round worm was vomitted up with the blood. During subsequent treatment dozens of round worms were discharged. In certain hysterical subjects, profuse hæmatemesis may take place during mental emotions or mental shock from some cause. The junior practitioner should be confident that there is no cause of alarm in such hysterical cases. The prognosis is quite favourable, although similar attacks of hæmatemesis may recur after future mental shocks. Some of these cases are of the nature of vicarious menstruation.

In cases of internal hæmorrhage after accidents, falls, blows on the abdomen, or injuries from air raid bombs, shock and collapse may take place. After falls or blows on the head, symptoms of fracture of the base of the skull may develop. There is loss of consciousness and also there is hæmorrhage through the ear or nose or under the conjunctiva. In cases of simple concussion of the brain, there will be no hæmorrhage from the ear, nose, or eye, although there may be loss of consciousness for sometime.

Cases of severe uterine hæmorrhage may come to the general practitioner when the specialist is not available. The most severe of these are cases of retained placenta after delivery or abortion in which the placenta has been partially detached. In these cases, the general practitioner cannot wait for the specialist to come, because, the hæmorrhage may suddenly be so profuse that unless the placenta is delivered, and, hæmorrhage checked, the patient will succumb. The medical attendant should at first try to deliver the placenta by expression of the uterus through the abdominal wall. In case expression is ineffective in delivering the placenta,

manual delivery of the placenta must be accomplished. The right hand should be thoroughly disinfected and gloved. The os uteri should be examined after clearing the passage of bloodclots. In cases of incomplete abortion, or abortion during early period of pregnancy, the os may not be fully dilated, then the os should be dilated by the dilator, or, by the fingers. Then, the index and middle fingers of the right hand should be inserted into the uterus, at the same time the uterus should be pushed down by the left hand from over the abdominal wall. The insertion of the placenta should be explored by the fingers, and, by gentle sawing movements the attached portion of the placenta must be detached and hooked down with the fingers, and extracted. After full-term delivery or when the os is fully dilated, the whole right hand with the fingers forming a cone should be inserted into the uterus, after thorough disinfection of the hand and the gloves. The insertion of the placenta should be thoroughly explored. By a gentle sawing movement of the four fingers, the placental attachments should be loosened gradually, till the whole of the placenta is completely detached. In order to take out the placenta out of the uterus, a practical point should always be adhered to: this is that the hand should be placed below and behind the placenta which should thus be taken into the hollow of the palm of the hand, and thus conveniently taken out of the os and delivered. After extraction of the placenta, bimanual compression on the uterus should be done for a few minutes, and, Pituitrin and Ergometrin injection should be given so as to stop the hæmorrhage completely. The contraction of the uterus is thereby also insured. The junior practitioner should therefore be fully cognisant of the treatment of severe uterine hæmorrhages even though he may be in general practice. Cases of eclampsia also constitute an emergency in which a general practitioner is urgently called. In these cases, ten per cent Mag. Sulph. solution ten cubic centimetre should be intravenously injected, but, Calcium Chloride ten per cent solution ten cubic centimetre should be kept ready for injection in case there is any sign of respiratory failure, although ten cubic centimetre Mag. Sulph. dose unless repeated is quite safe. If the eclamptic fits do not stop after Mag. Sulph. injection, then Luminal Sodium one-third grain should be injected subcutaneously. The pulse and respiration should always be carefully noted, the heart, also examined frequently. The progress of labour, and frequency and intensity of the fits should be watched. If required the fits should be checked with inhalation of small quantities of Chloroform at intervals.

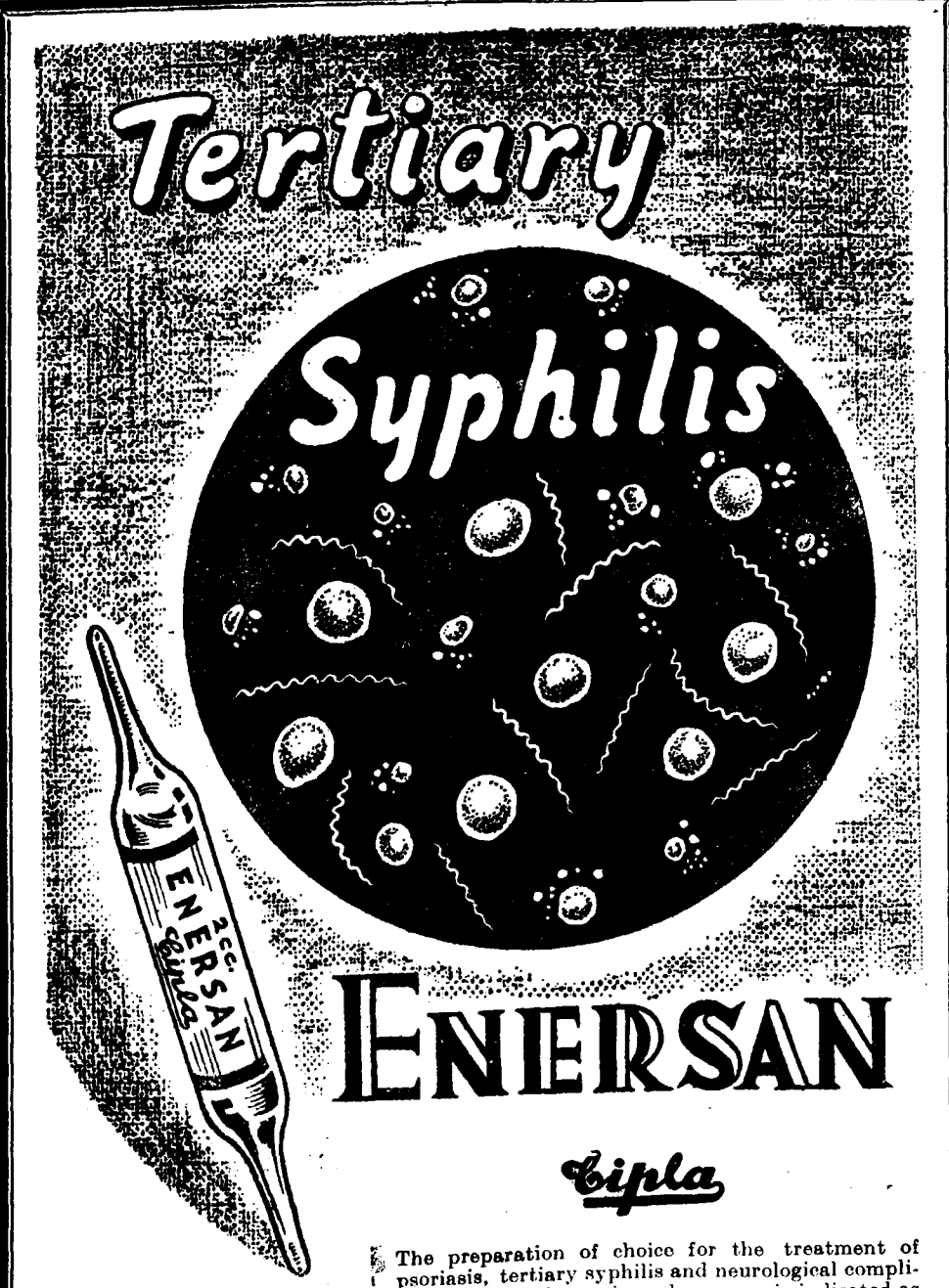
Cases of acute abdomen also come to the general practitioner, and require careful diagnosis and treatment. Among cases of acute abdomen, there may be cases of acute peritonitis, or appendicitis, or, strangulated hernia. Cases of intestinal obstruction from any cause also come to the general practitioner, and require careful attention.

The other emergency cases which the general practitioner gets, are cases of suspected poisoning. These require careful diagnosis and handling. A note should be kept about the case for future reference. These are most important cases because of medico-legal importance. Whether the patient survives or not, the general practitioner who gets the case must have to stand the examination and cross-examination when called by the court. The history of the case, the signs, and symptoms should be properly noted. All washings of the stomach must be preserved and sealed for despatch whenever required for chemical examination. In

cases of suspected poisoning, the entire responsibility of the case should not be kept on one's own shoulder. The general practitioner should therefore call some brother practitioner, so that the responsibility may be divided. Moreover, he would get competent medical assistance in treating the case, and in corroborating the evidence in court when required. In all poisoning cases if the case progresses from bad to worse, it should be sent to a hospital if it is within a reasonable distance. If not, information should be sent to the police for enquiry, or for taking dying declaration by a competent magistrate. In cases of opium-poisoning the junior practitioner should remember that even after 24 hours, the case may take a bad turn. This is because opium may be reabsorbed from the excretory passages. The medical man should therefore keep under observation cases of opium poisoning for more than 24 hours.

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Abdominal Pain

BY

S. R. RAJARAM, M.B., B.S.
The Salem Clinic, Salem.

"By emergencies are the reputations of those
in general practice made or marred"

ALING humanity is indebted to the healing art for the cures it effects in the diseased. More gratifying than this, from the point of view of the sufferer, is alleviation or relief of pain, and hence is Morphia the magic wand in our armamentarium. Instantaneous relief is the universal cry of those in the throes of pain, and in any instance an emergent relief becomes also the only way of saving the life of the sufferer—and this seems to be only too true in the case of abdominal pain.

The abdomen itself being "a temple of surprises", the etiology of abdominal pain has a great gamut of variation ranging from the organic conditions, like simple indigestion and constipation, to that of grave acute intestinal obstruction, to the functional conditions like abdominal neuralgias and gastralgias. The early diagnosis of the condition is of paramount importance not only to relieve the sufferer, but also to cure. How very sad and depressing it is for us to see Castor oil come up mixed with fæces when the abdomen is opened for an abdominal catastrophe because the quack mistook the sudden onset of pain to a constipation; or when the surgeon opens an abdomen in a case of basal pneumonia just because the patient complained pain in the abdomen as the most distressing symptom! The subject of abdominal pain might be discussed as occurring broadly among (a) adults and (b) with special reference to women and children.

Causes within the Abdomen.—1. *Acute Intestinal Obstruction*:—The classical picture is one of severe abdominal pain, constipation, distension of abdomen and early vomiting. Though acute intestinal obstruction is in the domain of the surgeon yet it is one of the important emergencies in the routine of the general practitioner since an *early diagnosis* is imperative before subjecting the patient to the surgeon's knife, and due to the fact that the mortality in the best surgical centres of the world is over 50%. There is probably no condition in which it is more worthwhile to spend sufficient time in taking a careful history and making a detailed examination. Examination for strangulation must be made in the inguinal, femoral, umbilical and epigastric regions for the respective hernias. In elderly subjects with a history of malignancy or violent purgatives, intussusception and volvulus must be thought of. In post-operative cases with an abdominal scar, obstruction due to adhesions should suggest itself, while in chronic inflammatory conditions of the abdomen viz., tubercular peritonitis obstruction by bands are a possibility. Infection by ascariasis accounts for a fairly good amount of morbidity and mortality in our country, specially among children. Clinically a gastro-entero-colitis type by round worms is recognized in which there is fairly severe abdominal pain of colicky nature, temperature rises, vomiting and diarrhoea set in when the round worms may come out at both ends of the alimentary system. There is yet another type clinically recognized viz., intestinal obstructive type which may be sub-divided into medical and surgical intestinal obstruction. Medical intestinal obstruction occurs after a vermifuge when a few worms are passed and the remaining ones cause the

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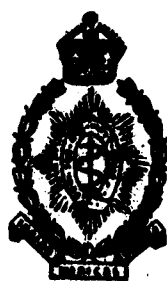
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obstruction presenting the typical picture. Drugs that relax the gut like Atropine, Hyocyamus and liquid Paraffin are indicated, and not those drugs that contract the intestines. The surgical type of obstruction is the actual obstruction caused by a knot of these round worms which act as foreign body like gall stones, etc., and surgical treatment is the inevitable course. Rare conditions like Meckel's diverticulum and congenital abnormalities should also be recollected.

While discussing the subject of acute intestinal obstructions we are tempted to narrate the story of a recent case of ours. Farmer, aged 27 years, history of sudden abdominal pain with constipation and slight distension of abdomen. Rectal enemas given, not very effective. Temperature normal, pulse beat 80 and 85 p.m. cramp-like pains with increased visible peristalsis and marked borborygmi. Patient was advised operation which was obstinately refused. Next day, pulse rapid, cold clammy sweats with faecal vomiting, thus showing that the site of obstruction was fairly lower down. Patient still refused to be operated and left for his village and after a month he gave us a very pleasant surprise, by making his appearance in the clinic escorting another patient. We leave it to the reader to guess the nature of the obstruction.

2. *Appendicitis* is perhaps next in order of importance. The signs and symptoms vary in their details depending on: (a) pathological lesions viz., whether it is one of (i) acute inflammatory, (ii) acute obstructive, (iii) a combination of both occurring simultaneously or one supervening the other, as also on (b) the anatomical position of the appendix such as retrocolic, retrocaecal, pelvis, etc. As an aid to diagnosis it is worth our while to recollect the signs and symptoms of a case of appendicitis. The typical picture is one of pain around the umbilicus or lower epigastric regions, which later gets localised over the right iliac fossa or over the sight of the appendix. As peritonitis sets in the abdomen, becomes distended, tender with board like rigidity, the pulse is small and rapid, respirations thoracic and hurried, with dry dirty tongue and sunken eyes. A little digression in the *pathology* of the condition illuminates the symptomatology. In the acute *inflammatory* type due to increasing vascular congestion the pain that starts as *dull aching* one round the umbilicus steadily becomes worse with a rising temperature and fast pulse. In the *obstructive* type there is *sudden cramping pain* in the lower epigastric or umbilical region, the patient writhing in pain for a few minutes and subsiding to a dull ache, to be repeated again; vomiting and retching being invariable. The obstruction is due to strictures in the lumen of the appendix at its proximal third, or due to kinks in the appendix owing to adhesions—which are a legacy of the previous attack. When the outlet is thus obstructed there is stasis, putrefaction, and increased intra-luminal tension giving rise to pulsion diverticula at the sites where the blood vessels enter or leave. Colicky pains result when there is an attempt to empty the appendix. If the obstruction is complete the appendix *ipso facto* becomes turgid, congested and pass on to gangrene. With the onset of gangrene there is apparent relief of pain without any improvement in the general condition which is a danger signal; or there may be a perforation which is equally grave. Viewing from the *anatomical* point, in the *pelvic type*, abdominal rigidity becomes manifest only when the peritonitis spreads above the pelvic brim, when there is tenderness in both the iliac fossae. In this type a rectal examination elicits tenderness. In some cases the localisation of

pain is on the left side simulating a diverticulitis in the old, left sided appendix. When there is efficient pelvic localisation the findings are atypical viz., a flat soft abdomen without rigidity or vomiting. Depending upon the position of the appendix viz., if very low in the pelvis underneath the bladder there is frequency of micturition. In a retrocolic type there is diarrhoea due to irritation of the ascending colon. By a direct involvement of the renal pelvis or ureter, or bladder by an inflamed appendix there may be hæmaturia. Or sometimes appendicitis and acute nephritis may be the result of a common infection viz., a streptococcal infection of the throat, in which condition also hæmaturia is present. Thus we have a kaleidoscopic picture in the signs and symptoms of acute appendicitis, and it is not to be viewed with surprise that occasionally healthy appendices are incriminated as pathological offenders and are sacrificed at the surgeons altar; while the diseased ones are scot free, as in the judicature where sometimes innocence is punished and guilt escapes. The following case is exemplifying, though rather personal. My younger brother was running a temperature with typical signs of appendicular colic with the pain localising in the right iliac fossa after about ten days. The attending surgeon was very anxious to open the abdomen for an appendicectomy, but my father—who was also a doctor—with a paternal intuition requested the blood to be sent for Widal. All the same the surgeon had decided to operate the following day, but the agglutination test was found to be positive, in time and eventually too, it proved to be a case of enteric.

General Peritonitis.—Patient is suddenly seized with agonising pain, the condition may be or may not be perforative. If perforative the patient feels some thing give way suddenly inside the abdomen, pain being local to the site of perforation. There is profound shock with the pain soon increasing in severity and getting generalised. The abdomen is distended due to paralysis of the gut. Latter rigidity and immobility sets in with increasing pulse rate, which is rapid and wiry. The temperature is sub-normal or slightly raised depending on the virulence of the organism. In pneumococcal peritonitis it might go up to 103 with a tendency to diarrhoea, as also in tubercular peritonitis; while constipation after the bowels move freely once is a common finding when due to streptococci B-coli etc. Soon nausea and vomiting set in and later no intestinal movements can be detected by the stethoscope. Respirations are hurried and thoracic and facial expression is drawn and anxious facies hippocratica. Regarding decubitus of the patient, he lies on his back but the text book description of the knees being drawn up over the abdomen is not always a feature in practice. Acute peritonitis is an emergency that requires a quick diagnosis and prompt surgical interference. Every hour's delay in operation is said to lower the chances of recovery by 5%. It is opined that in operation within six hours recovery is usual, if within 12 hours it is not usual, but later than that, it is very uncertain. An easy tip to diagnosis is to record the increasing pulse rate every 15 minutes and note the absence of abdominal movements as rigidity sets in. Soon after the diagnose is made and operation decided upon, an injection of Morphia 1/6 to 1/4 gr. may be given.

Colics:—The etiology and dignosis of colics could well be the subject matter of a thesis in itself. In derth of space and time, brevity shall be our guide. Suffice it to say that as an emergency in general practice it is

upto the clinician to clearly cypher whether a given case of abdominal colic is one which requires immediate therapeutics. The first aid in a clearly diagnosed case of colic is 1/6 to 1/4 gr. of Morphia, after which the necessary investigations to locate the source of trouble, to be followed by the necessary surgical measure or otherwise. Broadly classifying, colics could be intestinal, biliary, and renal which include ureteral and vesical. Intestinal colic sets in after indiscriminate eating and is to be differentiated from the other numerous abdominal catastrophes which call for immediate operation. These patients after tossing about in bed shrieking with pain finally select a position where they could bring pressure on the abdominal wall.

Biliary Colic :—These pains come off after a physical exertion like a long journey, violent exercise etc. Pain of short duration and great severity sets in suddenly, the patient shivering without rise in temperature. Pain starts in the area of the gall bladder or epigastrium and radiates to the angle of the scapula to the right shoulder. Here again the patient is restless in contrast to a case of perforating ulcer or acute appendix. This sudden onset and sudden offset are characteristic of the colic.

Renal Colic :—The pain is in the lower abdomen, peroxysmal and very agonising, the patient writhing in pain tosses in bed. There is severe shock with beads of perspiration on the forehead. The temperature is subnormal associated with vomiting. The pain is referred to the loin and testis in the male, strangury is present with frequency of micturition.

Acute Pyelitis causes severe abdominal pain which may be mistaken for an acute appendix but the relaxation of the abdominal muscles, the deeply placed tenderness, and a high temperature as a rule help in the differential diagnosis while the microscopic examination of the urine clinches the diagnosis.

Typhoid.—Pain in the abdomen is a feature in typhoid at different stages of the disease with varying significance, thus (1) at onset when the typhoid bacillus invades the gastro-intestinal system which stimulates appendicitis, diarrhoea or dysentery (2) during the course of the fever pain in enteric cases may be: (a) simple colic, due to milk dyspepsia and meteorism, (b) hæmorrhage, the pain is severe and of sudden onset. There is a sharp fall in temperature with a rise in pulse rate, increasing pallor of the face, sensation of faintness and collapse—shrinkage of spleen. Blood is soon passed per rectum—within an hour—which confirms the diagnosis. The treatment is purely medical. (c) Perforation. This is an abdominal emergency of the first order, in general practice. An early diagnosis and immediate surgical measure alone saves the life of the patient. Our memory is only too fresh with the case of a perforation that we saw last night where an early diagnosis was sadly missed by the attending physician and consultant. The orthodox description of severe sudden pain with collapse is not always to be expected. Many a time the patient casually informs of a slight pain in the abdomen and there is neither the "sharp fall" in temperature or rise in pulse rate, nor any rigidity in the pre-peritonitic stage. A change in the aspect of the patient should suggest the catastrophe, and not delay for the abdominal rigidity, and diminution of liver dullness, if the patient is to be saved. The pain of perforation has to be differentiated from the colicky pain of milk dyspepsia, and it becomes rather difficult since in both

there is diarrhoea and in patients suffering from diarrhoea perforation is common. The main points for differential diagnosis are: (i) When the pain in colic has passed off, the aspect of the patient and pulse rate are unaltered. (ii) Abdominal rigidity which may be present at the onset pain subsides, while in perforation pain and rigidity steadily increase, accompanied by signs of collapse. How very non-dramatic could be a picture of perforation in typhoid at its onset is seen when we realise that cases of perforation in ambulatory cases start out on their daily work unmindful of "the slight discomforts" in their abdomen. An engine driver who had his usual breakfast at home came to the station for work despite a little "discomfort" in his abdomen. Soon the pain was getting severe and he was forced to get into the hospital when on laparotomy it was discovered to be one of those ambulatory cases of enteric with perforation.

Amoebiasis :—It is well to remember at this stage that among the intestinal complications of amoebic dysentery are, perforation, stenosis with partial obstruction and gangrene which cause severe abdominal pain.

Abdominal Pain with special reference to Women and Children:
Women.—Due to the anatomical variations in the fair sex the following conditions give rise to pain in the abdomen which have to be differentiated from affections like acute appendix, since the treatment in some is entirely non-surgical.

1. **Right Acute Salpingitis and Salphingo-cophoritis** :—The onset of pain is after the periods or after labour, and the seat of pain throughout, is the lower abdomen, unlike in appendix where it is diffuse to start then round the umbilicus and finally localised to the iliac fossa etc. A vaginal examination is essential before deciding on an operation, a palpable tender swelling of the adnexa could be felt in the right fornix—in a case of right sided affection, which differentiates it from an acute appendicitis where there is only tenderness elicited.

2. **Intra-peritoneal Haemorrhage** :—As a ruptured ectopic gestation or ovary. These cases also complain of severe sudden abdominal pain and are easily mistaken for acute appendix. While the history of amenorrhoea and a pulsatile mass which may be felt in the fornix help in the diagnosis of an ectopic gestation while putting in a needle in the pouch of Douglas through the posterior fornix and aspirating blood would clinch the diagnosis.

3. **Pelvic Peritonitis and Cellulitis** :—Caused by criminal abortions or septic abortions simulate acute appendicitis. One would be ill advised to open up the abdomen under such wrong diagnosis. A history of such criminal interference by the patient gives a clue to diagnosis.

4. **A twisted Ovarian Cyst on the right** :—If the cyst is small and if it was previously not known to be present it is likely to be mistaken for an acute appendix.

Children.—In children again due to their peculiar anatomical bearings like abundance of lymphoid tissue, low peritoneal resistance and easily developed acidosis, we have the following points to bear in mind. Thus due to the Payer's patches long well developed in them, intussusception is the most common cause of intestinal obstruction usually between 6 to 18 months.

Acute appendicitis constitutes about 75% of the cases of acute abdomen in children. It may occur at any age but is common in older

children. Unlike in adults the appendicitis never resolves and due to the peritonium of the child being very defective in dealing with infection there is hardly any adhesion, localisation or abscess-formation, but passes on to general peritonitis, and hence the dictum in children, when once appendicitis is diagnosed always operates, either it be the first day or the fifth day. Gangrene of infantile appendix is commoner.

Among the remote conditions that cause abdominal pain in children are, (1) otitis media, (2) ulcerative stomatitis, (3) tonsillitis, (4) ulceration of urinary meatus, (5) acidosis-acetone bodies, (6) diabetes mellitus giving rise to epigastric pain, vomiting and collapse, (7) acute rheumatism.

Functional Abdominal Pain.—1. *Abdominal Neuralgias* :—Severe abdominal pain sine organic disease, and hence, it is diagnosed after a process of careful exclusion. This is common in women. In such cases opening up the abdomen shows spasmodically contracted colon or small intestines termed "entero-spasm" by HALEWHITE.

2. *Hysterical Gastralgias* occurs in girls who have once suffered from genuine gastric ulcer. The pain has variable relation to food some times coming on before food and at others after food. The site of pain could be varied by the suggestion of the observer and the area of hyperesthesia over the abdomen is also diffuse extensive and changing. Vomiting does not relieve it.

Abdominal Pain-Causes Outside the Abdomen.—These are very important from the point of view of diagnostician who is to leave no stone unturned in arriving at a correct diagnosis.

1. *Basal Pneumonia* :—Is often an easy trap into which the surgeon falls and occasionally the abdomen has been opened up especially in children suffering from pneumonia, since the diaphragmatic pleurisy of basal pneumonia simulates an acute appendix. The clinician could note that the pain in the right iliac fossa is superficial, and on deep pressure there is no pain; and when the patient is turned on his left side he coughs in pneumonia, while in acute appendix he has increased griping pain.

2. *Gastric crisis of Tabes* :—The absence of knee jerks and other signs of the nervous disease helps to differentiate.

3. *Malaria* :—This universal tropical fever could simulate any diseased condition of which abdominal pain is but one.

4. *Pott's Disease and Hip joint Disease* :—Specially in children have referred abdominal pain.

5. *Purpura Abdominalis or Henoch's Purpura* :—Where severe abdominal pain with griping is accompanied by blood and mucus per rectum is easily mistaken for intussusception.

6. *Abdominal Angina* :—Pain is referred to the epigastrium, and a whiff of Amyl Nitrite is both therapeutic and diagnostic.

The subject of abdominal pain being "infinite" we have been hardly able to present the broad outlines of the conditions. Still it shows how many factors pass before our mental eye when a patient complains of pain in the abdomen, while to the quack, with his characteristic, it is nothing but "simple". To him we quote that "white light is simple not because it lacks the richness in colours, but has all the seven colours uniformly blended into one".

1st Agraharam, Salem.

Epistaxis

BY

PARMA NAND AHUJA, M.B., B.S.,

Karachi.

EPISTAXIS as a medical or surgical emergency oftentimes taxes the skill and ingenuity of the medical practitioner, and is very disturbing and alarming to the patient and his relations. In this short note I will mostly confine myself to the medical aspect of this emergency, and the possible and practical means at the disposal of the general practitioner to meet it.

Etiology.—The causes of epistaxis may be classified for the sake of convenience as follows :—

LOCAL.—Injury like blows on the nose fracture of the base of the skull; deflection of the anterior portion of the septum favouring drying infection and erosion of the mucous membrane (dry crusts form in the hollow of the septum which, when removed by finger nails or hard blowing of the nose, lead to bleeding) multiple telangiectasis or varicosity of vessels; irritating inhalations; acute rhinitis; hay fever; adenoids, malignant tumours or, bleeding polypus of the septum; syphilis, tuberculosis and leprosy, resulting in local ulceration of the septum; foreign bodies like maggot, worms, leeches, etc.

General Causes.—*Cardio-vascular* :—High arterial tension as in arteriosclerosis, chronic nephritis, cirrhosis of liver; violent exertion physical or mental, extreme of heat and cold, venous congestion as in mitral stenosis.

Menstrual Disorders like climacteric or vicarious menstruation or even pregnancy.

Respiratory Disorders like emphysema, bronchitis, whooping cough, pneumonia.

Toxic Blood Conditions as pernicious anæmia, leukæmia, purpura, scurvy, and acute infectious fever during the prodromal stage especially in typhoid, smallpox, measles, typhus fever, erysipelas, malaria, diphtheria, rheumatic fever, yellow fever, influenza, jaundice, etc.

Constitutional Diseases like gout, alcoholism, hyperthyroidism, acromegaly.

Pressure Effects :—Compression of the veins from head and neck by thoracic aneurysm, mediastinal tumours, goitre and other tumours in the neck.

Rarefaction of the air as in aeroplane ascents and mountaineering.

Drugs : Phosphorus, Salicylates, Quinine, Chloralamide.

Mixed : Sexual excess, over-eating and general plethora, sudden suppression of hæmorrhoidal bleeding, post-hæmorrhagic anæmia, etc.

Site of Bleeding is in majority of cases a small spot called Little's or Kiselback's area on the front and lower part of the septum just beyond the vestibule.

Treatment.—The commonest remedy is to apply cold to the nose, forehead etc., with a cloth rung out of cold water or iced water or even ice cap applied to the region. The nose should be carefully examined under good illumination after mopping of the blood with pledgets of cotton wool. The bleeding nostril should be plugged firmly with cotton soaked either in Adrenalin Hydrochlor. solution 1 in 1,000 or Liq. Hamamelis 1 in 10 or Hydrogen Peroxide or even Antipyrine solution 5 to 10%. The pledget of wool should be introduced for less than an inch into the nares and held by

compressing the nostril. This may be left in place few minutes or if necessary, for twelve to twenty four hours.

Other measures suggested are: (1) syringing with very hot or cold normal Saline, or Alum 4% or Gelatin 10%; (2) insufflations with powdered Antipyrin, Alum or Tannic acid; (3) compression of the septum by pinching the nose for 15 minutes or the insertion and dilation of the finger of a rubber glove with rubber tube and stopcock attachment (OSLER); (4) compression of the facial artery; (5) Morphine if required as a calmate.

In obstinate cases pack also the posterior nares by means of a Bellocq's cannula or a soft gums catheter, which is passed through the nostrils into pharynx and then fastend to a cotton dossil by a thread, the free end of which is left long. The dossil is brought up into the choana by traction on the catheter and the nasal and mouth ends of the thread are tied over the upper lip. The anterior nares is then packed.

The bleeding point when located may be touched with Silver Nitrite stick or even sealed by the Galvano cautery at dull red heat. Subsequently Eucalyptus Vaseline may be applied to facilitate removal of the scab, no 'fingering' allowed at any stage.

GENERAL:—In cases of recurring epistaxis, an earnest endeavour should be made to ascertain the causes and remedy the same.

In cases of high blood pressure or some heart disease or vicarious menstruation for instance, the nose bleeding may be a safety valve action and any attempt to suppress the same may be productive of more harm than good. In such cases attention should be directed to remedy the underlying cause to prevent recurrence of the bleeding.

Violent fits of coughing in bronchitis, whooping cough, emphysema etc., should be controlled. Toxic blood conditions should receive appropriate treatment. The nose bleeding during the prodromal stages of infectious diseases is generally of little or no consequence and relief is obtained more or less spontaneously.

The pressure of any tumours on the thorax or neck, should be relieved by appropriate medical or or surgical measures.

General health and hygiene of the patient should be looked into and regulated if need be. Excess of all kinds should be avoided. Simple, non-stimulating diet regime should be prescribed. Mental and physical stress and strain should be eschewed as far as practicable.

In the absence of any specific cause, coagulation time should be ascertained and if found low Calcium Lactate in 20 gr. doses three times a day should be administered or Colloidal Calcium may be injected subcutaneously. In severe and persistent cases, Neo-Haemoplastin, Vitamin K, Congo Sol. and Coagulen (Ciba) are worth a trial. Submucous injection of a few drops of Sodium Morrhuate in 5% strength is reported to yield much lasting results.

Reference:

1. Lippon Cott's Quick reference book.
2. Text Book of the Practice of Medicine, Edited by Fredrick W. Price.

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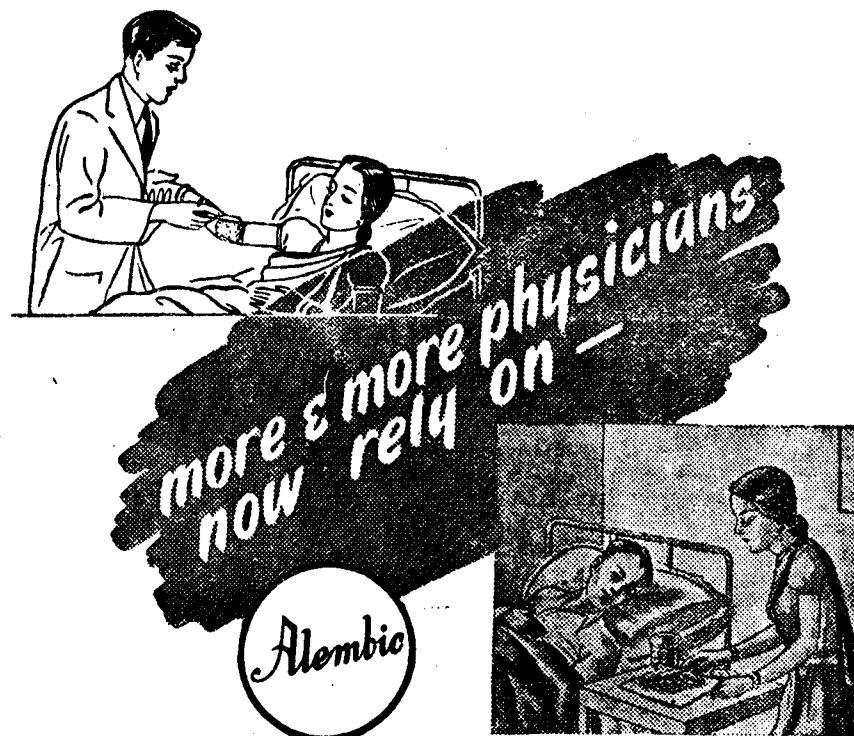
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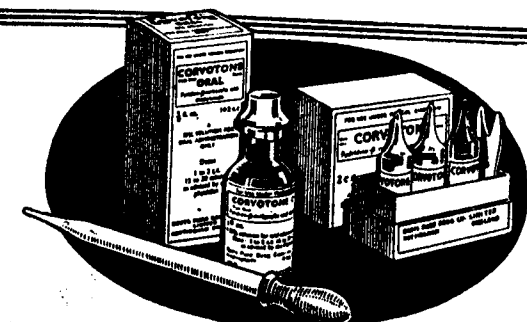
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Hæmatemesis as a Medical Emergency

BY

G. V. JOSHI, M.S., (BOM).

Hubli.

HÆMATEMESIS is always met as a complication of some other condition and is not a disease entity by itself. But it is always regarded as an alarming sign both by the patient and his relatives, and is one of the few conditions for which early medical treatment is sought.

There are very many causes which lead to this condition and the extent of the quantity of blood in the vomit varies according to the cause. From a clinical point of view the condition can be divided into 3 groups depending upon its severity.

- I. Repeated small quantities of blood being brought up.
- II. Fairly profuse hæmatemesis amenable to medical treatment.
- III. Sudden large quantities of blood being vomited resulting in a fatality.

I. Small repeated or single vomits containing blood are usually the result of (1) blood swallowed from the mouth or nasal passages and brought up later, (2) chronic gastritis, (3) chronic myocardial failure, (4) hysterical hæmatemesis, (5) leaking aneurism.

II. In this group of hæmatemesis the vomits are fairly large in quantity and contain either a large proportion of blood or purely blood only. The causes are (1) gastrostaxis, (2) peptic ulcer, (3) cirrhosis of liver, (4) splenic anæmia, (5) hæmorrhagic conditions such as purpura hæmophilia, etc., (6) gastric irritants, (7) chronic nephritis, etc.

III. Sudden large quantities of blood being vomited as a terminal event is usually a result of (1) cancer of the œsophagus, (2) aneurism bursting into œsophagus or stomach, (3) malignant growths of the mediastinum perforating the big blood vessels and the œsophagus, (4) advanced portal obstruction.

The causes can also be differentiated according to the site of the lesion but I think, the above classification is more useful than a topical one and as such I have adopted it.

Usually, it is fairly easy to distinguish between hæmatemesis and hæmoptysis. In hæmatemesis the patient usually tells you that he vomited blood and the vomit contains partly digested food. Commonly, the blood has undergone chemical changes in the stomach and is either like coffee grounds in appearance or at least dark in colour. The reaction of the vomited material may be acid. In hæmoptysis, however, the patient tells you that he coughed out the blood, and it is usually frothy in appearance. It is bright red in colour and alkaline in reaction. It may be mixed with sputum.

In rare instances, when the hæmatemesis is at all profuse and if one happens to see later vomit than the first, then, the above points of distinction may not be of much help and one has to depend upon the patient's version and probably signs or symptoms pointing to a particular organ from which the bleeding is taking place.

In the conditions grouped under GROUP I, the diagnosis is usually

evident and the extent of hæmatemesis is such as not to need treatment by itself, but attention to the underlined cause is sufficient. Hysterical hæmetemesis, however, is an entity that alludes clinician and before a patient is labelled as such, every possible care should be taken of, excluding a possible organic lesion.

The group that concerns us mostly in this article is GROUP II, out of which gastrostaxis and peptic ulcer can be considered as one. This is really the one type of hæmetemesis that is both common and amenable to medical treatment. The condition is found mostly amongst the young and the middle aged and probably commoner among men than women.

Usually a history of a peptic ulcer of some standing is available, but in a few cases, there may not be any such history available, and the patient may only say that he felt a sort of discomfort and heaviness in epigastrium after a sumptuous meal and that the next he noticed was a vomit containing blood. The vomiting continues unawaited and the quantity of blood in the vomited material goes on increasing. The patient feels restless and mentally disturbed and if allowed to progress further may show signs of depletion of blood and shock thereafter.

Treatment.—It is always safe for such a patient to be shifted to the hospital if possible for treatment. A hospital has distinct advantages in observing the strict regime required and saving the patient from the anxious looks and hurried activity of his kith and kin.

The most important factor is rest, and this has a threefold application: (a) rest to the body, (b) rest to the mind, (c) rest to the stomach.

The patient has to be flat in bed if necessary, the foot of the bed raised a little and should not be allowed to sit up on any account. He should be made to vomit by turning his head to the side and should be warned about not retching forcibly, even a semi-recumbent position is not advisable.

Psychological re-assurance is an important factor in allaying the condition. One can easily understand how alarming it must be for the patient and his relatives to see him vomiting quantities of blood, especially, with a deep rooted idea at the back of their minds that such a condition is mostly fatal! Erroneous as the impression is, it is so firmly rooted in the lay mind that it is difficult to get over the idea many a time. It is certainly required of the physician to gather all his resources of skill in persuasion including his personality and manners to convince the patient that his condition is not at all of a serious nature, but just a complication of an underlying cause and that, if he takes things easy, everything will turn out for the best. I am personally more than inclined to believe that this confidence created in him is about the most potent remedy available. Without this mental subordination, the body of the patient is never going to lie at rest and give the hæmorrhage a chance to stop. Lastly, the stomach has to be given rest. This has to be from two points of view, viz., from motility and from secretory activity. It is quite obvious that a violent peristaltic movement is bound to hinder coagulation or dislodge a firm coagulum and thus prevent the sealing of the bleeding point. Increased acidity of the stomach contents increases peristalsis and also delays coagulation or dissolves a clot. It is not possible to attain an ideal condition of rest regarding both these factors and one has just to be

satisfied with the maximum that one can do. To achieve this, the mental condition of the patient has again to be considered, as an excited nervous state increases the gastric secretion.

The patient should be starved in the strictest sense of the term, till such time as the bleeding continues and preferably for 24 hours after. He may, however, be allowed small pieces of ice to be sucked at long intervals and should be asked to spit out the saliva. Oral hygiene should be carefully attended to as otherwise, parotitis may develop as a complication. Resumption of feeding has to be very gradual and should consist of small non-irritant liquid feeds, later on leading to any standard ulcer diet.

Drugs.—The one drug of primary importance in this condition, is Morphine, given as an injection of $\frac{1}{4}$ grain better still with 1/100 grain of Atropine. In a few instances, it may happen that Morphine would produce mental excitement and vomiting and if the patient is known to have such an idiosyncrasy, it is better to withhold Morphine and use some of its substitutes. The injection may be repeated more than once, if necessary.

The coagulability of the blood may be increased and this may be useful in arresting the hæmorrhage. The three types of remedies available are: preparation of Calcium given intravenously, Hæmostatic Sera, and Congo Red. Personally, I believe that Congo Red is about the most useful of the three and its use in effective doses is helpful.

Adrenalin is a drug that has been spoken of in different ways. If at all used, it should only be done as a local application. To do this, the stomach should be washed out and about 2 to 5 c.c.s. of undiluted solution of 1 in 1,000 Adrenalin Chloride may be left in.

Alkalies have been recommended internally as a source of checking gastric acidity, but I do not think that they are useful at this stage, although, they have a definite place in the treatment of peptic ulcers as such.

Other Measures.—If the stomach gets full of clotted blood and the bleeding continues, it is advisable to wash out the stomach gently with ice cold water till the returning fluid is clear. The stomach tube used should be of a moderate size and should be passed only just beyond the cardiac opening. If the starvation has to be continued for a long period, and if the patient's general condition is low, then, the lost fluids may be replaced either by rectal or subcutaneous Saline infusions. It may happen that the severity of the hæmorrhage may demand a blood transfusion, and for this reason, it is better if a blood matching of the patient with a suitable donor is done on admission. More than 500 c.c. of blood should not be transfused at one sitting, but the same may be repeated again if necessary.

Because, of the Morphine given and the starvation, the patient's sigmoid may get loaded and lead to distension and vomiting which is very undesirable. To counteract such a condition arising, the sigmoid should be emptied by a small simple enema.

The return to normal activity after the bleeding cases should be very gradual and in a case of definite peptic ulcer the diet should be suitable

to the condition of the patient, based on one of the standard ulcer diets such as Sippy's or Lelhartz's. The increase in the quantity of food should be very gradual and it is always safer to hasten slowly.

A word here about the possibility of surgical intervention in these cases will not be out of place. It can safely be said that hæmatemesis from a peptic ulcer if not checked by methods mentioned above is a bad surgical risk. There is no hope of saving a patient by an operation except in a few instances, even then, probably a remote possibility. It may be that this statement appears too dogmatic but I am afraid, it is all the same true. Luckily, the mortality in these cases treated medically is small and ranges between 2 to 3 per cent.

Hæmatemesis due to Cirrhosis of Liver.—The condition of the liver that I am thinking of here is the stage when the liver is still hypertrophied and palpable. There are no signs of portal obstruction established yet, and naturally no ascites. Hæmatemesis may be the first sign to draw one's attention to the condition of the liver. This condition can be differentiated from that due to peptic ulcer because of the size of the liver and the slight jaundice. The treatment is on the same lines, as that of the previous group except for the use of Morphine which should be avoided. Blood transfusion should be done earlier in these cases. Calcium Chloride 5% with Glucose intravenously is more useful. Lavage is risky in this condition and should not be attempted.

Hæmatemesis due to splenic anæmia and hæmorrhagic conditions of the blood are only a local manifestation of the general disease. Out of all the methods of treatment advocated so long, each one is equally incapable of arresting the hæmorrhage. However, Vitamin K, may be found of some use, and a trial may also be given to intramuscular injections of Whole Blood.

Gastric irritants have been mentioned only to make the list complete, and when the irritant happens to be a poison, the case has to be treated for the poisoning. It is, however, necessary, to mention that Aspirin has been known to cause hæmatemesis and whenever, a cause is being searched for, it should be kept in mind. Hæmatemesis due to chronic nephritis is a mild condition and is easily controlled by medical treatment.

GROUP III consisting of the sudden large quantities of hæmatemesis as a terminal event is always beyond the aid of the physician. If the patient happens to have been seen before probably, it has a diagnostic value as a terminal event, and if possible one that can be checked by a post-mortem examination. If the patient is seen for the first time, the physician reaches there just in time to certify the death.

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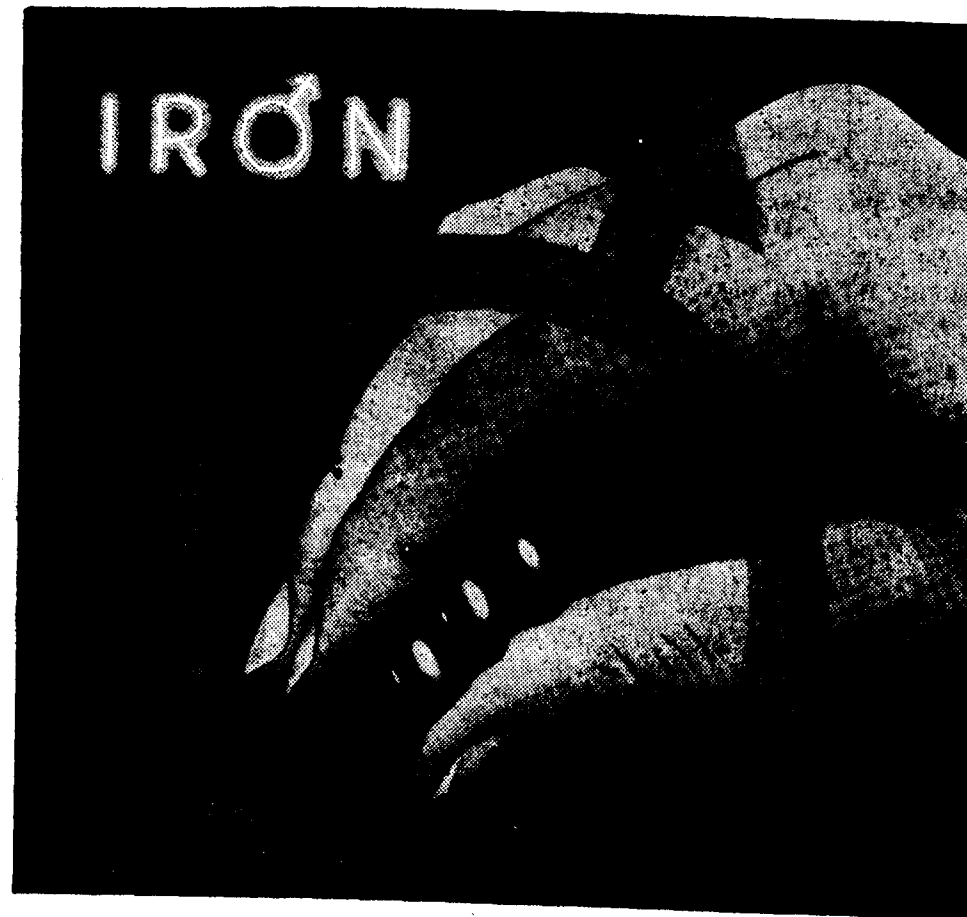
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Blood per Anum

BY

H. P. MUKHARJEE, M.B.

Medical School Bankura, Bengal.

WHEN we come across a case of profuse bleeding per anum, it becomes a serious and emergent condition endangering the life of the patient and before we actually diagnose the cause of such a condition we generally try straight-away to stop the bleeding and, if the amount of bleeding has already become serious, we take measures like Saline administration and in well-equipped hospitals transfusion to replenish the circulation. But diagnosis is certainly *sine qua non*

In this article such obvious causes as piles, fissures, injury, carcinoma rectum, polyps and such other surgical conditions which may be easily diagnosed simply by visual or tactual or simple instrumental examination will not be considered. Of course a bleeding carcinoma or polyp high up may cause great difficulty. This article will not include also such other surgical conditions like intussusception, mesenteric thrombosis, etc., which may give rise to serious haemorrhage. I do not include in this article blood per anum such as occurs amongst infants and children like melæna neonatorum, Henoch's purpura etc.

It includes medical cases such as are common in this part of our country. They are as follows:—

- | | |
|---|---|
| I. Typhoid. | VI. Tuberculosis of the intestines. |
| II. Malaria. | VII. Leukaemia. |
| III. Amoebic. | VIII. Snake-bite. |
| IV. Bacillary dysentery. | IX. Unknown causes which include haemorrhagic diseases. |
| V. Liver diseases like Cirrhosis, Abscess, Cancer, etc. | |

In an analysis of the relative incidence of these diseases excluding blood diseases and snake-bites I have found that the incidence of malaria is 62%, typhoid 3%, amoebic dysentery including liver abscess 16%, bacillary dysentery 14%, T. B. intestines and lungs 1%, cirrhosis 5%, as they presented themselves in the out door dispensary. I do not include peptic ulcers as they give rise to melæna rather than profuse haemorrhage per anum.

I. Enteric Fever.—Though the relative incidence of this disease is comparatively low, it is however the commonest cause that I have come across in giving rise to profuse hæmorrhage. The diagnosis is not difficult as we have a history of (1) a continuous fever reaching its fastigium in the second week with a variation in temperature not exceeding 20° generally, (2) a slow and dicrotic pulse, (3) a tongue which has a coat looking exactly like curd on its surface, the tip and edges excepted, (4) tympanitis and gurgling in the right iliac region, (5) a 'typhoid condition' all of which may not be however present even in E. typhi infection, (6) a high coloured urine, (7) the absence of M. P. a leucopenia, lymphocytosis and above all, (8) a positive Widal and if possible positive early blood culture. (9) The patient scarcely has any thirst, any restlessness or early vomiting or early delirium or any early sweating, all these being quite

fortunately a complication of low incidence. Still many cases are seen due to this form of dysentery. The bleeding starts like a bolt from the blue. The patient, whose colour is never healthy but may be well nourished though a few cases may be thin, who might have been constipated or having attacks of diarrhoea, indigestion abdominal pain, pain in the back, suddenly finds his motions all blood. This may follow constipations or diarrhoea. More cases are seen during the cold days. The patient feels giddy, restless, a griping pain in the abdomen (not necessarily in all cases) before the passage of bloody motions. For a diagnosis we should examine the stool but should be careful in selecting a portion of mucus if possible for such examination. Mucus is invariably present and remains adherent to the bedpan. Faecal matter may be wholly absent as the lower bowels frequently become evacuated before the blood passes. However the detection of the *E. Histolytica* may be very difficult unless the examination be made with as fresh an evacuation as possible. If only the blood per anum is examined nothing may be detected. The blood examination of these patients should invariably be made for excluding malaria. In amoebiasis we find a leucocytosis, however slight, with no very characteristic differential count. Some cases may show some increase in the number of eosinophiles, mononuclear and abnormal lymphocytes. I have however come to regard a leucocytosis with presence of abnormal lymphocytes and a slight degree (may be very high) of eosinophilia as highly suggestive in these cases. Some cases might show no change at all or even a small lymphocytosis. A hepatitis with or without any history of actual dysentery is frequently present. The tongue in most cases is furred and fissured. The caecum shows some tenderness and accumulation of gas and actual gurgling may be detected as well. The abdomen in certain cases becomes stiff but never rigid. Vomiting is absent but nausea may be present. The temperature may become increased later, suggesting coli or strepto invasion but is scarcely increased at all during the attack when it is subnormal. Sometimes a mass may be detected in the right iliac region suggesting an appendical abscess or pericolic abscess. In some of the cases anaemia becomes very pronounced suggesting oozing which had been continuing for a pretty long time. The patients are generally flabby but some cases are thin. Sepsis in the gums like pyorrhoea is very frequent. The patient's general appearance suggests hypothyroidism. Malaria need not be present. The role of the liver, which is almost invariably enlarged and tender, in giving rise to bleeding is certainly important but that there are other reasons, there can be no doubt. Large number of hepatitis cases are seen without such bleeding. As I have already suggested in enteric cases the role of a secondary invader is important like the strepto or colic either by direct local activity or by the absorption of their toxins which may produce changes in the vessel walls and their permeability, also deranging the liver probably bringing about defect in the production of fibrinogen. The oral sepsis may also be important. Of course the amoebae themselves easily erode the vessels thus opening them up and giving rise to bleeding. But over and above these silent submucous workers, other important factors must always be considered.

II. Amoebic Liver Abscess is often complicated by very serious intestinal bleeding. In these cases besides the ulcers bleeding it is as if the liver suddenly collapses and ceases to function and fatal haemorrhage may take place. In these cases other important reasons than the activity

of the organisms seem to be causative. Treatment seems to be of little avail and the clinical picture changes like a cinematographic film. Haematemesis, hiccup, epistaxis, purpura, convulsions, coma—all come into the picture in quick succession till exitus lethalis.

III. Subtertian Malaria is a very frequent cause in giving rise to intestinal haemorrhage. I have noted two types of cases—one beginning as an attack of dysentery, the other as an ordinary attack of malaria or influenza quickly taking this serious pernicious character. If one examines the spleen during such an attack the organ may not be felt at all in many cases. During the prevalence of these malignant cases from the months of October to December one should be careful in taking things easy with these cases, for they suddenly grow extremely worse. The restlessness, early vomiting, pains in the body, thirst, abdominal pain and cramp, a diffuse thin coat on the tongue and an icteroid tinge of the conjunctiva, Goldfeder's pigmented scleral vessels, besides the spleen, go a long way to establish a diagnosis. However a blood examination is imperative. Quinine is invariably effective. None of these cases showed any haemorrhagic manifestations like purpura, epistaxis etc. Of course there are cases of malignant tertian infections where bleeding may take place from the gum or nose and piles may suddenly bleed profusely, showing the haemorrhagic tendency but gastric or intestinal haemorrhage seems to be altogether separate from this haemorrhagic tendency.

IV. Bacillary Dysentery.—In view of its greater incidence and the nature of the wide spread gangrenous ulcerative condition that may be produced by this infection severe haemorrhage should have been more common but fortunately the non-mannitol fermenter shiga infection is very much less common and we have in the Serum a very potent medicine against this type of bacillary dysentery. The cases occur when they had not been properly managed and particularly when Quinine had been administered previously. In certain cases the picture might suggest an enteric infection or even malaria but the ordinary microscopic examination of the stool showing the abundant polymorphonuclear exudate containing macrophages will settle the diagnosis. The difficulty becomes very great when there is mixed infection of both amoebic and bacillary dysentery. In these cases the stool should be examined as fresh as possible and the mucus should be selected for examination, when the vegetative form will be found. Fortunately mixed infection is very uncommon. I found amongst a hundred cases of dysentery only about 2% of mixed infection. The appearance of *B. coli* has to be differentiated—an organism which is not infrequent. The blood should in every case be examined to exclude malignant malaria, which by itself resembles bacillary dysentery. There may be a good degree of leucocytosis even in pure cases of malaria during the febrile stage. However the finding of small delicate rings is not difficult with thick film technique of KNOWLES and DAS GUPTA. Though bacillary dysentery may bring about a relapse of benign tertian infection, a subtertian infection with *B. dysentery* is not common.

V. Liver Diseases.—(1) Cirrhosis. (2) Acute atrophy. (3) Cancer. Cirrhosis of the liver is a very frequent cause of giving rise to severe haemorrhage per anum, which seems to be separate from the melæna that frequently occurs in a case of portal obstruction. The profuse haemorrhage per anum is more frequently terminal, heralding exitus lethalis, than an ordinary incident of obstruction like melæna. These cases are

common in pernicious 'typhoid' type of malaria. Laboratory tests are not often necessary for a diagnosis except to rule out complicating malaria and amoebiasis, or helminthiasis which are not infrequent often changing the typical picture of an enteric infection. Such complications may in themselves give rise to hæmorrhage as I saw in a few cases requiring Emetine or Quinine as the case may be.

(1) The complicating malaria was found to be benign rather than malignant tertian and it is my impression that a latent infection of malaria which showed no manifestations for a certain degree of immunity developed against it, again manifested itself as a result of breaking down of this relative immunity by the enteric infection. The enteric infection must have given rise to ulcerations which would have bled even if there was so complicating malaria—this is very probable. But when I observed that the hæmorrhage followed the periodic exacerbations of temperature with chilly sensations I was led to believe that malaria toxin must have helped or actually initiated the process of bleeding from these ulcers which otherwise might not have bled.

(2) Enteric fever with amœbic infection is very similar. These are generally cases of chronic amœbiasis which suffer from enteric infection and thus the amœbic infection gains in strength and shows itself by blood and mucus in stool. It is fortunate that these cases of bleeding are too early to be due to typhoid ulcerations, as I saw bleedings as early as the 8th to the 12th day of the fever *i.e.*, long before there is a chance of ulceration forming and eroding vessels to give rise to hæmorrhage. Stool examination shows the vegetative forms and Emetine injections are curative. Of course when hæmorrhage occurs late when it might be due "enteric" itself we can differentiate amœbiasis from the fact that there is mucus in the stools with tenesmus. Microscopic examination of the stool is however absolutely necessary in these cases for a proper diagnosis of the complication. In these cases Emetine injections are not contraindicated but are absolutely necessary but should be given in small doses in view of the myocardium.

One has, however, to remember that acute amœbic infection may resemble typhoid fever and may be extremely fatal in spite of vigorous treatment with Emetine and otherwise. Hæmorrhage generally takes place too early, early vomiting is present and frequently the pulse is very quick, a picture altogether different from an onset of enteric fever.

(3) The role of Streptococci, and *B. coli* in the intestines in giving rise to hæmorrhage should be remembered though not agreed upon by most authorities. But it would appear to be correct from the fact that cases of enteric which have been treated by me with Sulphapyridine with the idea of checking these opportunists from the beginning, come round without any complication and much less any hæmorrhage. Sulphaguanidine may be better in this respect but I have not used it so far for its not being available in the market. Of course STANYON and others have treated cases of enteric with Sulphapyridine which they claim to be curative. If it proves to be so then my contention of checking the Streptococci and *B. coli* falls to the ground.

(4) Whether ascariasis which is pretty common in complicating enteric cases brings about a tendency to a greater incidence of hæmorrhage I cannot say. But it certainly brings about certain uncommon features

of toxæmia showing great nervous irritability, delirium, aphasia, diarrhœa, abdominal pain and irregular temperature.

The kneejerk is highly increased and superficial reflexes very vigorous. Of course one should remember that ascariasis by itself may simulate typhoid and known as typho-lumbricosis where no ulceration of the lymph follicles nodes of the intestine occur. Near our hospital there is a locality, where there is a heavy incidence of ascariasis both amongst adults and children, an incidence of somewhere about 80% where many cases of enteric complicated by round worms are seen. Perforation by round worms is highly probable but I have not seen one: though specimens of such a condition are not uncommon in pathological museums.

(5) Hook - worms complicating typhoid predispose to severe hæmorrhage as also perforation. It renders the diagnosis of enteric also difficult as the temperature is found irregular, the pulse more quick, anæmia very marked and the ankylostoma may cause fever by itself, which fever closely simulates enteric. In cases of ankylostoma fever, the count shows leucocytosis with heavy eosinophilia, whereas in enteric the invariable picture is found and eosinophiles may not be detected. Early abdominal pain, hypothyroid, oedematous face and particularly eyelids and ankles, and dry lustreless hair, pigmented and typical tongue looking like blotting paper, should make one suspicious in these cases and examine the stools for the ova. The bleeding time is increased in all such cases and the blood per anum which is very profuse may be fatal in spite of vigorous treatment. I cannot say anything about blood transfusion in such cases as I have no experience.

(6) In this connection I would like to bring the ambulant enteric cases to attention as they may have severe hæmorrhage and may be regarded as suffering from amœbiasis or malaria. His only complaints may be nothing more than a persistent headache or a belly-ache or indigestion by which is meant tympanitis, loose motions, loss of appetite and some pain in the abdomen. Very frequently they are mistaken for malaria. These cases are very difficult to diagnose unless one remembers them. These cases may be brought into the hospital as suffering from broncho-pneumonia, pneumonia, pleurisy and sudden hæmorrhage per anum. The blood and stool examination while showing nothing of importance and even the Widal may not help. The spleen may be detected, the tongue may be characteristic, and by chance the rose spots may be found fortunately.

(7) Typhoid with toxic purpura in a few cases noted amongst children also showed bleeding per anum. The simultaneous occurrence of purpura is enough to settle the cause of the bleeding per anum. It generally occurs when the patient has recovered from his attack of typhoid when suddenly bursts of purpuric spots and bleeding from mucous membranes set in. The diagnosis is not difficult. But when during the course of fever when the probability of the ulcers bleeding remains, bleeding with purpuric spots occurs, the question of diagnosis is not very important. It only means that bleeding is taking place not only from the ulcers as also because of the toxic hæmorrhagic state. The role of Streptococci in this connection may be very important.

I. Amoebic Dysentery.—Though the incidence of amœbic dysentery is very frequent in our country, profuse hæmorrhage per anum is

like those that occur in cases of liver abscess. One even cannot say how a case of cirrhosis of the liver is going to fare though he apparently seems to improve. He may suddenly die, or die of complication but bleeding from various mucous surfaces including intestines seems to me a more frequent cause of death than any other.

VI. Tuberculosis of the Intestine is not at all uncommon and is unfortunately a terminal complication. When these ulcers open up a vessel it is frequently fatal. As tuberculosis seems to be on the increase this cause may soon assume very serious proportions. One particular case may be cited as instructive. It was diagnosed as a case of asthma at first, but later sputum examination confirmed my diagnosis of T.B. lung. This case was later being treated as a case of dysentery. Stool examination did not show any parasites or organisms. Within a week of this treatment he was dead from intestinal hæmorrhage. Examination of the stool shows constant presence of red cells, absence of *E. histolytica* or the dysentery organisms, presence of T.B. **BROWN** and **SAMPSON** have described the characteristic radiographic picture which may help.

VII. Leukæmia is not at all rare and cases frequently die of hæmorrhages. The proportion of acute leukæmia is very small probably not exceeding 10% of all cases. They occur only in children. It may be mistaken for malaria, kalaazar, enteric, or septicæmia. But the bleeding stomatitis, absence of rigors and features of toxæmia, should suggest the disease which is diagnosed easily by blood examination. The chronic forms are mostly myeloid in type and not infrequently complicated with malaria. One such case, a Mahomedan female, showing both the diseases died as a result of profuse hæmorrhage from stomach and intestine.

VIII. Snake-bite.—I know just only one case where the bite was said to be caused by a Russel's viper—Chandraboda as it is called locally where the patient died under the treatment of local ozhas or snake charmers. This patient had evacuations when he was more or less comatose, bleeding also from the nose and gums.

IX. Hydrarg Administration may cause severe colitis as a result of long continued use, or after Salyrgan or other Mercurial diuretic or even sometimes after inunction and may lead to severe hæmorrhage. Calomel even in therapeutic dose is said to give rise to such a condition rarely.

I have not seen quite a large number of probable causes which certainly may give rise to hæmorrhage per anum. They are (1) smallpox, (2) hæmorrhagic diseases, (3) kalaazar, (4) scurvy, (5) cholera, (6) septicæmias, (7) splenic anæmia, (8) schistosomiasis which is said to occur rarely in India, (9) ankylostomiasis, (10) hypertension.

Kalaazar may certainly give rise to intestinal bleeding. I have very little experience with K.A. which appears to be very infrequent in the western part of the district of Bankura in Bengal. I will not deal at all with these cases. Clinicians and pathologists all agree as to the probability of ulceration of the intestine caused by the L.D. bodies though Professor M. N. DE in a series of post mortems in Calcutta Medical College Hospital did not see an ulcerated intestine caused by these organisms. He is of opinion that these organisms are principally lodged in the spleen, liver, bone marrow and lymph glands and localisation in other places was more or less determined by local inflammatory conditions. So, I may

be allowed to suggest that dysenteries or hookworms may be important concomitant infections that should be excluded in even cases of K. A. showing intestinal hæmorrhage.

It is difficult for me to believe that ankylostomiasis or oxyuriasis may give rise to profuse bleeding per anum. I also doubt very much if splenic anæmia is a real entity. As a matter of fact I have not as yet seen a single case where I was satisfied as to the diagnosis. I have seen a few hæmorrhagic disease cases who have died of fatal bleedings like from the gum, nose, stomach or kidneys and I have also seen melæna occur in them frequently but none with frank profuse hæmorrhage per anum.

In some cases of typhoid or malaria it is not improbable that there may be bleeding seen as purpuric spots, or bleeding gums or nose, due to the toxins bringing about some change in the permeability and resistance of the capillaries. In some of these cases and only during the time of hæmorrhages capillary resistance test (**RUMPELL-LEEDE**) was found to be positive. It is said to be indicative of Vitamin C (P) deficiency. Instead of the indophenol test it may be easily carried out by simply raising the pressure of a blood pressure armlet to 70 mm. Hg. maintaining it for a few minutes (2 to 3). Petechiæ appear below the armlet. Vitamin P (Hespiridin) is not ordinarily used for treatment but may certainly be found useful instead of Vitamin C which we so frequently use and find effective.

The coagulability of the blood shows definite changes which explain the hæmorrhage in such cases as malaria, typhoid, etc. Of course thrombosis may also be noted in some, like in dysentery or typhoid, so that the explanation is difficult for even in the same case of femoral thrombosis. I have seen the bleeding time and coagulation time definitely increased in a case of amoebic dysentery.

In some cases of gastro-intestinal disorders like amoebic dysentery, ankylostomiasis and malaria, the bleeding time appeared to me to be increased. In some of the dysenteric cases also the blood passed per anum does not coagulate and remains fluid for a long time showing that the clotting time is also increased. From this we might conclude that there must be some defect with the liver in forming the prothrombin, fibrinogen or the bone marrow in producing the thrombocytes. So we find that ordinary treatment does not often suffice and we need have to take recourse to Vitamin C, Vitamin K or such stimulants like Serum or Protein shock for bringing about stopping of hæmorrhage.

The diet of these patients is frequently defective. The diet may consist of nothing else than barley water with sometimes a dash of milk. Even if some form of fruit juice is given I suppose it is not enough to meet the requirements.

Treatment.—Treatment is of course directed towards the cause primarily but the checking of the bleeding is also of the greatest importance. Certain general considerations already dealt with are important in this connexion, i.e., whether the coagulation time is normal, the permeability of the capillaries is normal, bleeding time is normal, any nutritional deficiency is present.

The following measures are generally found effective in arresting bleeding:—(1) Calcium parenterally and by mouth, (2) Hæmoplastin Serum parenterally, (3) Congo Red intra-venously. (4) Vitamin C along with P

and K orally and parenterally, (5) Whole blood transfusion if practicable or by intramuscular injection in 20 to 50 c.c. doses. (6) Clauden, Coagulen, etc., parenterally. (7) I have not used Venoms in these cases. Russel's viper or Mocassin Venom is said to be very effective. (8) Liver extract, Placental extract may also be used. (9) I have not used Timperley and Nash's method.

Rest to the intestine is imperative and is brought about by wise administration of Morphine and Adrenalin Hydrochloride by mouth, Trasentin, Atropine etc. Stopping all foods requiring digestion and giving only Glucose, cocoanut milk and some buttermilk and fluid.

We must however remember that starvation by itself may lead to an increased tendency to hæmorrhage and should not be countenanced.

Replenishing the circulation may be necessary.

Taking measures to prevent secondary invasion as the blood clot in the intestine serves as an excellent pabulum for these invaders. Sulphonamides and Serum and intestiphages and occasionally intestinal antiseptics should be used.

Hæmatinics are necessary during convalescence. The diet should supply not only sufficient proximate principles but also enough of the accessory vitamins.

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Emergencies in Typhoid Fever

By

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For one who is qualified to make use of the art of medical science, it is not only in the chronic cases, who punctually visit him in working hours, that the question of application of the medical knowledge presents itself; but there are more trying and important occasions than this. A patient with the history of continued fever for more than a fortnight, with ladder-like rise in the first week and maintenance of the high temperature in the second week, is not an emergency, even though the doctor may be examining the patient for the first time but now if to the above condition is added the history of passage of frank blood in the last motion or coming up of acute distension of the abdomen or acute diarrhoea, the case then takes a different turn altogether and becomes an emergency. Here one cannot wait for an extensive series of investigations to be carried out, and the resources of a doctor get limited to few things he carries in his emergency bag.

Typhoid fever is pretty common in India in epidemic form, inspite of improvement in sanitation, and treatment facilities. It is one of the major problems of the medical man in the tropics. This disease is remarkable for the number of complications which may arise, though only a few of them can be said to be relatively frequent. They are commonly met with in the severe cases. A fatal termination is generally caused by one of the complications, which are liable to occur at the height of the disease or during its latter part. Mortality rate, too, is considerable. The season that favours the outbreak of the disease is in the second part of the year. As a matter of common experience, the management of a typhoid fever case consists of guarding against the complications of the disease, and their occurrences become emergencies.

Before starting the subject proper, I want to tell about the recent researches which are being carried on, on the bacteriology and immunology of the disease. A third antigen known as V, antigen has now been fully recognised, in addition to the other two known antigens. This was first discovered by WEIL FELIX and his co-workers. It is a sheath antigen enclosing the body of the bacillus in a kind of capsule thereby preventing the fixation of O, agglutinin to the deeper lying O, antigen. This has been used to prepared V, antisera for therapeutic use, and such sera have been clinically tried at few places.

By a study of cases in India, it has been seen that the majority of them are ushered in with suddenness, high temperature, 103-104°F. headache, pains in joints and limbs, and in few cases with rigors. Onset is misleading and simulates malaria, dengue, etc. Headache is very severe to start with and also sweating. Extreme degree of abdominal distension is a marked feature. Cough occurs in 25% cases. Absence of text book description of rose spots and epistaxis in Indians is a marked feature. Enlargement of spleen carries no weight in diagnosis. Serum diagnosis is still a controversial point. Box considers agglutination 1 in 50, should be positive while LEWIN (1938) thinks 1 in 100 (H) and 1 in 200 (O), agglutination to be suitable for diagnosis, while some of the cases clinically

diagnosed have been found to give negative widal test. Under the light of present scientific knowledge of the metabolic changes in fevers, the 'feeding' fever diets, is much more rational and sound than starvation diets. VON HOESSLIN, after observations in the cases of typhoid fever, found that the temperature was only 0.11°C to 0.3°C higher when food was given than on starvation days and that absorption of light articles of diet goes on as easily and perfectly in the feverish patients as in the healthy individuals. Efficient and careful nursing, is the sheet anchor in the treatment of typhoid fever. For the sake of brevity, I will deal with the most common complications which call the immediate attention of a doctor in more detail and the rare ones will be mentioned only.

Intestinal Hæmorrhage.—It is, along with perforation, the gravest of all complications, caused by separation of the slough from ulcerated patches. In this process, a vessel may be eroded or a tear occur through the tissues remaining at the base of the ulcer and through the peritoneal covering of the bowel. Small traces of blood may be observed in the first week as a result of hyperæmic condition of Peyer's patches, but they are of no significance. This complication occurs in about 6.5 to 7% cases in India, though statistics taken in some places show much less e.g. 3.6%. It occurs any time after the end of second week or beginning of third week. The evacuated blood is bright red or dark in colour, depending upon the time it has remained in the intestines. Some of the blood comes from capillaries of the inflamed follicles but it is sometimes a large vessel that has become eroded. Intestinal hæmorrhage may be slight consisting of few clots of blood in the stools or it may be profuse, consisting of blood in fluid state. The former can occur at any time but the latter does not occur before the end of second week, and may be sometimes followed by a sudden fall of temperature in addition to usual symptoms of loss of blood. In many cases these profuse hæmorrhages come on after 12 days of temperature coming to normal. Death is mostly caused by repeated loss of blood as the patient is already weak; rather than a single large hæmorrhage which is not fatal.

I have observed in the few cases of hæmorrhages in typhoid fever among my cases, especially of profuse type a *premonitory symptom of a sudden onset of polyuria without any apparent cause whatsoever*. I cannot tell whether my fellow practitioners have any such experience to confirm my observation. Coming to actual symptoms, the patient complains of faintness and abdominal discomfort rather than pain, to begin with. He becomes pale and sweat may appear on his or her forehead. Restlessness with sighing respiration and sometimes vomiting may occur. The pulse becomes thready and running and there is a sharp fall of temperature to subnormal. There is a transient rise of blood pressure, with disappearance of dichrotism. Spleen may shrink rapidly. Sometimes hæmorrhage is fatal before the blood is voided. The hæmorrhagic form of typhoid or melæna may be an early stage associated with patches or bruises of skin and hæmaturia. The outlook is certainly grave in these cases.

Regarding treatment, absolute mental and physical rest should be enforced in any hæmorrhage exceeding 5 ounces. There is no danger of perforation as long as the abdomen is scaphoid and soft. Injection of Morphia and Atropine can be safely given followed later by Dover's powder. For slight hæmorrhages an enema of 4 oz. of starch mucilage and Tinc. Opii m. 30, is usually sufficient. Food should be withheld for at

least 24 hours. Ice bag may be applied on the abdomen. Oral administration of astringents and coagulants, such as Acetate of lead, Calcium Chloride, etc., is not likely to have an immediate effect. We generally try one after another of the above drugs till we succeed and we can't tell which of the above drugs did act successfully with or without the help of nature. These drugs, at least, control the tendency to hæmorrhage. The following mixture may be given.

R Plumbi Acetate	... gr. 3
Liqr. Ammon Acetatis	... ℥ xxx
Acid Acetic dil	... ℥ xx
Aqua distilla ad	... 3i

Sig. Such six doses, to be taken hourly.

Calcium Lactate may be given in gr. xx t. d. s. to increase the coagulability of blood and thus stop the hæmorrhage from the bleeding point, though I have not much faith in this. The hæmostatics in use are 1 grain Calcium Chloride in 100 min. of sterile water, injected intramuscularly. The *latest and probably* the best, is 10 c.c. of a 1% solution of Congo Red, given intravenously, which has often stopped the hæmorrhage. It is better to use 'Grubler's Congo Red' which is free from impurities, and only fresh solution should be used, to avoid any causation of rigor. This injection may be repeated every twelve hours if necessary. Large doses of Vitamin C, Vitamin K and Venomostat have been used with success. I have used Kapilin (Vitamin K) of Glaxo laboratories in many of these cases, and found them useful. In the cases of leaking type of hæmorrhage which is accompanied by extreme toxæmia and sometimes hæmatemesis and epistaxis also, all the above drugs fail to act and these cases generally die of peripheral failure. In cases of collapse, the foot-end of the bed should be raised and the limbs should be bandaged. In apparently desperate cases, blood transfusion might be required, but the patient at this stage may not bear the shock. I have used the Serum "Neo-Hæmoplastin" (Parke Davis) in the dose of 2 to 5 c.c. given intramuscularly, but diluted with sterile physiological Saline, with good results, and in some cases Kaolin helps a lot. MURRAY has used Stypven, Cotarnine but could not find it very effective.

The prognosis in the cases with extreme toxæmia is really grave. About half of the cases observed by me died.

Perforation of Bowel.—This is the most dreaded complication because it is most fatal. The only hope is immediate surgical interference. The early diagnosis of the accident is extremely important but unfortunately very difficult. It is a complication usually of a severe attack of typhoid fever or one which has shown recrudescence, though it has occurred in mild attacks also. The age incidence varies from 10 to 24 years. It is rare after 40 years or before 10 years. About two-thirds of the victims are males and the rest females. The time of its occurrence is mostly in the febrile stage, though very seldom after the temperature has settled down. Majority of them occur in the end of third week, as this is the time when sloughs separate. It specially takes place in cases characterized by severe diarrhœa or by meteorism. Its onset may be associated with or preceded by intestinal hæmorrhage though it may occur independently also. In about 21% cases, perforation is preceded by hæmorrhage, though usually single perforations may be multiple. The most common

site, in about 75% cases, is the small intestine within 2 feet of ileo-caecal valve.

The immediate or exciting cause depends on the errors of diet, unsuitable purges, whether the purge was administered by mouth or rectum, straining at stools, sudden movement on the part of the patient, certain movement on the part of the nurse usually in delirium and distension of bowels. The most common pathological cause is separation of slough which has resulted from the extensive necrotic process to the peritoneal coat of the bowel. A bit of the peritoneum is included in the slough and the slough has got to separate, so a hole must result sooner or later. Sometimes peritoneum is involved in the inflammation that precedes necrosis. Lymph is thrown out and it might block the opening but with the separation of slough the hole becomes larger.

The early signs and symptoms consist of shivering with sharp pain in the lower part of abdomen specially in right iliac fossa, which is sudden in onset and frequently severe but may be mild in some cases. Sometimes pain all over the abdomen, not localisable, or referred to epigastric region, may be present. Localised tenderness, guarding of abdominal muscles and local immobility of the abdominal wall with thoracic breathing accompanying the pain are the cardinal signs. Both pulse and respiration rate increases, and the temperature may show a sudden drop followed by a rise but sometimes no variation is detected. Vomiting at this stage is uncommon. Other signs of less frequency may be vomiting, collapse and change of colour of the face. Last but not the least, is the fact that perforation may give rise to symptoms which are not very severe.

Later signs and symptoms consist of 'obliteration of liver dullness' which used to be considered as a cardinal sign specially occurring in rigid and retracted belly, but I have found it to be very inconsistent. The other sign of occasional onset is the irritability of bladder. Local symptoms are more important for diagnosis. After the first shock, the patient may show deceptive signs of improvement but before many hours, the signs of spreading peritonitis will assert themselves.

Diagnosis of perforation is difficult because all the above symptoms may occur and yet perforation may not have taken place. There have been cases where the abdomen was opened and nothing but scybalous masses were found throughout the colon. Polynuclear leucocytosis generally accompanies perforation. In differential diagnosis, the first thing which comes to our mind is *peritonitis* which is very difficult to distinguish from this. W. B. C. count is of no avail in cases where peritonitis is due to direct infection. *Intestinal colic* can be ruled out by the peristaltic movement which may be made out, and which is absent in perforation. In biliary colic, the pain and swelling near gallbladder region, vomiting, pyrexia and rigidity of the region with accompanying jaundice are the distinguishing features. In acute pneumonia a pleurisy pain may be referred to abdomen.

Treatment should be surgical and prompt, otherwise it is fatal, but uptil then Morphia and Opium should be withheld so as not to disguise the symptoms. Abdomen is opened and perforation is repaired under Gas and Oxygen anaesthesia. Abdomen is partially sutured and a large drainage tube is put in. In many cases, it has been found that the intestines herniated out but the patient lived though a metallic protector had to be

used in future. The operation must be completed rapidly to avoid much shock.

Prognosis is very grave and according to GOODALL (1928), one-third of the deaths of typhoid fever is due to this complication. A few cases of this complication, observed by myself, were all fatal with or without operation. Early diagnosis only can save the patient, if operation facilities are readily available.

Diarrhoea.—It does not always appear. Some patients remain constipated throughout the course of the disease. When it starts, it is very alarming indeed because it may end in, intestinal hæmorrhage or perforation. It often appears after a few days of hospital treatment. It generally occurs in either high or low diets.

Milk should only be administered by diluting it or peptonizing it, every 6 hours. Tinc. Catechu m. 20 added to mist. Cretæ 1½ oz. and Milk 6 oz. mixed in it. 1/12th part should be given diluted with water every six hours. Whey and Albumin water can be continued. If the diarrhoea persists, we can give:—

R Bismuth Salicylas	... gr. 25
Dover's Powder	... gr. 5
Mft. Pulv.	

Sig: One powder every six hours till diarrhoea stops.

Calcium should be given in order to prevent intestinal hæmorrhage at the onset of diarrhoea. Salol or one or two "Kerol" (intestinal) capsules a day reduce the profuseness and offensiveness. Pilula Plumbi cum Opio Gr. 2 to 4 or an enema of Tr. Opii m. 30 with *thin cold* starch Mucilage 2 oz. has been found beneficial. In mild cases, Tr. Catechu with Tr. Camphor Co. has a good effect. I have used Guaicol Carbonate and Salol, along with Dover's Powder and found them useful.

Myocardial Weakness.—It is evident by the short sharp first sound, feeble impulse, increased area of cardiac dullness and systolic cardiac murmur. The blood pressure falls. In some cases the pulse becomes intermittent, irregular, and alternating. Although this complication may manifest itself at any stage, it is particularly liable to do so during the third week.

By experience, in India, it has been found that circulatory failure afforded by typhoid myocarditis in the middle course, is not so inconsiderable as other people think about it. Not much attention has been paid previously to the pathology of the heart in typhoid fever. Of course to demonstrate the myocarditis by clinical methods, is difficult because the previous myocardial state of the heart is unknown and we generally don't attach so much importance to the heart specially in cases of abdominal complications.

The direct bedside evidence of typhoid myocarditis is suggested by MURRAY. Fever is the evidence of acute myocarditis, announced by the apical systolic murmur which rarely fails to evolve an immediate diagnosis of myocarditis. Development of cardiac dilatation during the course of fever is also important. The emphatic auscultatory sign is given by gallop rhythm, which can be foretold long before by the splitting of first sound. PORTER and BLOOM (1935) making a study of heart in typhoid, concluded that this organ presented no significant problem and

specially when the disease was treated with high diet, but KELLY and MURRAY (1938), on clinical grounds, found that cardiac failures in these cases were due to myocarditis, and LAKIN was also of the same opinion. In the cases observed by me, cardio-vascular failure occurred in 6.5% cases, and mortality was 75%. The lowest mortality occurred in cases where Vitamin B was administered, showing thereby the importance of this particular vitamin. This complication caused 40% of total deaths, higher mortality than any other complications. *Coramine* parenterally or by mouth has given me very hopeful results.

Peripheral Failure.—This complication is supposed to be most dangerous in typhoid fever, as it can hardly be controlled once it appears. The onset is insidious. This is very rare in children. Prognosis is worse if there is accompanying hyperpyrexia. The treatment consists of administering 25 c.c. of 25% Glucose intravenously and often repeated. It dilutes the toxins, helps their elimination and also supports the cardio-vascular system. Digitalis is of value in cases where there was previous history of heart disease. Sedatives to quieten the patient are given. Adrenal cortical extracts have been found useful but their exorbitant cost is the only drawback. Large doses of vitamin C should be given. The difficulty in such cases, is to find out a drug which constricts the blood vessels of the body and at the same time does not impair the heart. Veritol B is probably the best among such drugs, but it has not shown good effect. Barium is too toxic. The action of either Adrenalin, Pituitrin, or Ephedrine is too short lived, while Pituitrin is toxic to the heart also.

Electrocardiographic evidences of myocardial damage have been studied by BROW, "who has found that, in 14 out of 65 cases of typhoid fever, P—R interval was prolonged to between 0.21 and 0.28 second. The prolongation of conduction time generally developed in 2nd and 3rd weeks, and most often lasted for 2 to 4 days. Rare instances of transitory complete heart block in typhoid fever have been observed." According to FISHBERG, circulatory disturbance in this disease is rarely the result of cardiac weakness alone. For threatened cardiac failure, I have used the following combination given hypodermically every 4 hours:—

R Strychnine Sulph.	... gr. 1/100.
Atropine Sulph.	... gr. 1/100.
Adrenalin	... m v.
Sterile Water	... m x.

Oxygen administration with nasal catheter (No. 8), should be started early, as soon as cyanosis appears or the pulse becomes irregular. For other times the following mixture can safely be given in the case of myocarditis:—

R Tinc. Nux. Vom.	... m x.
Tr. Digitalis	... m vii.
Spt. Ammon. Aromat	... m xx.
Aqua Camphor ad	... 3 i T.D.S.

Femoral Thrombosis—This is apt to occur in early convalescence, and is usually left-sided. Sometimes it appears to commence lower down in the veins of popliteal space or calf or internal saphenous trunk. Pain, tenderness at the site of thrombosis, fever and swelling of the limb are the symptoms. The vein is felt as a hard cord. There is slight leucocytosis

in blood picture. In a few weeks the thrombus is absorbed and circulation is established, though certain sequelæ like neuralgia, œdema, varicose veins and thickening of skin may persist. Regarding treatment absolute rest of the limb is very essential, for fear of embolism. The affected limb should be kept elevated in between two sandbags and a Sodium Citrate injection 150 c.c. of 5% solution is advised. Citrate can be given by mouth at the same time. For local treatment, Glycerine Belladonna paint with a light cotton bandage is sufficient. This complication occurs in about 1 to 4% of all cases.

Toxæmia.—This can be treated by tepid sponging, and intravenous administration of Glucose and Saline in double distilled water. Cold water to which Glucose may be added is freely drunk. Glucose lemonade with $\frac{1}{2}$ lb. of Glucose in one pint of water flavoured with lemon juice to taste or imperial drink is useful for oral use. Any amount upto six pints may be given in 24 hours. Should polyuria ensue, it is a good sign.

Delirium.—It is generally nocturnal. Though occurring mild in type in moderate cases, in severe cases the patient will get out of bed, if not restrained. Mechanical restraint is undesirable. Draw sheets well tucked in will usually answer the purpose. Tepid sponging is useful. Sedatives should be given. Paraldehyde 2 drs. may be tried or 10 gr. of Dover's Powder. If one or the other hypnotic has been tried without result, no further time should be lost but Morphine gr. $\frac{1}{4}$ resorted to.

Hyperpyrexia.—It also occurs in about 5% cases. It is better to avoid antipyretics, as the patient might collapse. Hydrotherapy has been found to be the only method in treatment, though it should be employed cautiously.

Bibliography:

1. British Medical Journal, 1935, 1938.
2. Journal of American Medical Association, 1917.
3. Goodall—Test Book of Infectious Diseases.
4. British Encyclopedia of Medical Practice, Vol. 6.
5. Indian Medical Gazette 1938, Vol. LXXIII.
6. Rogers and Megaw—Tropical Medicine.
7. Lancet.....1940.
8. Antiseptic, July 1942.

Emergencies Arising During the Course of A Case of Continued Fever

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DURING the course of fever, various complications take place which are observed during practitioner's usual round and treated, but there are times when a certain development in the progress of the case takes place which may be simply a usual complication of the case, or a sudden unexpected turn in the case, which is likely to be of serious import endangering the life of the patient if not promptly dealt with, and which forces the relatives of the patient to call any doctor available immediately if his own doctor is not available. It is this sort of emergency I shall discuss in the present article. I will confine myself to the treatment for the emergency only and not further.

Infantile Convulsion is a common emergency for a general practitioner. During the attack, the child should be immersed in tepid water upto the waist and an ice bag applied to the head or a cold stream of water directed against the fontanelle. This will be sufficient to stop the seizure for the time being. Then give a Glycerine Enema to clear the bowels and if patient is in a condition to swallow, give a dose of Chloral Hydras, Pot. Bromide with Antipyrine or Amidopyrine. This will act as a sedative to the nervous system and also as an antipyretic. Ice bag to the head should be kept constantly for an hour or so. Sometimes the seizures are so powerful that the respiration stops. Inject immediately Atropine Sulph. with Camphor in oil and simultaneously give artificial respiration. If with this treatment the convulsion does not stop, a whiff of the vapour of Chloroform may be given. If the patient is not in a position to swallow the sedative dose, it may be given per rectum. Some advocate injection of Hyoscine or Morphine but I think it should be kept as a last resort.

Hyperpyrexia.—If on examining the patient we find that it is absolutely necessary to bring down the temperature immediately, we cannot wait to see the results of antipyretics such as Cryogenine, Antipyrine or Antifebrin or Amidopyrine which will always take time to reduce the temperature. We have to have recourse to other methods viz., cold or wet pack, cold bath or cold sponging. This should be done by a qualified nurse or the practitioner should see it being done by the relative of the patient under his own supervision. After the temperature has been brought down to the safe level, the antipyretics should be given to prevent its rise again.

Retention of Urine is another emergency for which you may be summoned. First, differentiate carefully between retention and suppression and then endeavour to find out the cause of retention. Make enquiries if he had any previous complaint of retention, and what was it attributed to, such as, stricture, enlarged prostate, calculi or inflammatory swelling. In a fever case these causes are unlikely to be present in the absence of any previous history. The most common cause is toxæmia. If the bladder is very much distended causing severe pain and discomfort, immediately pass a rubber catheter and then give an Alkaline mixture with Hyoscyamus and Bromide. If the distention does not cause any pain or discomfort, you can give first an enema or

a Glycerine syringe which will surely enable the patient to pass urine voluntarily. Hot fomentation over the lower part of the abdomen is also useful.

Acute Distention of the Abdomen.—This, in some cases of enteric and pneumonia, becomes a pre-eminent symptom and may embarrass the heart's action. The course will be to flush out the enteric colon with Normal Saline enema to which either a few drops of oil of Turpentine or half an ounce of Tincture Asafoetida is added. After this, in case of pneumonia, give an injection of Strychnine which will give tone to the intestines, but, in enteric, you cannot venture to give Strychnine lest it may start hæmorrhage. Turpentine stupes or Mustard plaster over the abdomen may be applied. Generally this distention is due to paralysis of the bowels and as such carminatives given orally are useless as they never reach the bowels. If the distention is situated in the small intestines, rational treatment would be to administer intestinal antiseptics and oil of Turpentine 10 mm. in capsule or 5 min. oil of Cloves or Cinnamon and Carbo-lignum powder gr. xxx in cachets.

Præcordial Pain.—You may be called for a sudden pain in the cardiac region which is likely to frighten the relatives of the patient, who will always think that the heart is failing or may fail if immediate treatment is not given. This pain may be primary due to the heart, or secondary due to the lungs or abdomen. Primary heart pain is always of serious import and may be due to the onset of pericarditis or any myocardial or coronary affections. Patient should be very carefully examined and treated. Pain will easily be relieved by applying locally Belladonna and Chloroform Linament over the præcordium under Oil Silk or a large Belladonna Plaster may be applied over the heart area. If pain is paroxysmal and accompanied by high blood pressure pulse, suggesting angina, Amylnitrite inhalation usually affords speedy relief. Acute tympanites may cause præcordial pain and should be treated on the lines described above. In pneumonia præcordial pain is not infrequent, due to the embarrassment of the right heart. Here Oxygen inhalation with Strychnine, Digitalin alone or with Camphor-in-oil 6 gr. in 2 c.c. or Cardiazol will be useful. Some people advise venesection to immediately relieve pressure in the engorged right auricle and right ventricle. After removing the blood, Strychnine Digitalin treatment should be pushed on. In nervous patients sedative dose or an injection of Morphine is better.

Acute Cardiac Failure.—This is the most common and most serious of all the emergencies arising out of a fever case and may be expected or unexpected. You may be phoned by the patients' relatives for the patient having a sudden drop of temperature with profuse perspiration, rapid and stertorous breathing, faltering speech or cyanosis. Occasionally the cardiac failure may be prevented by hyperpyrexia the temperature rising upto 107°F. On visiting, you will find temperature subnormal, having fallen from 104° to 96°F. suddenly within a course of half an hour, body being cold, clammy and breathless. Even in hyperpyrexia you will find extremities cold though axillary temperature is as much as 107°F. The first thing you have to do is to give cardiac stimulant by parenteral as well as oral route if patient is conscious. Give intravenous injection of Coramine 5 c.c. with 25%, 25 c.c. Glucose and water for sometime to see the result. As soon as the pulse shows improvement, inject subcutaneously 6 to 12 gr.

of Camphor-in-oil with Strychnine and Digitalin. This, in most cases, helps in rallying the patient from the emergency. By mouth Brandy and Glucose should be given every now and then during the next twelve hours. If necessary injection will have to be repeated from four to six hours till the crisis has passed. Strychnine should always be given by Hypodermic route as it has very little value when given by mouth in mixture. After giving our injection of Strychnine, if it is not practicable to give another injection after six hours, an ordinary Hypodermic tablet 1/15 gr. when placed besides the frenum of the tongue is rapidly absorbed and acts almost as well as if given by an injection. Veritol is another good diffusible stimulant and is worth giving a good trial. Keep the patient's body warm by hot water bottles to the extremities.

Typhoid Hæmorrhage is another emergency for which you are called. Immediately on reaching the patient, keep ice bag over the abdomen. inject Coagulen (Ciba) 20 c.c. or Neo-Hæmoplastin subcutaneously and Calcium Gluconate intravenously. Stop all food by mouth but give only sips of Glucose water. Absolute rest is necessary, the patient should not be given the trouble of lifting his body to pass bed-pan. In severe cases Hypodermic of Morphine $\frac{1}{4}$ gr. should be given without delay. No stimulants should be given. Hæmostatics by mouth are useless as they never reach the bleeding point. Calcium Chloride by intravenous route is also useful.

Reference : Whitlas Dictionary.

Oppo. : B. B. & C. I. Ry. Station,
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'Malaria' as a Contributory Factor in the Emergencies of General Practice

BY

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Introduction :—An eminent clinician once remarked rather aphoristically that accurate diagnosis depends on a remembrance of possibilities on the part of the physician or the surgeon. Nowhere is this more true than in the broad realm of the "Emergencies" met with in general practice. The circumstances in which a general practitioner often faces a case of emergency are hardly conducive to such mental efforts and yet he is called upon to rack his memory and arrive at a reasonably correct diagnosis on the spot, without any adventitious aids. Both the patient and the physician or the surgeon are alike dominated by one and the only thought *viz.*, "How to afford relief at the earliest possible moment". Naturally the question of a searching enquiry into the possible factors that might have precipitated the emergent condition, does not then receive as much attention as it should. "Symptomatic relief" serves often as a short cut to clinical success, temporarily, at any rate; and the general practitioner is only human if he adopts it, as an "expedient". But the need for more radical measures based on a proper evaluation of the factors that have contributed to the onset of the particular emergent condition, is felt soon, in fact sooner than the general practitioner realises it, as the symptomatic relief afforded to the patient though timely as an expedient and may be very opportune too, cannot, by its very nature deal with the "causes", nor afford permanent relief. Factors giving rise to an emergent condition especially in a tropical or sub-tropical country where cosmopolitan infections are the rule may be many and varied; and the chief difficulty may lie in a proper apportionment of their role in causing the particular emergency and hitting upon the main factor. And this difficulty is heightened by the protean manifestations of a few diseases which may be either exclusively tropical or sub-tropical or world-wide in their distribution. For instance "malaria" amongst the tropical diseases and syphilis from among the diseases with a world-wide distribution have such protean manifestations. And the practitioner in a tropical or sub-tropical country like India can afford to forget the protean manifestations of malaria, only at his peril. That such manifestations may be instrumental in giving rise to some of the emergencies met with in general practice, is the main theme of this note.

Malignant Malaria as the Cause of Emergencies.—Fortunately for the residents in the tropics and sub-tropics, it is only one particular type of malaria, namely, that due to the "*plasmodium falciparum*" or "malignant tertian" as it is commonly designated, that gives rise to such protean manifestations and needs to be considered here. That this type of malaria gives rise to the so-called "pernicious forms" is a matter of common knowledge; but that these pernicious forms may be the "*raison-de-etre*" of "emergencies" in general practice does not appear to have received adequate recognition at the hands of the general practitioner. And to direct his attention to these is the object of this note.

Before actually dealing with the emergent conditions caused by "malignant malaria" it is well to recollect a few salient points from the

pathology of the disease, as these will help to explain the mechanism of causation of these "emergencies".

Some Points from the Pathology of Malaria.—1. The causative organism *viz.*, plasmodium falciparum, is essentially an intra-cellular parasite and it is very prolific and therefore highly destructive to the R.B.Cs. which constitute the essential units of life.

2. The parasite induces a peculiar change in the infected cells which renders them sticky, fragile or inflexible and therefore such "cells" plug the finer capillaries, causing "embolism" with all its concomitant effects on the organ supplied by such capillaries.

3. The broken-down products of the infected cells and the metabolic waste products of the organism have a deleterious effect on almost all the tissues of the human body with the possible exception of the bones and such products give rise to various functional disturbances and in some organs to structural disturbances as well, which persist for sometime.

4. The parasite multiplies chiefly in the internal organs of the body such as the brain capillaries, the meningeal, the gastric and, the mesenteric vessels, the splenic vascular channels, the portal and the hepatic vessels, capillaries of the lungs, the finer capillaries of the sense-organs like the eye, ear, larynx etc., and the vessels of the spinal cord as well as of peripheral nerves. Consequently the functional integrity of such vital organs as the brain, the lungs, and the heart as well as that of the other organs like the stomach, the intestines, the liver, the pancreas and the kidneys, may be affected, in varying degrees, not to speak of the sense-organs like the eye, which may be affected by the parasitic emboli or the toxic products of parasite-metabolism already mentioned.

Some Emergent Conditions and the Mechanism of their Causation.—

Now let us pass on to a consideration of some of the actual emergent conditions and the bearing of these pathological points on them.

1. *Hyperpyrexia*—Naturally this comes first, as the fatal effects of long continued high fever are too well recognised to be gainsaid. The liberation all at once of a large quantity of metabolic waste products of the parasite from the broken down infected cells and the escape into the general circulation of a large amount of protein-split products also from such cells, cause a protein-shock, the degree of severity of which will necessarily be conditioned by the quantum of such material released in the general circulation, which in its turn depends upon the "density of infection" and the duration thereof. Where there are opportunities for continual re-infection, the density of infection will naturally be greater, or again, where the duration of a single infection may be such as to cause the same high density relatively, owing to peculiar constitutional factors existing in the individual affected, or caused by the single infection, the same pathological effects are produced. But generally speaking, the severer pathological conditions are apt to supervene where there are opportunities for a continual re-infection with the parasite-inoculum.

ILLUSTRATIVE CASE I. Mrs. X. a Hindu female, age 40, had a remittent type of fever for about a fortnight and an irregularly intermittent type thereafter. On the strength of a coated tongue with loss of appetite, enteric was diagnosed. After 3 weeks from the onset of the illness there was a sudden rise of temperature to 104° F., which could not be controlled by the usual anti-pyretic measures including hydrotherapy. All other febrile conditions were thought of, excepting malignant malaria, by the

physician in attendance on the case. A consultant suggested a blood examination and the specialist who examined the blood reported the presence of malignant tertian rings. With specific treatment, the case ended in recovery quickly.

CASE II. Mr. S.N.B., Hindu male, age 25, had an attack of fever lasting for about 8 hours on the previous day. Then the temperature came down and there was a remission in the evening. Next morning again it shot up to about 104° F., and continued to remain at that level coming down only by a degree or two for a short time when the usual antipyretic measures were applied. A medical practitioner who was called in diagnosed the case as "enteric" and at once vigorously applied hydrotherapeutic measures which gave only momentary relief. The writer who happened to visit the residence of the patient by chance, was consulted. On the strength of the recent family history, which revealed the existence a few days before in the same household, of two cases of malignant malaria in the two brothers of the patient, a diagnosis of malignant malaria was made and an intra-muscular injection of Quinine was administered which brought down the temperature to normal within a few hours. Oral Quinine for 5 or 6 days completed the treatment and the recovery was uneventful.

It is noteworthy that in both these cases, some one who remembered that a persistent high temperature can be caused by malignant malaria, the toxins of which are as potent as those of enteric in affecting the stability of the thermic centre, was either called in or was accidentally present to establish the correct diagnosis.

2. *Hyperemesis in a Gravid Woman* :—When excessive vomiting is present especially in a woman advanced in pregnancy, the idea that it might be due to malignant malaria does not strike the general practitioner. Hyperemesis gravidarum is the only condition that is first thought of. That the multiplications of the malignant tertian parasites in the gastric and the mesenteric vessels leads to a partial stasis in the capillaries and to a hyperemic condition leading to a dysfunction of the digestive system, is not generally remembered. Vomiting is one of the ways by which "Nature" attempts to eliminate the "Toxins" from the system and that hyperemesis may be caused by the malarial toxin or by the incomplete oxidation products of the broken-down organ-proteins of the system liberated in the course of a malarial paroxysm caused by the malignant tertian parasite, generally escapes notice.

CASE III. Mrs. S.B., Hindu female, age 35, VIth para, had irregular attacks of fever for 3 days previously, with cold and loss of appetite. Influenza was diagnosed. On the 4th day, vomiting started and continued throughout the day. As she was in her 7th month, hyperemesis gravidarum was diagnosed by the attending physician. Drop doses of Lugol's Iodine, Acid Carbolie and Chloroform with Glucose were tried without any tangible benefit. Mustard-plaster to the epigastrium afforded relief for some time. But the vomiting recurred and anxiety was felt for the safety of the child in utero. The temperature was not very high and no other complications were seen. A consultant suggested the examination of blood which revealed M. T. rings. With specific treatment given by intramuscular injections, the hyperemesis was promptly controlled.

3. *Persistent Hiccup* :—That the hyperemic condition of the gastric mucosa and the irritation caused by the malarial toxin acting directly on the mucosa or through the phrenic nerve centre, may cause a persistent hiccup, is generally forgotten, and attention is ordinarily directed to the kidneys and the urine.

CASE IV. K. G. R., Hindu male, age 45, had an attack of fever for 4 days the temperature rising to 104° F., every day, and subsiding to the normal next morning. Without any treatment, the temperature remained normal for 2 or 3 days and hiccup with occasional vomiting started thereafter. Gradually it increased in frequency and intensity and did not yield to mixtures of gastric sedatives. A slight rise of temperature and chilly feelings followed by a severe head-ache raised a suspicion of malaria. The examination of the blood revealed a combined infection with M. T. and B. T. Specific treatment stopped the hiccup.

4. *Acute Dysentery with irregular Pyrexia*.—One of the pernicious forms of malignant malaria, is commonly designated as "algid" and this is sub-divided into "choleraic" form and "dysenteric" form, according to the clinical signs predominating in a particular case. Most common mistakes occur in diagnosing these conditions and the possibility of their malarial origin is ordinarily not remembered.

CASE V. Miss M., Hindu girl of 4 years, had an attack of acute dysentery with a rise of temperature, which persisted with slight remissions. An examination of the stools by a specialist in Tropical Medicine revealed the usual features of a case of acute bacillary dysentery. Treatment with Salines was instituted (bacteriophage had not come into use then). Slight improvement was noticed for a few days, but the temperature behaved very erratically and each rise in temperature was accompanied by an exacerbation of the dysenteric symptoms and signs. An examination of the blood revealed numerous M. T. rings and Crescents and then only the true nature of the case was understood. But by the time an intra-muscular injection of Quinine was got ready, the patient had attacks of convulsive seizures and died. But for the presence of Crescents, this case might have been diagnosed as acute bacillary dysentery with malignant malaria as a super-added infection. The presence of Crescents showed that malaria had been present for a longer time and the dysenteric manifestations were due to malignant malaria.

CASE VI. Master K., Mohammedan, male child, nephew of a civil surgeon, had an attack of acute dysentery with fever. The writer was asked to examine the stools only and give an opinion. The examination of the stools revealed the ordinary features of an acute bacillary dysentery viz., a richly cellular exudate with a few R.B.Cs. and macrophages, etc. A diagnosis of acute bacillary dysentery was made and treatment with the appropriate "phage" was instituted. An improvement in the condition of the patient was noticed for 2 or 3 days and then the particular brand of "phage" was exhausted and a new one had to be used. On the same date the temperature shot up to 104° F., and the dysenteric symptoms and signs showed a distressing exacerbation. The new brand of "phage" had absolutely no effect in relieving the patient. Next day the writer was again consulted and the blood was examined at his instance. Numerous M. T. rings and Crescents were found. Prolonged discussions ensued then as to the real nature of the case and at the instance of the writer, it was decided to give a trial to Quinine by the intramuscular route for a day or two and then recommence the phage treatment with the first brand. The first intramuscular injection indicated the malarial origin of the dysenteric symptoms and signs and after another intramuscular injection, oral treatment with Quinine was commenced and the case ended in recovery without any further untoward effects. The presence of Crescents helped to establish the fact that the malignant malarial infection was not

a later one and was present from the beginning and the dysenteric symptoms and signs were due to that infection which was subsequently confirmed by the therapeutic response to the specific treatment for malaria.

5. *Pneumonic Manifestations with Irregular Pyrexia*.—The multiplication of the M. T. rings (parasites) in the capillaries of the internal organs and the liberation of the merozoites, as well as the protein-split products and waste products of the parasite metabolism therein, might induce in some individuals, a hyperæmic condition with mild inflammation of the organs. This applies equally to the lungs. That hyperæmic condition of the organ with a rise of temperature will naturally simulate any of the pneumonic conditions is understandable. But this is not ordinarily remembered.

CASE VII. Mrs. C. B., Hindu female, age 40, had slight rises of temperature of a short duration off and on for about a week, which did not actually confine her to bed. Suddenly there was a rise of temperature to 104° F., which persisted for the whole day and she had to lie in bed. The usual hydrotherapeutic measures were applied with temporary relief. The temperature continued to remain high and after 3 days she developed signs of catarrhal pneumonia and steadily grew worse. One of the several medical attendants on this case insisted on an examination of the blood which revealed numerous M. T. rings and Crescents. By the time the other medical attendants were convinced that it was a case of malignant malaria with pneumonic signs and that specific treatment was necessary at once, and arrangements could be made for an intramuscular injection of Quinine, (an intravenous injection was out of the question in view of the respiratory distress) the patient expired. Had the examination of the blood been made earlier, timely specific treatment might have been instituted and the case might have ended in recovery. Here also, the presence of Crescents established that the infection was rather long in duration.

6. *Convulsive Seizures with or without Pyrexia*.—The multiplication of the M. T. parasites inside the brain capillaries and the meningeal capillaries and the liberation of their toxins therein and the plugging of such capillaries by the affected R.B.Cs. might cause an irritation of the sensory or motor areas of the cerebral cortex or an inflammation of the meninges; this is usually not remembered, except by practitioners who practise in hyper-endemic areas.

CASE VIII. Miss D., Hindu girl, age 4, had slight attacks of fever off and on for a fortnight or so. On a particular day she had repeated convulsive seizures with a rise in temperature to 102° F. There was a slight icteric tinge also. The spleen and the liver were both enlarged. The convulsive seizures were rather severe and brought this case into the category of an emergency. The attending physician naturally thought of helminthic infection, infantile liver and cerebrospinal meningitis also as a remote possibility. A consultant suggested the examination of blood which revealed M. T. rings and Crescents with a few Quartan rings as well. Specific treatment administered intramuscularly for the first three days gradually effected an improvement and the case ended in recovery. Had the examination of blood not been made the malarial origin of the convulsive seizures would never have been brought to light.

In conclusion, I cannot help repeating here the dictum laid down by the same eminent clinician with those aphoristic remarks. I commenced this note, that to a practitioner in the tropics or sub-tropics, "A microscope is perhaps more essential than even a stethoscope."

Convulsions in Children

BY
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Udipi.

Introduction.—This is a very common emergency in children requiring immediate medical aid, which if properly rendered, can save good many lives. In villages some people think that the condition is due to the mischief of some evil spirits, and instead of calling in a physician, they get a witch doctor or a *mantravadi*. Such neglect and ignorance, as may be expected, is one of the main causes of the high rate of mortality in children.

Definition.—Convulsions in children, like headache in adults, are not diseases by themselves. They are the symptoms of numerous diseases, and the correct diagnosis is an all important factor. They are merely a spasmodic contraction of the muscles of the body, due to an unstable condition in the nerve centres, permitting sudden, excessive and temporary nervous discharges. They may vary in degree, beginning with mere turning in of the thumbs towards the palms, or twitching of some of the facial muscles and ending in regular epileptiform fits.

Aetiology.—Convulsions may be roughly divided into 3 groups:

- I. Coming on suddenly in an apparently healthy child.
- II. Ushering in or superimposed on some acute infectious disease.
- III. Terminal stage of a chronic complaint.

I. **Coming on Suddenly.**—This again may be (1) of a mild degree or (2) of a violent type.

(1) *Mild Degree:*—In ordinary "night screaming" or "night terror," the child suddenly starts screaming, apparently unconscious of the surroundings and does not even recognise its friends and relations. This condition may last for a few seconds or longer and requires nothing more than affectionate soothing. The commoner causes of this condition are (a) dreams, (b) indigestion, (c) wetting of the bed and a cold feeling, (d) stuffing of the nostrils due to tonsils or a sudden cold, and (e) phimosis in male children.

A mild degree of twitching of the face, rolling about of the eyes, twitching of the muscles of the hand and gentle moaning in small children during sleep, are considered by many mothers as not pathological (though any or all of the above mentioned causes may coexist) and they call them as "angels' whispers" or "inward fits."

(2) Regular convulsions in children may closely resemble epileptic fits in adults with the initial tonic stage followed by the clonic convulsions and ending with exhaustion or sleep. This condition is invariably due to gastrointestinal irritation either indigestion or worms. Other conditions like debility, rickets, malnutrition, congenital syphilis, phimosis, otitis, and regular epilepsy either singly or jointly are responsible for a few cases of convulsions. Dentition is said to be one of the main causes, but statistics show that the greatest mortality from convulsions in children is during the first 6 months of the child's life i.e. before the actual teething time.

II. Convulsions may be the precursor of many of the acute infectious diseases or may occur some time during their course. They take the place

of rigors in adults. Measles, pneumonia, acute encephalitis and meningitis are some of the diseases that cause it. High rise of temperature due to any cause may cause convulsions in a child.

III. Convulsions occurring late in the stage of a chronic complaint are invariably fatal. They may occur in enteric colitis, tuberculous-meningitis, whooping cough and rickets.

Symptoms.—The attack may come on suddenly without any warning or may be preceded by a tonic stage. It usually begins with the thumb of the right hand which is turned inwards towards the palms. Eye-balls are seen rolling about or fixed and staring. The body becomes stiff, face congested and invariably the temperature rises. Then occurs the spasmodic contraction of the limbs which may be limited to one side only or affect both the sides. Facial muscles co-operate in the spasm and the angle of the mouth may be drawn to one side with each contraction. Teeth are clenched and the tongue may be caught between them. The trachea and the glottis may also get involved in the spasm and result in a condition of "spasmodic croup". The inspiration is laboured and the "crowing" of the child could be heard from a distance. There is perhaps acute congestion of the lungs and loud bubbling sounds are heard even without the help of the stethoscope. Frothy matter may be oozing out from the mouth or nose. Breathing is mainly abdominal and marked tympanitis will be noticed.

Diagnosis of the convulsions itself is not a difficult matter. The causative factor should be found out. Convulsions occurring in an otherwise healthy child are usually due to irritation, indigestion or worms. The temperature of the child, presence of any eruptions, the general condition whether debilitated or rickety, previous history of chronic diarrhoea or whooping cough, family history or other signs of congenital syphilis, presence of tonsils, or phimosis (in the male) etc., should be carefully enquired into or found out by a thorough physical examination.

Course and Prognosis.—The attack may come on and last for a short time and subside of its own accord or it may continue till the active interference by the physician which, if not availed of may end fatally. It may recur after an interval of some months, days or even hours, if the underlying cause is not properly treated. Though it is said that convulsions play an important part in infantile mortality, the attack by itself, if properly treated, is rarely fatal except in very weak children. If the convulsions occur late in the stage of a chronic complaint, it is invariably fatal. Irregular attacks of convulsions, coming on after the second year of life, in an otherwise healthy child, are likely to be regular epilepsy.

Treatment.—This resolves itself into two parts: treatment of the convulsions proper and treatment of the cause.

Whatever the cause, the convulsion should be treated independently and without delay. Loosen all the clothes about the body, keep the child in an open room with good ventilation, free the tongue from the teeth if it is caught there and clear the nostrils, mouth and throat of any frothy matter that may be present there. A Glycerine enema may relieve a loaded bowel or the tympanitis to a certain extent. Ice to the head and warm foot-bath have been advocated and found to give some relief. The child may also be kept for a few minutes in a basin of warm water (neck-deep) with

cold application to the head. Pot. Bromide and Chloral Hydras are well tolerated by children and may be given in repeated doses. If the child cannot swallow by mouth it could be given by way of an enema. Violent spasms may require cautious administration of Chloroform to control them. When the convulsions subside it is usual to give the child divided doses of Santonin and Calomel and a purgative mixture.

I have known some people make the child (as it lies on the lap of the mother) grip a small piece of iron rod (or a key) and make the iron touch the earth. The child's hand is held down with sufficient force, so that even during the spasms, the earth connection is maintained. I have myself tried this method in many cases with success in a few. I do not know what electric or magnetic forces come into play or it may be only a coincidence that this method was used just when the spasms were subsiding. Convulsions coming on after a chronic illness like tuberculous meningitis is less amenable to treatment. Only Luminal gives temporary relief. Lumbar puncture may be tried in cases of chronic meningitis.

The after treatment of the various diseases that cause the convulsions and a proper dieting etc., are necessary to prevent recurrence.

Emergencies Caused by Ascaris

BY

D. N. DEBSARMA, F.M.B.,

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ONLY a brief note on ascariasis has been given below just to draw the attention of the readers of "Emergencies in General Practice," to the subject. Although apparently the subject is of minor importance, I believe most of our brethren have experienced the fatality due to the worms at one time or another during their practice. In tropical countries the ascaris is very common indeed, especially in children who often harbour these loathsome creatures in enormous numbers, in dozens, or even in hundreds. The warmth of the climate and the habits of the people with regard to the disposal of night-soil are mainly responsible for the great frequency of ascaris lumbricoides in warm climates. In many a case these parasites complicate diseases and cause fatal terminations. Such cases are often met with. Many physicians are in the habit of saying, "O it's nothing, it's an infection of worms, give Santonin." This habit of trifling with the matter should be totally discouraged, as the ascaris has been found to be responsible for various emergencies in such neglected cases. The following two cases will illustrate this clearly. No detailed description of the signs and symptoms of ascariasis will be given here. My chief aim in writing this short paper is to lay stress upon the fact that the worms often give rise to various grave emergencies that are generally met with in our practice.

Case I.—A Mahomedan female child, aged about 5 years, had the usual signs and symptoms of worms such as fever, nausea, vomiting, abdominal pain, picking at the nose, grinding of the teeth and startling during sleep, indigestion, etc. An exorcist administered some preparations of herbs. The Ojha (exorcist) continued his treatment for a day or two but

to no purpose. Constipation and intestinal distention were present. A dose of Epsom salt that was brought from a village practitioner was given but the bowels did not move even then. The poor patient developed at last convulsions and I was called to see her probably on the 7th day of the disease. The convulsion was controlled, the bowels were cleared by the usual methods and a dose of Santonin was administered. About 50 adult round worms were expelled the next day. All the symptoms except severe anorexia and general debility, disappeared. The poor patient could not procure further medical help on account of poverty and her anorexia due to the toxæmia increased gradually and she died after some days.

Case II. A Mahomedan male, aged about 45, had rice-watery stools, vomiting, abdominal pain, cramps, suppression of urine and low blood pressure. The signs and symptoms of dehydration were all present. The case was clinically diagnosed as cholera. I came to learn from the relatives of the patient that he passed two adult round worms with his stool. Santonia (gr. ii) with Calomel and Sodii Bicarb was given and a few doses of Calomel (gr. $\frac{1}{4}$) and Sodii Bicarb (gr. x) were prescribed for hourly administration. Then an injection of Ephedrine Hydro-Chloride ($\frac{1}{4}$ gr. in $\frac{1}{2}$ c.c.) was given. A few doses of each of mist. Chlorodyne and mist. Diuretic were also given. I saw the case first at about 2 p.m. in the evening though the purging and vomiting stopped and pain and discomfort in the abdomen subsided, the condition of the patient was not at all good. The pulse at the wrist was imperceptible. At about 10 p.m. I gave another injection of Ephedrine and at mid-night half a pint of Isotonic Saline solution was injected subcutaneously. Thus the patient recovered at last. Absence of cholera case in the locality at that time, and expulsion of worms with the stool, were in favour of the probability that the worms were responsible for the condition.

Now, it is evident from the above few lines that these creatures can create a good deal of mischief to human life. Convulsion, coma, especially in children, pneumonia, intestinal perforation in typhoid cases, etc., are often the result of round worm infection. Cases are on record in which they caused suffocation by wandering into the rima glottidis (MANSON), and so, the importance and dangers of this parasite cannot be ignored.

P.O., Dalgona, Assam.

Treatment of Snake Bites

BY

A. BALAKRISHNA MENON, M.B., B.S.,
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OF all emergencies one comes across in general practice the treatment of snake bite is one of the most urgent. To those who practise in cities and towns such an emergent opportunity may never present itself but to such of us who have decided to settle down in villages and rural parts, this is a very common occurrence. While every hour is precious in certain surgical emergencies such as acute abdomen, here, every minute, nay, every second, makes all the difference between life and death to the patient. Nothing original is claimed by the author of this article in the treatment of snake bites but he has ventured to present his experiences of nearly eight years as a rural medical practitioner, through the columns of this valuable journal, so that he might pass on that knowledge, however little it be, to those many medical men distributed all over India, especially those practising in rural areas and thereby be instrumental in saving thousands of cases every year which otherwise would end fatally.

Poisonous snakes, which abound in India and especially in Malabar, may, for all practical purposes, be broadly divided into three categories:—

I. **Kraits.**—These are about 1 to 2 feet long with white transverse bands over a black background and which fork off into pairs over the ventral aspect. Generally found among grasses, reeds and stones, they occasionally frequent houses, too, where they come in search of their prey. Their bite is one of the most deadly and is followed by great heat and pain creeping up towards the region of the heart and which ultimately ends in unconsciousness and death.

II. **Vipers.**—There are many varieties and their length may vary anywhere between nine inches to three feet. Their distinguishing features are their triangular head and a short rapidly tapering tail. The body is covered over by irregular white annular rings. They prefer to creep about after dusk and do not move away at the approach of persons as other snakes do. The most famous and deadly of its representatives is the Russels' viper which is also known in Malabar as "payyani" or "chenathandan". This particular variety is very venomous and when disturbed or trodden upon, bites viciously at the victim tearing off the tissues and injecting the deadly contents of its fangs deep into the flesh. The bite is soon accompanied by intense pain at the spot which spreads upwards. There is swelling of the limb and the lymphatic glands draining the area become enlarged and tender. Giddiness, palpitation, restlessness, drowsiness and vomiting follow in due course, ultimately ending in unconsciousness and death. This viperine poison is said to affect the circulation and blood is first coagulated and later haemolysed. There is bleeding from the capillaries, especially of the mucous membranes, such as those of the gums, nostrils, urethra, rectum and the gastric mucosa.

III. **Cobras.**—These are the hooded reptiles with their famous spectacles spread out on the dorsal aspect of the hood. Generally there are no markings on the body but in some variety especially the 'king cobra' which often grow to a length of twelve feet, some transverse stripes may be noted. The ordinary variety one meets with, is about three to four

feet long. They are apparently more intelligent than the previously mentioned snakes and move away quickly at the approach of persons. This probably is the reason why cobra bites are less common than those of others. When roused to anger or when at bay it raises its head and anterior portion of the body from the ground, spreads out its hood and poises it gracefully ready to strike. This posture is both fascinating and awe-inspiring and is said to hold the victim under its spell. It seldom bites unless provoked and even then gives due warning before it strikes. The bite is very deadly and the effect quite rapid, death occurring anywhere between half to three or four hours. The poison has no effect on blood or blood-vessels but rapidly affects the central nervous system through the nerves. There is not much pain except a slight burning or tingling sensation at the site of the bite but the patient soon becomes restless. Tingling sensations are felt like lightning in various parts of the body and numbness and tingling are especially noted at the tip of the tongue. This sensation is periodical in its occurrence and this stage is very soon followed by one of collapse and paralysis. The muscles of respiration are paralysed, probably through the medullary centre and the heart-beat becomes slower and weaker. First respiration and then the heart-beat cease and death finally closes the scene.

These are some of the outstanding signs and symptoms which guide the general practitioner in diagnosing the variety of snake bite.

Coming now to treatment, we may broadly divide this into general and specific. General treatment is only in the nature of a first-aid and may go some way in helping the ultimate stage of recovery. It just helps in preventing the spread of the poison to the system, localising it to the part affected and in some way destroying or neutralising the poison. Specific treatment is aimed at neutralising and thereby destroying the effect of the poison on the body.

General Treatment.—1. Ligature the part well, both above and below the bitten part. A rope, a string, a piece of cloth or a rubber-tubing, whichever comes in handy should be applied like a tourniquet. The idea is to prevent the poison from entering the general circulation.

2. Excision of the part and a portion of the area round about it, if done boldly and without much loss of time, may by itself prevent fatal consequences.

3. The wound site may be scarified in a criss-cross fashion and encouraged to bleed freely, thereby washing out a good portion of the poison.

4. A burning splinter, red-hot charcoal or a live beedi may be freely introduced into the wound and the poison burnt out, if possible. Caustics such as strong acids, alkalies or Potassium Permanganate crystals may also be used to the same effect.

5. Some people advocate sucking the wound through the mouth, but if the above methods are done properly and quickly, this dangerous procedure need not be adopted since there is always the risk of the poison entering through the soft mucous membrane.

A few or all or a combination of the above methods may well save the life of a patient, if done quickly and efficiently.

Specific Treatment—I am not going to take up much of the reader's time by describing the varieties of antisera on the market. These antisera are highly elaborated products obtained by immunising the horse against different varieties of poison. They are very costly, difficult to obtain and still more difficult to have their potency kept intact. Such sera

are useful only against the particular snake bite for which they have been prepared. More often than not the variety of snake is difficult to be identified and hence the value of serum treatment cannot be assessed beforehand and prognosis can only at best be guarded. Serum treatment, moreover, is possible only in cities where one must keep the sera in refrigerators or ice-chambers and snake bite being rare in cities this method of treatment is not much in vogue.

'Tiriyag'.—This medicine is a specific for all snake bites and for any other poisonous insect-bites such as those of scorpions, centipedes, spiders or any other poisonous insect. It is a clear, greenish coloured fluid with a smell of camphor and is supplied in half-ounce bottles by Dr. Lorbeer's Laboratory, 104, Upper Mall, Lahore. The medicine is priced fairly cheap, Re. 1-4-0 per bottle, and would ordinarily suffice for 3 or 4 snake bite cases. The claims of cure attributed to this medicine have been confirmed by me in my sixty and odd cases treated over a period of seven years. This medicine is an extract from a rare herb, probably a chlorophyll, kept in solution by some organic solvent. A few drops of this clear fluid when mixed with water become at once turbid and a sticky greenish substance soon separates and adheres to the sides of the vessel. India has been famous from time immemorial in producing such magical cures and there are many people who still possess the secret of such cures, but who keep it only to themselves. This medicine 'Tiriyag' is one such secret, said to have been obtained by Rev. Dr. Lorbeer from a great Himalayan Seer.

Treatment by 'Tiriyag'.—Ten drops of this medicine are mixed with one teaspoonful of water and swallowed by the patient every five minutes. The literature supplied with the bottle advises removal of any ligature before treatment is begun, but I have slightly modified this method. I first give the patient a dose of this medicine and then remove the ligature, so that the release of poison into the circulation may not precede that of the medicinal antidote. The patient should walk about swinging his arms vigorously, thereby hastening to neutralise the poison in the circulation. The bitten area is next scarified and a few drops dropped on to the part, to neutralise the local poison. If the patient is unconscious or drowsy, two assistants should move the arms and legs up and down till the patient regains consciousness and is able to do this himself. If he is unable to swallow, three drops of this clear fluid should be instilled into the nostrils every three minutes until consciousness returns. Vigorous exercising of the limbs is essential for bringing about a rapid cure. Heat in the head and drowsiness should be treated by dashing or pouring cold water on the face or head. If the patient has been given any other medicinal antidote such as Chillies or Neem-leaves, he should first be induced to vomit these by giving large quantities of salt water or tickling his fauces. 'Tiriyag' acts best on an empty stomach. If the system contains poison, the medicine will taste sweetish and as more and more poison is neutralised the medicine will taste more and more bitter. (The natural taste of this medicine is bitter). The pain will also come down by degrees till only the bitten area is slightly painful and ultimately this pain disappears. Medicine ought to be given till this stage is reached and should be continued for one or two doses more. He is advised to take only a glass of milk that night and a good purgative the next morning. No further treatment is necessary. The time taken for the cure may vary between $\frac{1}{2}$ to 2 hours but

may also be greater or less, depending on the severity of the bite or the time elapsed between the bite and starting the treatment.

The following cases are some typical examples which I had the good fortune to cure but they are merely illustrative and not exhaustive.

1. My very first case was that of an old Cheruma (Harijan) woman. While gathering dry sticks under a tree for her firewood, she was bitten on her foot by a viper. Not thinking it to be very serious, she came home and very soon the effects of poison began to spread. The pain was intense, the limb was swollen, and within a few hours she was oozing blood from her gums. A few hours later her urine was also blood coloured. Late in the night she became drowsy and by next day she lost consciousness. I was called in only that afternoon. The medicine could not be administered by the mouth and so I had to drop it through the nostrils. The bitten area was scarified and a few drops of medicine rubbed in through the abraded skin while a couple of assistants vigorously exercised the limbs. Within half an hour she was able to swallow the medicine and by two hours she was feeling alright, though the limb was swollen and slight oozing of blood persisted for a few days more.

A week later her old husband came smiling to my house with a bunch of plantains brought in grateful appreciation of my services and then I knew she had completely recovered from the bite.

2. My cousin while returning to my house at dusk was bitten on the foot by a small viper, right in front of my house. I was chatting to a friend at that time and he came straight to us, terribly upset. The pain was already intense and he was feeling giddy though the bite was just recent. The dispensary was only a hundred yards away and by the time we reached it, he was feeling quite sick and giddy. I applied the medicine to the wound and gave a dose by mouth. When asked about the taste of the medicine he replied it was sweetish. Later it became more and more bitter. Even after the first dose he felt slightly improved. The pain came down bit by bit and within twenty minutes, after six or seven doses, he was completely alright, even the burning pain at the bitten part disappearing altogether. In this particular case, I think, though the bite was severe, the cure was rapid, due to the quick treatment given to the patient.

3. A School Final student of the local high school was returning through the fields at about dusk after a dip in the tank near his house. Something bit him on the leg and he felt a sort of burning sensation at the spot. This was soon followed by tingling pains, specially felt at the tip of his tongue. The dispensary being five miles from his house, his parents first tried the local *Manthravathi*. Even after two hours he was not feeling any improvement but was actually worse. They finally, at the boy's insistence, took him to my dispensary at about 11 that night. He was on the verge of collapse by this time and was hardly able to answer the questions put to him. From the symptoms I knew it was a cobra-bite and because of the valuable time lost, I ventured only on a guarded prognosis. Half an hour after treatment was started, the boy began to improve but even then there was recurrence of the lightning and tingling pain. I applied the medicine locally and by way of nostrils and mouth and after four hours of treatment, the tingling pain did not completely disappear, though the general condition was very much improved. I then decided to give $\frac{1}{2}$ c.c. of the pure medicine subcutaneously at the bitten part. There was acute pain at the site due to the injection but I was gratified to find that the tingling pain very soon subsided. Probably the

medicine had completely neutralised the poison locally and also acted through the blood. After 4½ hours of intensive treatment and exhausting two bottles of medicine, the boy was completely cured. I am sure if the boy had been treated earlier there would have been a speedier cure.

4. A Brahmin gentleman of the local village was bitten at about 6 p.m. by a cobra in his back-yard garden. He first mistook it for something else but within half an hour I was sent for. He was already feeling very bad and was much agitated. Here too the tingling pain was present. There was no aching pain in the leg or any swelling and I diagnosed it therefore as a cobra bite. This case took me nearly three hours; and a local injection, as in the previous case, had to be given at the end for a complete cure. In both the above cases the area of injection was later increased.

5. A barber woman living next to my dispensary was bitten on the thumb by a scorpion at night. All through that night she spent a sleepless time and next morning she came to my dispensary. A few drops locally and one dose by mouth completely cured her and she went back smiling.

The above are a few instances of cure but a word of caution appears to be necessary. I cannot, from my experience of 60 and odd cases, claim infallibility for this wonderful drug. I have had five failures but in all these cases either a tremendous amount of poison was injected or else they were seen by me pretty late. Of these, only one was a cobra bite and the rest bitten by Russel's vipers. In one of these cases, the flesh was actually torn away by the bite and the patient died within an hour of my starting the treatment. There was extreme drowsiness and frequent vomiting, both of these being bad symptoms. In one case the patient was almost cured and against my advice wanted to go home to suckle her child. The next morning she was taken to my dispensary again, but by then she was far too gone and treatment was of no avail. A few such failures are of course inevitable in one's professional experience, but I have no doubt in my mind that no medicine vaunted as a cure for snake bite, can equal this wonderful elixir.

I will close this article with an appeal to the readers and also to the administrative medical authorities. No private practitioner and no hospital or dispensary should be without this medicine. Many drugs in our Pharmacopea possess only an empirical value and only a very few are specifics. Prestige or other false sentimental notions should not stand in the way of the government stocking their medical depots all over India with this essential specific, which will be instrumental in saving the lives of thousands of such unfortunate victims. Our noble mission is to bring succour to the ailing humanity and may this feeling outweigh all other considerations.

Book Review

Aids to Human Physiology. By DR. S. N. CHAKRABARTI, published by Messrs. Pioneer Book Co., 18, Shama Charan Dey Street, Calcutta, pp. 211. Price: Rs. 3-8/.

This little book is written in an absolutely novel way. The subject matter is dealt with in the form of questions and answers, covering practically every aspect of Physiology. Coloured blocks and diagrams are inserted wherever necessary. The writer correctly warns his student friends that this little volume is in no sense a text-book. It is only intended to enable students who have limited time at their disposal to have readymade information which can only be obtained by reading voluminous text-books. This is a sort of guide-book for medical students appearing for examinations.

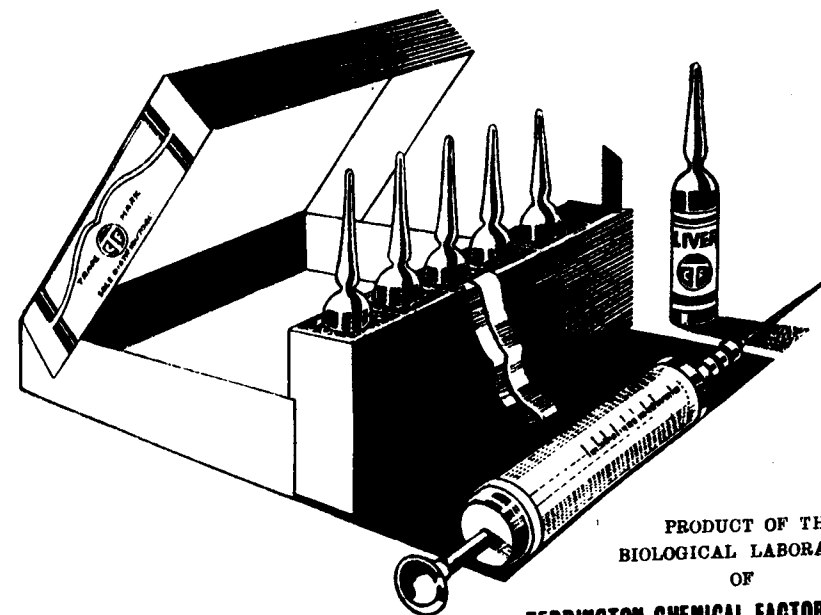
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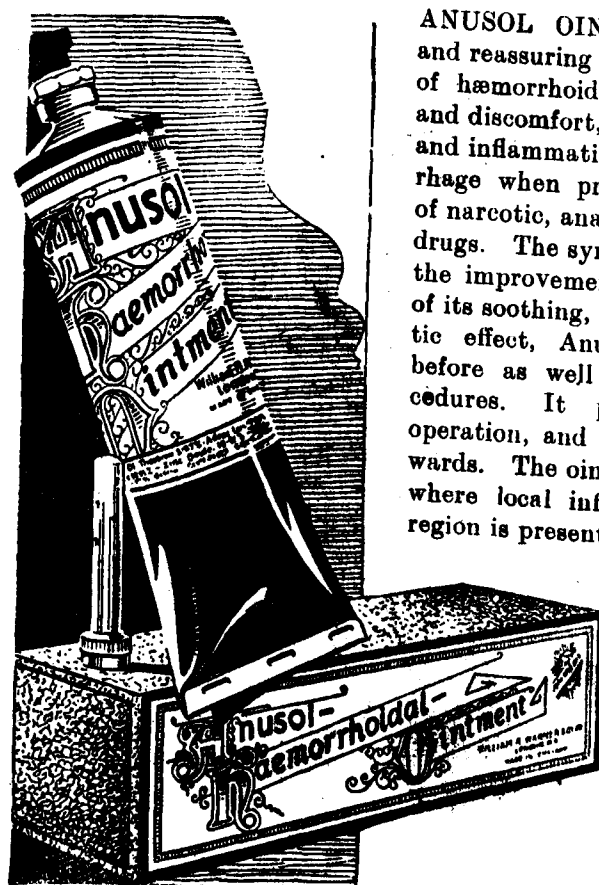
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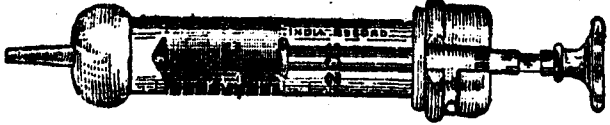
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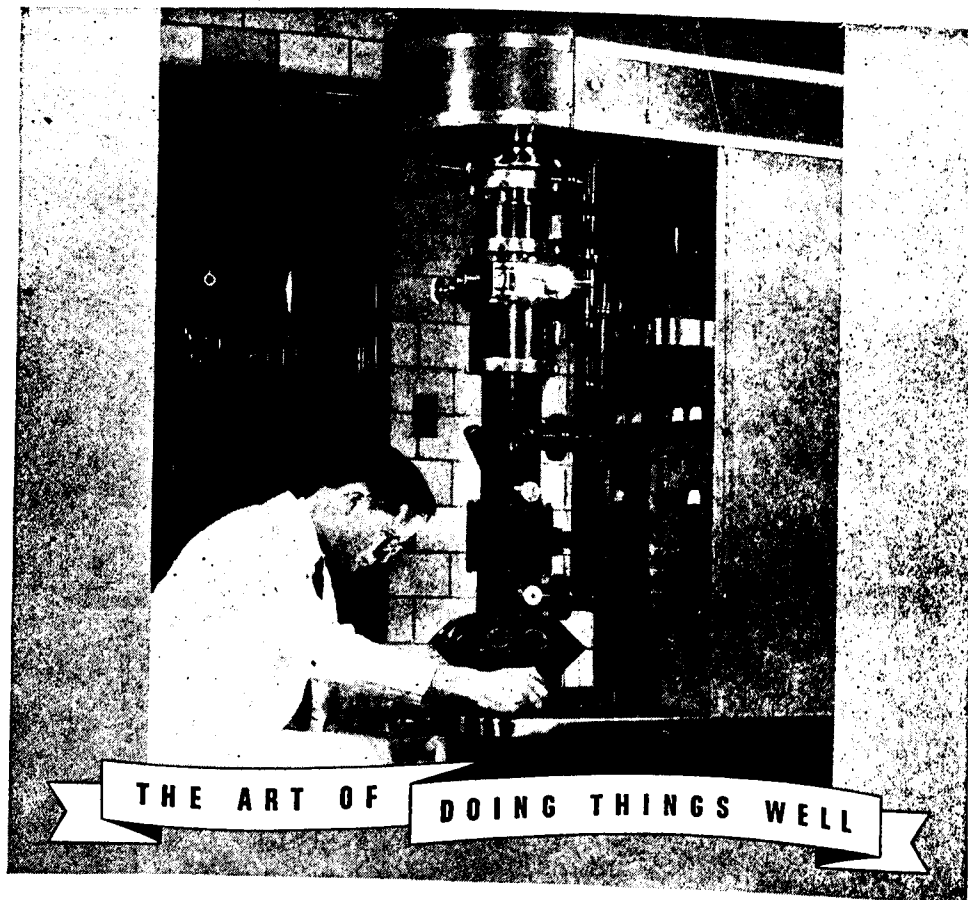
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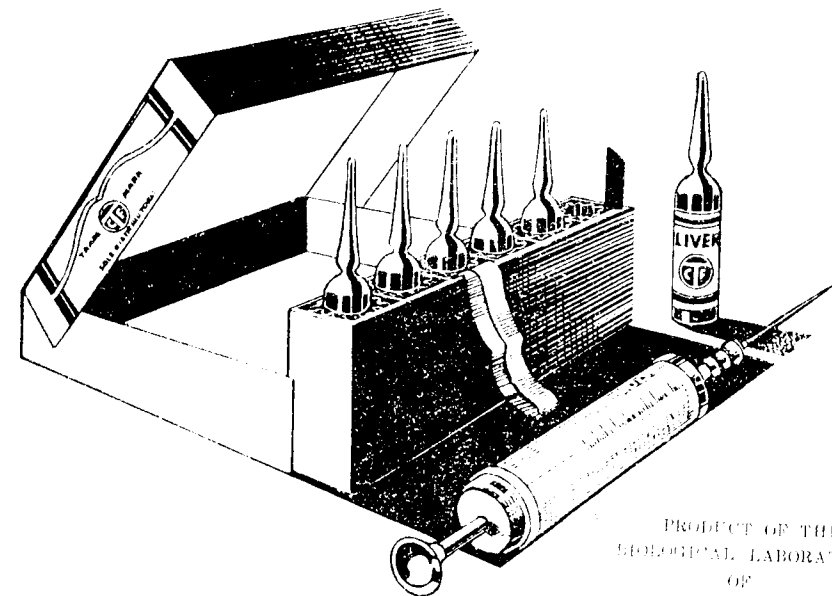
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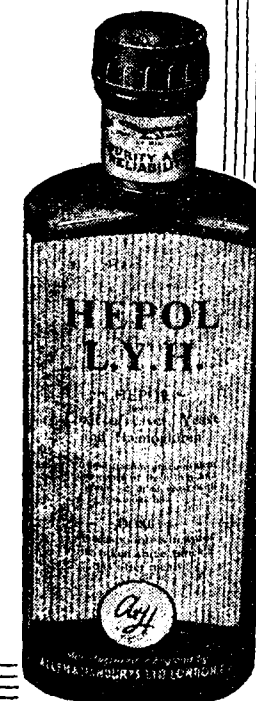
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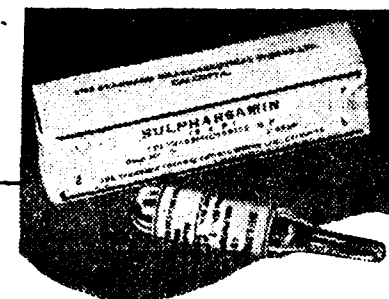
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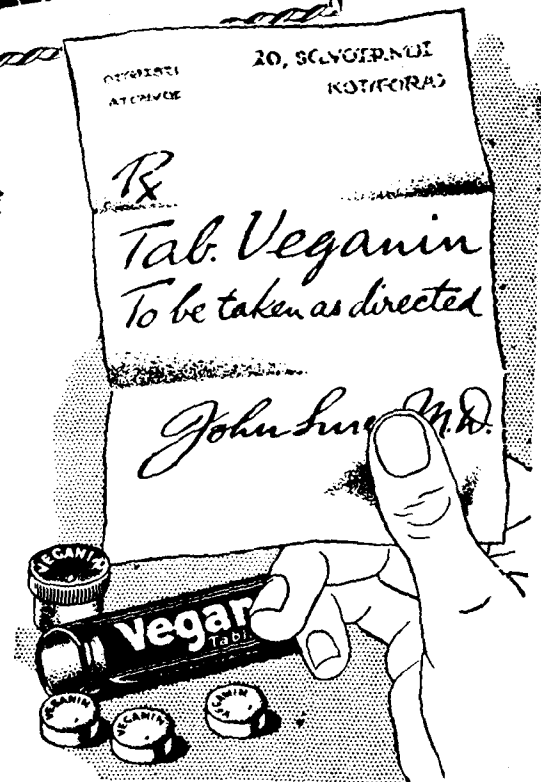
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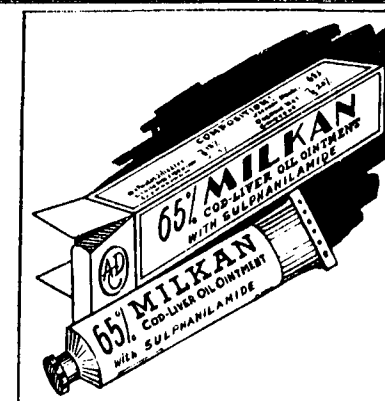
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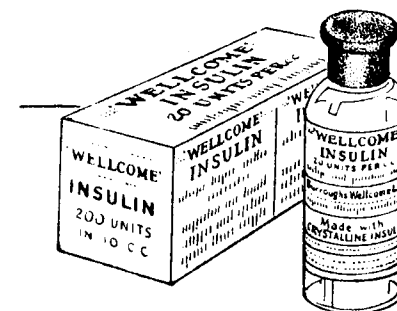
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Vol. 40.

APRIL, 1943.

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BY

R. KRISHNA RAU, F.R.C.S.,

Professor of Anatomy, Andhra Medical College,
Vizagapatam.

HARDLY any apologies or explanations are needed for the choice of these operations in particular for description, as, from the point of view of emergency, they rank first in importance and may have to be performed at any place at any time by any medical man of whatever status, rank or grade with the minimum equipment for a patient in extremis as a life-saving measure. Of the various systems in the body the dominant place has, no doubt, to be assigned to the central nervous-system by reason of the supreme function of control it has over all the systems of the body. Injury to calamus scriptorius is instantly fatal. The circulatory system is a closed tubular system the patency of which is essential to the maintenance of nutrition of all the bodily tissues. Obstruction or severance of any part of the extensive system constitutes a major emergency. The muscular alimentary canal is closed except when food passes through it. It can brook obstruction for some length of time amounting to a day or even two before proving a menace to life. The cartilaginous respiratory tract on the other hand differs from the alimentary in as much as it is kept persistently patent for the never-ceasing, constant and continuous ingress and egress of air, both during the sleeping and waking states. Obstruction of the laryngo-tracheal tract is highly embarrassing from the outset and is an emergency of considerable magnitude as the slightest delay in providing relief is dangerous. There are certain professional obligations which cannot be evaded by any medical man and where an attitude of *laissez faire, laissez passer and laissez mourir* are unpardonable and inexcusable. Every medical practitioner is expected to do certain operations and these are included among them.

* Specially contributed to 'The Antiseptic'.

Many and various are the operations that are performed in and about the middle line of the neck. Of them two are singled out as emergency operations. They are:—(1) laryngotomy—or intrathyroid laryngotomy or transverse inter crico-thyrotomy and (2) tracheotomy high, medium and low and crico-tracheotomy. Salient anatomical landmarks in the middle line of the neck.

The only bone that is met with in this region between the *synostosis menti* (symphysis is a misnomer) and the suprasternal notch below is the hyoid bone. Its body is subcutaneous and felt fairly easily. In the F. H. plane (Frankfurt Horizontal) or the eye-ear plane, it lies just below the floor of the mouth on a level with the chin or at a slightly higher level. It is more distinctly felt when the neck is extended. It moves up and down during speech and moves forwards and upwards in deglutition. The greater horn is covered by the platysma but admits of being grasped between the finger and the thumb. The tip of the major cornua is obscured by the anterior margin of the sternomastoid and lies below the angle of the mandible. The lesser horn is situated at the junction of the body and the greater horn can be felt only in some cases. The body of the hyoid is availed of for subdividing the middle line into supra and intrahyoid portions. The supra hyoid muscles are derivatives of the first and second bronchial arches. The straight strap muscles below the hyoid belong to the cervical part of the ventral longitudinal musculature. The suprahyoid part has no relation to the parts under reference. Just below the hyoid is the hyothyroid membrane. Next come, in order, from above downwards, the V shaped laryngeal prominence, the pomum adami, the narrow rounded anterior margin of the thyroid cartilage, the middle crico-thyroid ligament with the crico-vocal membrane on either side, the narrow anterior arch of the cricoid, the crico-tracheal ligament, the first ring of the trachea, the isthmus of the thyroid gland and the lower cervical rings of the trachea. The observations made on the cadavers in the department show that the average vertical measurement of the crico-thyroid interval in the male adult is 9 mm. and that in the female is 8 mm. Even in adults the space is just enough to admit a medium sized laryngotomy tube. The interval in children under twelve or thirteen is far too small for introducing a tube. The crico-thyroid space is pierced by the small crico-thyroid branches of the superior thyroid artery. The veins are better made out in the living; sometimes the arteries are bigger than usual and give rise to profuse haemorrhage. The author has met with one case where the arteries, when divided, gave rise to alarming bleeding in preliminary laryngotomy. The arteries are nearer the upper boundary of the space. Opening is therefore safely done near the upper margin of the cricoid cartilage. The space is overlapped by the small but important crico-thyroid muscles innervated by the external laryngeal branches of the superior laryngeal nerve. They bring on elongation and tension of the vocal cords and are described as 'the tuning fork of the larynx.' The isthmus of the thyroid gland is not always in front of the second, third and fourth rings of the trachea as has been described in text books. The position is not constant. It has been found to extend as high up as the cricoid cartilage and as low down as the fifth tracheal ring. It has to be remembered that the shrunken shrivelled up and discoloured thyroid in the cadaver is quite a different thing from the full rounded and highly vascular gland in the

living. There are again considerable individual variations in the number of the cervical rings of the trachea. The pyramid of Lalouette—the middle lobe of the thyroid, is occasionally, if not frequently, met with extending from the upper border of the isthmus to the hyoid a little to one side of the middle line—more often to the left. It may be a muscular or fibrous strand. According to STRECKEISEN, the levator is present in 79% of the subjects. Its incidence is very much less here in this province.

In the female the neck is relatively longer and more slender. It is because the lower jaw bounding the neck above is smaller than the male jaw and the sternum delimiting the neck below is slightly lower than in the male. The clavicles which are usually directed upwards in the muscular male are either horizontal or slope downwards in the female (round shoulders). The bottle neck of the Victorian age is due to the lack of tone of the trapezii. The muscles of the neck of the female are slenderer than those in the male. The pit of the neck (Dianas' pool) and the supra clavicular salt cellars are filled up with fat imparting a rounded appearance to the neck as a whole.

The prominent and conspicuous feature of the male neck is the pomum whereas that in the female is the thyroid gland. The collar of Venus, the transverse flexure lines are as a rule more marked in the female; owing to the greater thinness of the skin the blue of the subjacent external jugular veins is distinct in fair-skinned women.

In children, the neck is shorter, more rounded and fatty; the landmarks are less well-marked than in the adult. The larynx is higher. The trachea is at a greater depth. It is of about the size of the common carotid artery. It is softer in consistence more movable, compressible and liable to be lacerated. The innominate artery and left innominate vein are higher in children. It is not easy to define the lower border of cricoid. The thyroid isthmus is relatively bigger. The thymus is behind the space of Burns. The distance between the cricoid cartilage and sternal notch is variable depending upon the length of the neck, the age and position of the head. In adults it is 2-3/4". It is increased by 3/4" in full extension.

Measurements of the length of trachea, according to TILLAUX.

Children between 3 and 5	... 4 cms.
" 6 " 7	... 5 cms.
" 8 " 10	... 6 cms.

Diameter (GUERSANT)—4 mm. in children under 18 months
6 mm. to 15 mm. in older children
12 mm. to 15 mm. in adults.

A strong process of cervical fascia known as the suspensory ligament of Berry binds the thyroid gland to each side of the cricoid cartilage and has to be divided for immobilising the gland.

Varieties in the course of the vessels to be remembered in performing the operation of tracheotomy.

The arch of the aorta may be placed as high as the upper border of the sternum—rather rare.

The innominate vessels may be higher usually in children.

The right subclavian artery may be given off from the arch of the

aorta beyond the origin of the left common carotid. It may then cross the root of the neck in front of the trachea.

The left common carotid may be given off from the innominate and may cross the root of the neck to its destination.

There may be an occasional *arteria thyroidea ima* from the innominate artery or aorta in front of the trachea for the supply of the thyroid gland.

Abnormal branches of the superior thyroid artery may cross the upper rings of the trachea.

N. B. :—The incision in the trachea has always to be made from below upwards.

The nerve supply of the skin of the neck is from the anterior primary rami of the second, third and fourth cervical nerves through the *N. auricularis magnus*, *N. cutaneus colli* and the supraclavicular nerves. These nerves emerge from about the middle of the posterior margin of the sterno-mastoid. A subcutaneous and sub-fascial injection along the posterior edge of the sterno-mastoid renders the skin only insensitive. Complete anaesthesia is obtained by injecting the cervical nerves as they leave the inter-vertebral foramina. The sensory innervation of the supra glottic part of the larynx is from the internal laryngeal branch of the superior laryngeal. The mucous membrane of the sub-glottic part of the larynx and the trachea is supplied by filaments of the recurrent laryngeal.

Local Anaesthesia is the anaesthesia of choice. Two punctures are made to the right and left of the trachea and from these the field is injected in a trough-like manner.—*BRAUN*.

Anterior Relations of the Trachea.—(1) Skin, (2) superficial fascia, (3) platysma—well away from the middle line, (4) infra-hyoid part of the investing layer of the fascia colli splitting at the root of the neck to form the interfascial space of Burns, (5) fascia of the depressors derived from the pretracheal layer of the cervical fascia, (6) infra-hyoid muscle, lozenge-shaped interval sterno-hyoids and omohyoid-superficial, sterno-hyoids-deep, sterno-hyoids converge below, sterno-thyroids diverge above, (7) pretracheal layer enclosing thyroid above and thymus below, (8) inferior thyroid veins and occasional *thyroidea ima* and (9) trachea.

Functions of the Larynx.—Many functions have been attributed to the larynx besides the principal ones of respiration and phonation; they are circulatory, fixative, protective, deglutitory, tussive, expectorative and emotional. The glistening and highly elastic vocal cords are exceedingly delicate and sensitive structures. The mucous membrane of the larynx is easily vulnerable to irritations and inflammations and ulcerates readily. The retention of metallic and other tubes in close proximity to the vocal cords for even a few days is to be avoided.

Laryngotomy :—Synonyms: Infra thyroid laryngotomy transverse inter crico-thyrotomy.

Indications :—For the relief of sudden laryngeal stenosis oedema of glottis or any other sudden acute temporary obstruction to the airway. Sudden impaction of foreign bodies. Scalds of the pharynx.

Non-emergent conditions : As a preliminary to operations on the tongue, tonsils, jaws etc., when the fauces may have to be plugged with a sponge.

This is a temporary emergency operation when neither time nor facilities are available for the more difficult operation of tracheotomy.

Stab-laryngotomy :—Steady the space with the left hand. Pinch up a vertical fold of skin over membrane. Divide it transversely with scissors. Jab through the membrane. Entry into the larynx is indicated by a sibilant sound caused by rush of air.

Tranquil Operation :—A vertical incision 1-1/4" to 1-1/2" long, is made from the lower margin of thyroid cartilage to just below the cricoid cartilage. The membrane is divided transversely. The tube is introduced and retained by a band round the neck. Dressing should be introduced between the flange of the tube and the skin of the neck.

Advantages :—The space is subcutaneous; the operation is quite simple and easy; it is readily performed; no assistant is necessary.

Contra-indications :—It is not applicable to children under twelve or thirteen; it is not to be performed when the tube has to be kept on for some days owing to proximity of vocal cords and liability of extension of inflammation thereof.

Structures to be avoided :—(1) Crico thyroid arteries and accompanying veins piercing the space and (2) Injury to the crico thyroid muscles. The laryngotomy tube should be removed if possible within twenty four hours.

Complications :—Haemorrhage emphysema, ulceration and stenosis if tube is retained for long periods.

Anaesthesia :—Local: Novocain, and Adrenalin Analgesia.

Tracheotomy.—Four different methods of opening the trachea have been mentioned in text books on operative surgery; they are crico-tracheotomy, high, median and low tracheotomies. The last three varieties have reference mainly to the isthmus, the medium commissure of the thyroid gland. As has been remarked elsewhere, the position of the isthmus is not constant. It may occasionally extend upto the cricoid cartilage; in such cases there is hardly any space available for opening into the trachea above the isthmus; in such cases, the isthmus has either to be divided or the trachea opened into below the isthmus. The high and low operations have obviously been designed with a view to avoid the division of the dreaded isthmus, which is regarded as a formidable undertaking owing to the great vascularity of the gland and owing also perhaps to the difficulty of mobilising the gland and depressing it for securing more space above it. Again, the difficulties of low tracheotomy have to some extent been exaggerated. The principal danger, if any in any one of the procedures, median or low, is bleeding. It has now been shown that the isthmus can easily and safely be divided in the middle line and that low tracheotomy is to be preferred to the high as the opening in the trachea is well away from the vocal cords and as the tracheotomy tube can be kept on for longer periods.

There are again other variations in the procedure based on the urgency of indications and rapidity of action. They are the stab tracheotomy advocated by *CHEVALIER JACKSON* and the tranquil operation named after *ST. CLAIR THOMSON*. They represent the two extreme excursions of the pendulum. The stab method is a sanguinary one performed in a desperate hurry whereas the tranquil operation permits of slow and steady action.

The path of prudence and wisdom lies in seeking a *via media* and skilfully steering clear of the Scylla of a rather blind slash and stab and the Charybdis of overabundant care, caution and leisure. The trachea has many vascular relations which have to be respected. Going slow is preferable to a hasty plunge in the dark.

It is said that a tracheotomy can be performed in a market place with the help of an intelligent by-stander with a pocket pen-knife, shoe-strings and a few hair pins. The whole thing reads like a romance but nevertheless, it can be done by a resourceful surgeon. Lay the patient flat on the ground, round out the laryngo tracheal region with a coat placed under the nape of the neck; steady the tract between the left forefinger and thumb. Cut boldly in the middle line from the upper border of the cricoid for two inches downward. Bare and steady the trachea. Jab it with the knife. Hair pins are used as retractors and the shoe string takes the place of the tape round the neck.

Indications:—Acute laryngitis, foreign bodies, laryngeal stridor, diphtheria, sudden dyspnoea, abductor paralysis, cut throat preliminary to plastic operations, tracheal compression by tumours of the neck, malignant disease of the pharynx, syphilis, tubercle, papillomata of the larynx, scalds of the upper aperture of the larynx and others—in brief, for relief of suffocation from obstruction in the upper reaches of the larynx.

The red light or danger signals are: (1) when the patient struggles for air, (2) when stridor is present along with restlessness and (3) strong indrawing of the suprasternal notch of the subclavicular fossa, of the inter costal spaces and of the epigastrium.

Anaesthetic:—Avoided in infants. Light general anaesthesia, chloroform in other children. No anaesthetic in stab operations. Local analgesia in tranquil operations is the best.

Cricoid Tracheotomy:—This is but a slight modification of combined laryngotomy and high tracheotomy. The operation is easy and free from risk of hæmorrhage; the area is superficial. It is not performed of late as the tube is not tolerated and as swelling of the mucous membrane of the larynx ulceration and even necrosis result from this.

High Tracheotomy:—This is an operation which is comparatively simpler and safer. It used hitherto to be described as the operation of choice. It consists in dividing the trachea above the thyroid isthmus. In elderly subjects bone shears may have to be used for dividing ossified tracheal rings. It is seldom performed at present owing to the proximity of the wound to the larynx. Stricture is said to follow division of the first ring of the trachea. The operation is permissible if the tube is worn only for a few days. A vertical incision 1-1/2" long is made from the lower border of the cricoid cartilage. "In young children in whom the cricoid is difficult to locate, the incision should be made in such a position that its lower end reaches almost to the sternum thus avoiding the mistake made by beginners of placing the cut too high over the larynx"—H. G. B. RUSSEL. TROTTER recommends excision of the divided rings of the trachea whereby a circular opening is performed. This method facilitates the easy introduction, removal and change of the tube.

Median Tracheotomy:—A vertical median incision is made from the lower margin of the thyroid cartilage almost to the suprasternal notch.

The isthmus is exposed and cut through in the middle line between ligatures; the stumps are quickly clamped with hæmostats. The middle lobe when present should be dealt with likewise. Note that the recurrent laryngeal nerves are in close contact with the outer and posterior surfaces of the suspensory ligament of Berry. The bared tracheal rings are divided as has been described before and the tube is introduced.

Low Tracheotomy:—Median vertical incision is made from the lower border of the cricoid downwards to about 2 cms. proximal to the sternal notch. The trachea is more deeply placed; vascular relations have been given under the heading of anatomy. Careful dissection is a safe method. All bleeding points should be seized with artery forceps and ligated. Opening into the trachea is made from below upwards.

JACKSON prefers low tracheotomy. He is the advocate of the emergency stab operation. Steady larynx and trachea, incise precisely in the middle line from just above cricoid to suprasternal notch; wound fills with blood. Insert index finger into blood-filled wound; incise three rings of the trachea by stabbing exactly in the middle line. Hold head downwards to allow blood to escape. Slip in a cannula and start artificial respiration if necessary. The special features of the operation are that no anaesthetic is given that there is a total disregard for bleeding and that the entire procedure is done rapidly.

Complications of Low Tracheotomy:—(1) Infection of the mediastinum, (2) broncho-pneumonia, (3) liability of displacement of the tube owing to the suction action of the chest and (4) not less than three assistants are necessary in tranquil low tracheotomy, one for supporting the head and giving anaesthetic, the second to sponge and the third to prevent struggling of the patient.

Tracheotomy in Children.—**Anaesthesia:**—Local Anaesthesia and light chloroform in young children; local anaesthesia only for older children. Novocain is injected into the skin and subcutaneous tissues of the middle line of the neck from the inferior margin of the thyroid cartilage to about the middle of the thyroid isthmus.

Position:—Child is placed close to the right edge of the table. Neck is extended fully by introducing a roller pillow beneath the nape of the neck. Sandbags are placed beneath the shoulders. Arms are restrained with a blanket. Chin and sternal notch should be in one line. Keep to the middle line.

The anatomical peculiarities of the child's neck have been given elsewhere. The trachea is soft, mobile and slippery. If it is not steadied before opening, œsophagus may be opened into.

Digby's Technique:—Median vertical incision 1-1/2" long from upper border of cricoid. Incise fasciæ vertically. Incise suspensory ligament attached to cricoid transversely.

Introduce hæmostat close to the trachea behind the thyroid isthmus thereby making a tunnel between the trachea and isthmus.

The pretracheal fascia is very adherent to the trachea behind the thyroid isthmus. Clamp the tissues in front of the trachea by two hæmostats one on either side of the middle line.

Rotate the hæmostat through 90°. Expose the first four rings of the trachea. Incise vertically through second, third and fourth rings.

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Tranquil Tracheotomy:—ST. CLAIR THOMPSON recommends the intra-tracheal injection of 20 minims of a 2½% solution of Cocaine in adults and 5 minims of a 1% solution of the same fluid in children for easing the commotion caused by the first entry of air into the trachea. The needle is held vertically. It should not penetrate more than 1/4". The solution is injected into the cavity of the trachea. After ten minutes, the trachea is incised. This technique is designated the tranquil operation.

Complications of Tracheotomy:—Hæmorrhage, sloughing of the wound, surgical emphysema, ulceration of the trachea, displacement of the tube, mediastinal suppuration.

Difficulties and Pitfalls:—Insufficient skin incision, failure to keep to the middle line, not steadying the trachea, hæmorrhage, inadequate opening of the trachea, no relief after insertion of the canula.

Conditions which impede the removal of the tube.

Prolonged formation of membrane in diphtheria, impairment of laryngeal function, granulation closing the passage, ulceration and cicatrization, reflex paralysis of crico-arytenoides posterior and impairment of the laryngeal function.

After Treatment in Children:—Periodical cleansing of the tube; induce sleep; nasal feeding through a jacque's catheter No. 4 or No. 6 in children. The child should be encouraged to breathe through the normal passage. The tube should be removed as early as possible and replaced, if possible, by India rubber tubing. In diphtheria operative treatment is complimentary to serum treatment.

Summary.—A short account of the Surgical anatomy of the neck with special reference to the crico-thyroid interval and trachea has been given. The successive steps of the operations have been succinctly outlined. A brief discussion of the relative merits of the various operations has been added.

References:

1. W. S. Bickham—'Operative Surgery,' W. B. Saunders, 1924.
2. Fraser's Surgery of Childhood, Arnold and Co., London, 1926.
3. Pye's Surgical Handicraft, Bristol John Wright and Sons, 1931.
4. Newman—'Medical Emergencies,' J. & A. Churchill, 1937.
5. Hamilton Bailey—'Surgery Surgery,' Bristol John Wright and Sons, Ltd., London.
6. C. R. Whittaker—'Manual of Surgical Anatomy,' E. & S. Livingstone, Edinburgh, 1928.
7. Beesley and Johnson—'Manual of Surgical Anatomy,' Humphrey Milford, Oxford University Press, 1927.
8. Grant Massie—'Surgical Anatomy,' J. & A. Churchill, 1928.
9. F. F. Burghard—'A System of Operative Surgery,' Henry Frowde, London, 1914.
10. Romanis and Mitchiner—'Surgical Emergencies in Practice,' J. & A. Churchill, 1931.
11. H. W. Carson—'Modern Operative Surgery,' Cassell & Co., Ltd., London, 1924.

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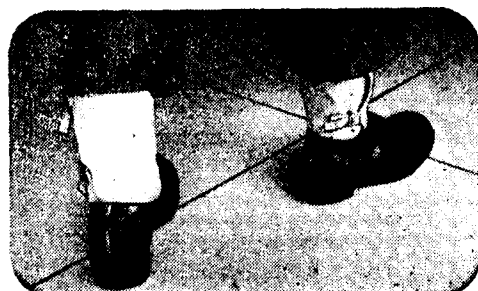
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Contraception

BY

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CONTRACEPTION means avoidance or prevention of pregnancy temporarily. The word birth control is popularly used as a synonym for contraception but it has a wider sense, and covers a much bigger field including sterilization and abortion on the negative side and the treatment and cure of sterility on the positive side. The word contraception is much a single word in comparison with birth control.

The attempt to avoid conception without abstention from the enjoyment of sexual intercourse is probably a very ancient custom dating from the time when man was able to use his imagination and envisage future possibilities.

At first contraceptive methods were carried out not due to economic or eugenic purposes but due to fear of detection of unlawful unions or through revulsion of the man at a realization of some possible previous act of unfaithfulness on the part of the woman.

This act of contraception is coming from the Biblical time when we find that ONAN son of JUDAH, spilled his seed on the ground lest his brother's widow should conceive—probably the earliest example of *coitus interruptus*. In ancient Greece from the writings of ARISTOTLE, we find that abortion and infanticide were quite common in those days. Perhaps they were done with the same idea as contraception to-day, there being no other known method for it, till the discovery of Rubber and Cinchona in the seventeenth century. It is not until the 19th century that contraception began to awaken the interest of thinking men and today it has become an accepted necessity in modern life, not merely from an economic point of view but also from a more thorough understanding of sex problems. It lies no longer under the suspicion of being linked with prostitution and immoral sexual relations but has become a part of the modern practitioner's equipment.

Legal Aspect.—If we trace back the history we find that it has been mentioned as early as the 12th century that whosoever shall give or take drugs to the interest that no generation or conception has taken place is punishable by law. BRACON in the 13th century gave out that according to the English law it is illegal to prevent conception. In the present era, we do not see a public prosecution for the practice of contraception and it is obviously impossible to interfere by law with the sexual relations between a husband and his wife, though the old law is still in vogue. LORD RIDELL writes that in his opinion there is no ethical objection to contraception when practised by married people. On the contrary he thinks it is justifiable and beneficial when used to prevent unduly large families or to protect the health of the mother or to prevent birth of mental and physical defectives.

Religious Views: The Hindu Religion never advocates birth control. Childlessness is taken as an ominous thing for the childless persons so much so that they are not allowed to carry on any religious function and are

* Specially contributed to 'The Antiseptic'.

have been recorded when torn teat of the condom has been found inside the cervical canal. Many experiments have been done on animals with some opaque substances like Barium in the vaginal canal. It has been found that normally they can enter the uterus but after an orgasm they have been detected inside the uterus by means of X-rays. This shows the mechanism of suction of the orgasmic uterus. The effect of orgasm favours conception.

Some women deliberately attempt to prevent themselves from having an orgasm because they believe that if they remain passive, fertilization cannot occur. It is probable that an active female orgasm does facilitate impregnation but it is quite clear that impregnation may and very often does occur in the absence of female orgasm.

Frequency of coitus: In India no statistics have been collected to this effect; but from the statistics in the continental countries we find the figures as follows:—Daily or often 16%; 2 or 3 a week 23%; 1 or 2 a week 20%; 1 a week 17%; 15-30 days 10%; 1 in 6 months 3%; 1 in a year 11%.

The above table seems to represent only a part of the population which came to attend the clinic and therefore cannot be taken as the real representative figures. The author believes that the frequency for daily, twice or thrice a week is oftener than that represented in the table. This frequency is very valuable and should be taken into consideration in the choice of the proper contraceptive.

Longevity of the Sperms.—The longevity of the sperms is not definitely known because it depends upon many factors:—

- (1) Normal vaginal acidity: P. H. 3.8-4.5 (which again varies during menstrual cycle).
- (2) The P. H. secretion of the cervical canal and that of semen.
- (3) The buffer action of the semen.

Taking everything into consideration, the sperms on average have a longevity of 12 hours or so, though REYNANDS and McCAMBER state the sperms seldom survive for more than 1-1½ hours in the normal vaginal pool and much less, in the vaginal hyperacidity.

BELONOSHKIN opines 24 hours. CARY found it upto 20 hours, whereas in TALOR's Jurisprudence we find that it has lived for 17 days. DR. OGINO concludes that the fertilizing ability of sperms lasts to a period less than 3 days though exceptions are possible.

The upward migration of the sperms from the vagina is facilitated by the motility of the sperms, by the capillary action of the vaginal folds, the favourable alkaline media and the positive chemotaxis.

The usual rate of propagation is 1½ mm. in 3 minutes. Sperms which are deposited in the mouth of the os enter at a quicker rate.

Lastly, mention must be made that the cowpers and the urethral glands which secrete the pre-ejaculatory secretion which act as lubricants have been demonstrated to certain active motile sperms and this has made coitus interruptus a failure as a safe method of contraception.

Absorption of Semen.—Absorption of certain substances from the semen has been advocated by many, though there is no positive evidence on behalf of this. DICKINSON says that yet we are at sea, so that it

carries no weight at present. MARIE STOPES states that the woman absorbs some vitamins, hormones or stimulants which affect the internal harmony in such a way as to benefit and nourish the whole system. VAN DE VELDE suggests that there may be satisfaction of a physiological hunger for the male fluid in the female analogous to the instinctive hunger for salt, lime and vitamins. The author cannot express any definite opinion regarding the question of absorption of materials from the semen but he has noticed that both the partners especially the wife, gets a beneficial effect out of it which is evidenced by bright outlook, increase in weight etc.

Safe Period.—This period is about 10 days before the onset of menstruation. As you know the ovulation usually takes place on the 14-16th day and as ovas are capable of being alive for about 24 hours or so and as the sperms on an average live for 48 hours or so—the period which is most liable to conceive is from the 12th to 18th or 19th day. From this calculation the so called safe period has been calculated but as we always know that though ovulation usually takes place on those days, it is not at all certain; no one knows with certainty how long the ovas or sperms can survive. Taking them into consideration safe period is not as safe as it was believed at one time and also as the name indicates. But speaking on a broad line it can be said that for a woman with a relatively normal menstrual cycle, thereby I mean that the period comes within 3 days of the expected date, this safe period is on the whole comparatively safe and chances of conception are less though no stress can be put on this.

Medical Indication for Contraception.—(1) Temporary ill health of the mother, (2) mental and physical disabilities, (3) birth spacing—2 years, (4) multiparity-maintenance and education of progeny, and (5) diseases of mother—heart, lung, kidney, anemia etc.

In addition to the foregoing cases in which contraception is recommended for medical reason, there is a class of cases in which contraception is practised for entirely selfish reason. This includes 3 groups:—

- (1) The unmarried who practise contraception through fear of the possibility of pregnancy,
- (2) the married who practise contraception as a safeguard in illicit relation with prostitutes or clandestine lovers, and
- (3) the married who practise through lack of desire for any children at all.

While we cannot condemn (1) and (2) wholeheartedly but it must be admitted that there is a necessity for recognition of the fact that the existing social system in the continental countries requires its recognition as less harm follows them than when it would occur if they were prohibited.

Sexual abstinence is usually difficult enough for the healthy adult who has had no previous experience of sexual intercourse. In the case of the married people already habituated to coitus and living in the intimate relationship with a marital partner to whom they are strongly attractive and so objected to more or less continuous stimulation, prolonged sexual abstinence is usually much more difficult and much more harmful.

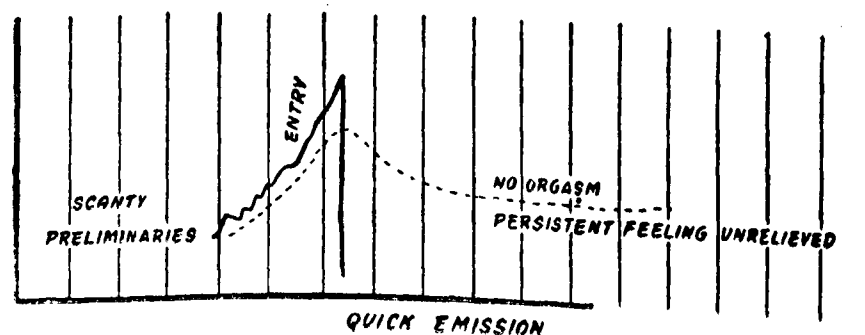
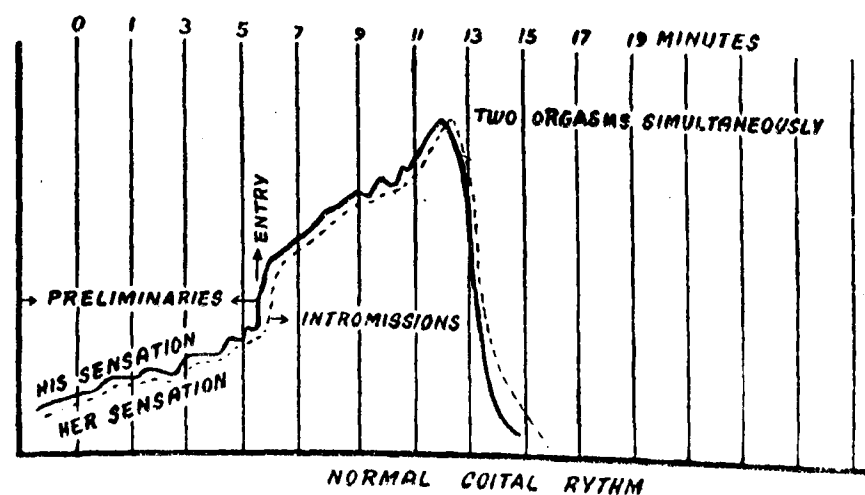
Methods of Contraception.—(1) Physiological, (2) biological, (3) chemical, (4) mechanical, (5) combination of two or more methods and (6) surgical.

Physiological Methods.—(1) Coitus Interruptus (Onanism) is derived from ONAN, son of JUDAH who practised this on his brother's widow for the first time in history. In this method the penis is withdrawn just before

the orgasm so that none of the semen falls inside the vaginal canal. This method sounds to be safe and as such it is probably universally adopted. But it is not at all reliable and it has been found that they are unsuccessful in 69.5% of the cases and more so if the cases are followed for a longer time. It is unreliable for the following reasons:—(1) The presence of active motile sperms in the pre-ejaculatory secretion, (2) it is not always possible to withdraw the penis timely and fully at the height of the excitement and (3) repeated sexual intercourse without properly cleaning the penis.

Besides these, this method produces a mental unrest in both the parties in a majority of cases and leads on to sexual frigidity and pelvic disorders in women and anxiety, neurosis in the males.

Coitus Reservatus is the prolongation of the sexual act without active movements. The woman may pass into a series of orgasms. Intromission is prolonged abnormally. According to MARIE STOKES the union is protracted and the erection after being active for a length of time varying from 20 minutes to 10 hours naturally subsides before withdrawal from the vagina. This method is also a failure due to leakage of motile sperms in the pre-ejaculatory secretion. (See Diagrams below and on the facing page.)



Coitus Saxonus:—By this method the emission is not allowed to flow into the vagina. It is pushed back into the bladder by pressure

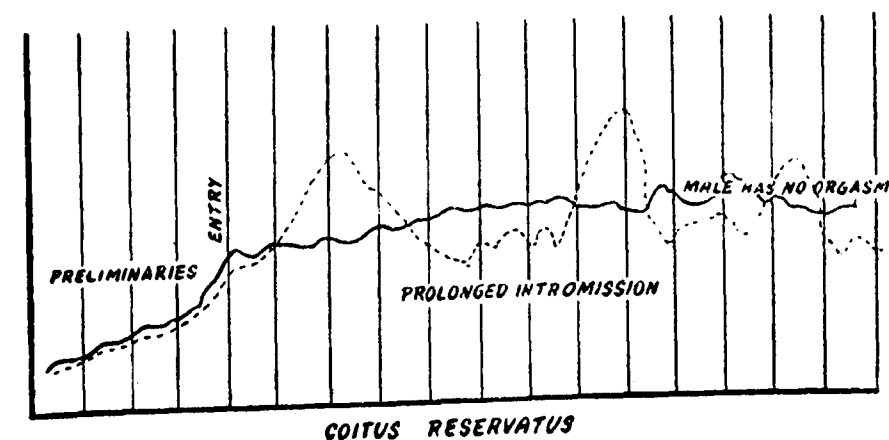
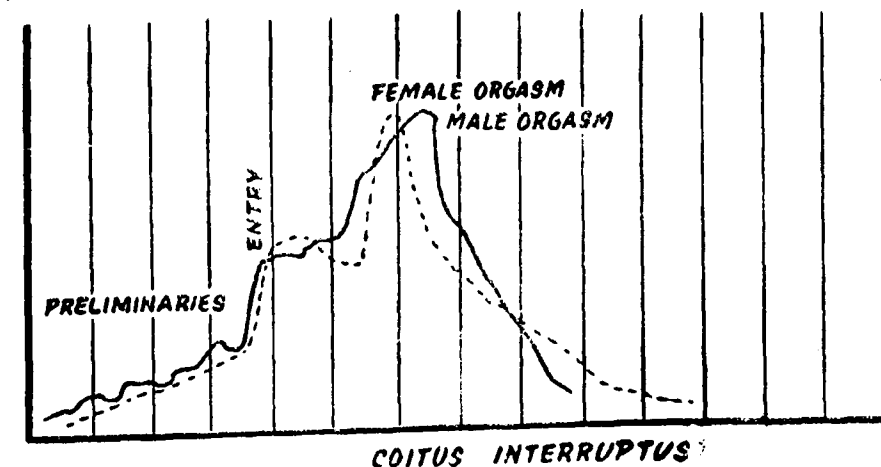
(obstruction) at the root of the penis from where the semen comes out along with the urine. This process may also be found to be safe but is absolutely unreliable because:—(1) Pre-ejaculatory secretion may contain sperms, (2) timely pressure and (3) some leakage even when the pressure is applied timely.

Special Coital Position:—Special coital positions to avoid contact of the ejaculate and the upper vagina has been advocated by many. Other things being equal if the semen is not allowed to be deposited at the level of the os, the chances of conception are remote. This method is most safe, the sedentary face to face position. But this is also unreliable because of the fact that the sperms are actively motile.

Lactation:—One may think that during lactation there is no menstruation and therefore no ovulation and therefore this may be urgently thought to be a safe period. But it is not at all true, as you all know, that pregnancy is quite common during this period.

Safe period is relatively safe as we have already discussed.

Intracural:—Sexual intercourse in the thighs i.e., without any penetration. This has the following defects:—(1) No enjoyment, (2) psychological depression and (3) it has been found that the sperms deposited in



the labias or in the vicinity of the inner border of the thighs have found their way up and have produced conception.

Complete Abstinence:—It is well nigh impossible to follow it for a prolonged period as this produces immense amount of mental tortures and leads on to many mental conditions. This may only be permitted in those cases where due to a temporary illness, both parties being agreeable, may be advocated for a few months or so.

Biological.—1. *Serological:*—The serological methods depend upon the formation of antibody and anti-toxin theory. It has been found that if animal sperms are injected intra-muscularly there is production of antibody in the blood, which in turn produces temporary sterility. The antibody thus formed is named Spermatotoxins. This method is used as follows:

Graduated doses of animal sperms in Normal Saline in which Methiolate has been added as a preservative and Chloretone as an antiseptic is injected in the gluteal region in doses of 3 c.c. ending in 10 c.c. for about 6-8 injections. Each c.c. of solution thus prepared contains 3-5 million sperms. This one course produces sterility for about 6 months and which again may be repeated for another course. This method is still in its investigating stage but from the available reports at the present moment it seems to be a favourable one. Some authorities use Hexyl Resorcinol as antiseptic with equally good results.

2. *Temporary Applications* of heat to the testis and irradiation of the ovaries have been advocated with the idea that they stop the spermatogenesis and oogenesis. The experiments have been done on animals with encouraging results but it is very doubtful how far it is successful in human beings. The research about this point is going on vigorously in America. DR. STEFANIK has done this irradiation in 103 cases and reports that in 12.1% of cases this is unsuccessful and in 6.8% permanently sterile with successful results in about 87% of cases.

The defect lies in its proper dosage. The dosage which is just a little for one patient may be enough to produce permanent sterility in another. It has also the defect of being costly and in producing artificial menopause.

Mechanical.—Various types of mechanical barriers are used in order to prevent conception. This may be used either by the males or by the females or by both.

Condoms are the commonest of all contraceptives that are used all over the world. They are thin sheaths used during coitus to prevent the contact of the semen with the cervix or vagina.

There are two varieties of condoms, namely male condoms and female condoms. The male condoms are of two types—rubber condoms and skin condoms. (1) The rubber solution and Latex, when the skin condoms are made from the peritoneal coverings of animal intestines—sheep, calf or goat, and (2) the skin condoms are not much in use because they are not only more costly than rubber condoms but are very unreliable because of their extreme thinness and therefore there are far more chances of giving way during the act of coitus.

The advantages of the condoms are:—(1) cheap, (2) easily available, (3) simple technique, (4) washable and (5) protect from venereal disease.

Certain precautions are to be taken for their proper application and use. They are:—must be blown and examined for leakage before and after use, (2) care should be taken to blow all the air from inside the sheath before it is rolled over the penis because the presence of air leads on to bursting. (3) lastly phallus should be withdrawn before full detumescence because of the danger of the escape of semen from the base, lastly new sheath should be used for subsequent acts.

Of all the modern methods of contraception this is by far the commonest and the safest though the enjoyment of the sexual act is very little for the male. According to COL. DANJIBHOY of Mental Hospital, Kanke, Bihar, it is equal to licking of an empty plate but the author does not agree with him whole-heartedly.

Besides its having the disadvantage of impairment of sensation it may produce soiling or dryness in the vagina because of the absence of the pre-ejaculatory secretion. It is for this purpose, that some lubricant is usually used to lubricate the outer and inner surface of the sheath.

There are two other varieties of sheath that are used. One is acron condom and the other the feminine sheath.

The acron condom is that which only covers the glans part. It has no advantage over the ordinary teat or non teat condoms and is less reliable because sometimes it may come off during the excitement. It cannot remain in place, especially in those cases where the fore-skin is intact i.e. not turned in side out.

Feminine sheath is used by the females exactly as condoms are used by the males. It is seldom used though it has the same advantage like that of a male condom. It also prevents venereal diseases and there is also no sexual enjoyment.

The success with the condoms are about 99%. Of the 1% failure majority are due to improper technique, bursting or leakage, using the same condom for repeated acts.

The chances of conception by this method become all the more less if some kind of chemical contraceptive in the form of Quinine pessary is used along with it.

Occlusive Pessaries like the sheaths, prevent the semen from coming in contact with the os but unlike the sheaths, they permit the semen to be deposited in the vagina, thereby quenching the physiological hunger of the woman for the male fluid and also by possible absorption of semen through the vaginal mucus membrane.

There are various types of occlusive pessaries but they are based on three principles:—(1) One which covers the os, (2) one which covers the os and the vaginal vault and (3) one which covers the anterior and posterior vaginal wall so that the vagina is more or less divided into two compartments, one anterior which contains the os and anterior fornix and a posterior into which the phallus is introduced.

The occlusive pessaries have the great advantage of permitting the spontaneous and normal sequence of coitus since they can be adjusted before retiring to and may be left over in that position over night.

Occlusive pessary alone is a failure because the semen may stick in the vagina and finally may ascend up when the pessary is removed. For this

reason occlusive pessary along with a chemical spermicide and preferably douching gives the best chance of safety.

The disadvantages are:—(1) difficult technique, (2) selection of the exact type, (as for example a pessary is useless if the cervix is conical), (3) may produce chronic irritation and this may result in cervical erosion and chr cervicitis, which in turn may produce permanent sterility, and (4) requires douching.

Advantages:—(1) Gives the spontaneity of coitus and (2) safe as compared to others.

Chemical Spermicides.—Many chemical spermicides are in the market to-day. The active principle of all being a substance which kills the spermatozoon even in high dilution. For the efficacy of a good chemical spermicide, it should have two components—(1) a spermicide and (2) a vehicle. However efficacious the spermicide and vehicle may be, or however efficaciously may it be distributed in the vagina, it may fail in its purpose, if the ejaculate passes directly into the cervical canal. Until this possibility is definitely excluded, the greatest possible protection against pregnancy still involves, the additional use of a mechanical barrier to protect the cervix from the ejaculate. The following are the characters of a good chemical spermicide:—(1) It should be harmless if absorbed from the vaginal mucus membrane, (2) non-irritant to vagina, uterus and penis, (3) should not disturb the normal vaginal flora, (4) should be cheap, (5) easy to apply, (6) harmless to rubber, and (7) must be a good spermicide.

Those that are common in use are:—(1) Suppositions—Quinine, Hexyl, Resorcinol, Salicylic Acid, Lactic Acid, Boric Acid are bases, (2) jellies or pastes, (3) Foam powder; Foam jelly; Foam Tablets—base of Sodi bicarb and an acid which in the presence of moisture produces foam.

The spermicides should be put in the upper part of the vagina sufficiently before the act so that it may melt down (average time required is five minutes).

Defects:—(1) The spermicide may fail to act when the semen is directly deposited in the mouth of os, (2) the spermatozoon may be partially injured resulting in weak, deformed progeny with recessive characters, and (3) It may produce irritation of the vagina leading on to soreness, and chronic vaginitis, cervicitis etc.

Intra Uterine Pessaries:—There are two varieties of intra uterine pessaries, one is vagino-uterine, which is commonly represented by wish-bone pessary and the other which is purely uterine is Grafeenberg's ring. They are introduced into the uterus and they set up chronic endometritis and thereby prevent embedding or lead on to early abortion. Cases have been recorded where pregnancy has taken place even after these intra-uterine manipulations, the embedding has taken place in a healthy part of the uterus where the irritating action was absent. Sometimes the pessary has been expelled during menstruation without the least knowledge of the patient. Lastly the result in chronic endometritis and in some salpingitis.

It is said that G. Ring produces its effect for six months to one year.

This method is therefore not only unreliable, cumbersome, disease producing but strictly speaking does not come under the category of contraception. Rather it leans towards abortion or non-embedding.

Tampoons and Sponges:—These are some of the earliest known contraceptives. The tampons and sponges usually act as vehicle for chemical spermicides besides their mechanical action. The defect of these lies in the fact that they may be displaced or dislodged by the phallus during the act of coitus and as such they are absolutely unreliable.

Douching:—It has some value if carried out in conjunction with occlusive pessaries. Even then some spermicides should be used because it is just possible that some sperms may adhere against the vaginal walls and thus may ultimately produce conception. Douching alone has some value when the condom bursts or the pessary is displaced accidentally. It has the disadvantage of æsthetic objection more over it may not be available at hand, and suitable at all places and at all times.

Surgical Method.—In this method the fimbriated end of the tube is embedded in a peritoneal porch and thereby it prevents conception. It is claimed that the porch can be opened up whenever required and the woman may again conceive. This method is not only difficult but cases have been recorded where the tubes have been completely blocked due to adhesions and thus permanent sterility has been produced.

Evaluation:—Having discussed the advantages and disadvantages of the different known contraceptives we now come to the question of evaluation. Before it is done, let us consider the characteristics of an ideal contraceptive. They should be:—(1) simple, (2) cheap, (3) reliable, (4) easily available, (5) shouldn't spoil the spontaneity of the act, (6) harmless to both, (7) harmless to the child which may be born subsequently and (8) æsthetically unobjectionable.

Much extensive work has been done on contraceptives but no ideal contraceptive has yet been discovered. Many statistics of success and failure are in the market but they are all misleading.

From our earlier idea we know that no one method alone is absolutely reliable and so in the modern days condoms with spermicides or pessaries with chemical spermicides with subsequent douching are taken as the best of the lot.

Conclusion.—The author believes in the saying that life is incomplete without marriage and marriage without children is no marriage. As such he does not advocate contraception in the early years of married life. He feels that the child is the connecting link between the father and the mother, after a few years of sexual life. It has repeatedly been seen that parties who use contraceptives during their early sexual life, are usually sufferers of many hysterical neuroses and as such one should have one or two children before any contraceptive method is adopted. It has frequently been spoken by newly married couples 'Oh we cannot afford to maintain a child.' To this I wish to comment that they are not fit to consummate marriage, if they cannot afford to rear up a child. I have seen very often that these are the patients, who after a few years suffer from various neuroses and sometimes becoming sterile due to use of various irritating contraceptives and as such I advocate the following to any couple who come to consult me:—

(1) Avoid contraceptives till one or two children are born. I use the word 'avoid' because it has become a fashion to use contraceptives and is being carried from person to person. Regarding two children, I wish to

comment that they should have so, provided they can be well maintained. Because personally I think that it is criminal to bring forth children if they cannot be well looked after. Maternal health is of course a consideration all through.

(2) After having two children, one must not only use his economic status as a guide to future births but must be able to look after the children properly. Merely producing life and spending money is no good.

(3) I believe in birth spacing—at least 2½ years.

(4) I recommend the following method for all family couples provided, the wife has a regular menstrual history *i.e.* she gets her period within 3 days from the expected date.

Beginning of menses upto 4th day (menstrual period)—No cohabitation.

4th day to 8th day (both days inclusive)—Cohabitation without any precaution.

9th day to 19th day (both days inclusive)—Contraceptives like condoms, pessaries chemicals and douching.

20th day till the beginning of menses—Cohabitation without any precaution.

The above method has worked very satisfactorily among my patients.

I wish to express my sincerest thanks to DR. Y. N. AJINKYA, M.M., M.R.C.O.G., F.R.C.S.E., D.C.H., Professor of Midwifery, Medical College, Agra, for his necessary suggestions at various places and to DR. P. N. LAHA, M.D., Lecturer in Diseases of Children for his multiple helps.

References :

1. Adair, F. L.—(1940), 'Obstetrics and Gynaecology'; Lea & Febiger, Philadelphia.
2. Allen—(1931), South Med. Journ. Vol. XXIV.
3. Barker, J. R.—(1935), 'The Chemical Control of Conception,' London.
4. Barker and Ramson, R. M.—(1934), Journal of Hyg. Camb. Vol. XXXIV, 474.
5. Blacker, C. P. and Malleson, J.—'The British Encyclo. of Medical Practice,' Vol. III L.P. 386, Edited by Rolleston, H., Butterworth & Co., London.
6. Butler, L. C.—(1933), A Student's Manual of Birth Control, London.
7. Carleton, H. M. and Florey, H.—(1931), Journal of Obst. and Gynaec. Brit. Emp. XXXVIII-550, 555.
8. Charles, E.—(1932), 'The Practice of Birth Control, London.
9. Cox, G. M.—(1937), Clinical Contraception, William Heinemann, London.
10. Dickinson, R. L.—(1938), 'Control of Conception,' 2nd Edition. Baillre, Tindall & Cox, London.
11. Dickinson, R. L.—(1938), American Journal of Obst. Vol. 14, No. VI.
12. Eden, T. W. and Lockyer, C.—(1935), 'Gynaecology for Students and Practitioners,' Edited by Whitehouse, H. B. J & A. Churchill Ltd., London.
13. Ellis, H.—(1939), 'Psychology of Sex,' William Heinemann, London.
14. Fielding, M.—(1934), 'Parenthood: Design or Accident—A manual of Birth Control,' 3rd Edition.
15. Greenhill—American Journal of Obst. XXII-1.
16. Haire, N.—(1938), 'Birth Control Methods,' George Allen & Unwin Ltd., London.
17. Hartman, C. G.—(1936), 'The Time of Ovulation in Women,' William & Wilkins Co., Baltimore.
18. Hartman, C. G.—(1936), Birth Control Review, May 1933 Vol. VII-5.
19. Himes, N. E.—(1936), 'Medical History of Contraception,' William & Wilkins Co., Baltimore.
20. International Medical Group for Investigation of Contraception—4th Report 1931,—5th Report 1934.
21. Malleson, J.—(1935), 'The Principles of Contraception,' London.
22. Ogino, K.—(1934), 'Conception Period of Women,' Medical Arts Publishing Co., Harrisburg.
23. Stopes, M. C.—(1931), 'Contraception—Its Theory History etc', London.
24. Voge, C. I. B.—(1933), 'The Chemistry and Physics of Contraceptives,' William & Wilkins Co., London.

Child-Birth Maternal Injuries*

BY

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THE high maternal mortality of child-birth in this country has attracted and is engaging the attention of our leading obstetricians. This is as it should be. But there is also another aspect of child-birth equally or more important both for its large share in mortality and its bearing on the life of surviving mothers—maternal injuries. DR. A. E. MENON, F.R.C.S., M.C.O.G., drew attention to it in his recent Elizabeth Mathai Lectures. Every year a large number of difficult labour cases handled by *dais*, midwives or general practitioners, are admitted into our City, District, Local Fund and Municipal hospitals. Brought in country carts often over long distances, from outlying parts lacking obstetric help or after vain operative attempts outside, many of these arrive moribund or in 'extremis' and die soon after or later from shock exhaustion, hæmorrhage or sepsis, following rupture of uterus, vagina or perineum. The survivors after long critical illness and suffering are left chronic invalids often for life, with various disabling injuries, bad cervical, vaginal, or perineal tears often involving anus, severe injury to urethra, bladder, ureter, rectum, uterus, pelvic floor and or pelvic joints etc., with often a residual pelvic infection.

Some injury to perineum, vulva, vagina or cervix may no doubt occur even in normal labour. This is generally minor, rarely disabling. But in difficult labour, death or some disabling injury seems to be the penalty the female sex has to pay for the privilege of motherhood even in the advanced West. COMYNS BERKLEY says incalculable harm is done every year in Britain by doctors trying to pull children's heads past the brim with brute force, a marked percentage of maternal deaths and injuries being due to such misapplied efforts. The Ten Teachers' remark that the serious error of dragging the head through an insufficiently dilated cervix,—the greatest danger with the use of forceps, is still persisted in, in spite of all teaching to the contrary. The combined text book observes that the abuse of forceps is still very great, its promiscuous use for pulling the head through the brim forcibly being very common in futile attempts to deliver, when such an operation should never have been contemplated. That 20 to 50 failed forceps cases are annually admitted in Glasgow, Edinburgh, Newcastle, Manchester and Liverpool maternity hospitals with 15 to 20 per cent deaths. That in Glasgow Royal Maternity Hospital alone they account for 4% of total deaths. That in 1931 no less than 214 maternal injuries from forceps were admitted into Glasgow, Edinburgh, Liverpool, Newcastle, Birmingham, Sheffield and Leeds maternity hospitals with 12% deaths. If this is what happens in advanced Britain it is worse here. Even in our hospitals the incidence of these injuries is not negligible. The following table of perineal tears alone in some of our hospitals, from DR. MENON's lectures, above referred to, is revealing. (Names omitted for obvious reasons).

* Specially contributed to 'The Antiseptic'.

HOSPITAL.	LABOURS.	PERINEAL TEARS.	PERCENTAGE.
C	... 9,463	1,039	11 %
K	... 395	111	12.5 %
M	... 17,284	2,191	12.7 %
P	... 2,093	554	26.5 %
R	... 15,080	1,722	11.5 %
W	... 4,584	389	8.5 %

Thus their incidence is from 8.5% to as high as 26.5%. If the other injuries are taken into account the importance of the problem becomes at once evident. Attention is now focussed mainly on maternal mortality. Injuries have not received the attention they deserve. In Britain on a conservative estimate 7 to 10% of women are said to suffer more or less disability due to child birth. Here in one hospital alone with only 14 gynec beds out of 852 admissions for 1937 and 1938 no less than 114 or one in 7.5 *i.e.* over 13% were such. These are but a small proportion of the injured in labour. Poverty and dread of operations keep the timid majority away. This should give us an idea of the prevalence of these injuries here and should give us much food for thought. This is not a state of affairs to be proud of and needs serious attention both for the patients and our prestige. Once they occur the graver injuries pass out of the province of midwife and practitioner to the expert gynecologist who alone can efficiently deal with them. Apart from immediate disability they bring worse evils in their train—badly gaping vulva and vagina, ectropion and erosion cervix, subinvolution, persistent leucorrhœa, pelvic inflammations, —adhesions, abscesses, dysmenorrhœa, menorrhagia, dyspareunia, chronic pelvic pain, repeated abortions, one-child sterility, genital displacements and cancer, recto and urogenital fistulæ, fecal and urinary incontinence, atresia vaginæ, ascending kidney infection etc., seriously affecting health and even social and domestic life. Social life is severely crippled, fecal and urinary incontinence and cancer making the victims practically social outcasts from fear of involuntary evacuations in public at inconvenient times and or a stench about their person. Effect on domestic life is even more tragic, young mothers, perhaps not yet out of teens being often discarded by their irresponsible husbands,—even some “Educated” ones—as no longer useful life partners. The illhealth, invalidism, physical and mental suffering and unhappiness caused by these injuries, often make life for the victims a long drawn out miserable living—death, worse than death in labour which would have saved them further suffering as they often express with tears. Many of them wandering from one practitioner to another for relief, drift into hospitals forming a large proportion of our gynec admissions. ‘By far the largest proportion of cases admitted to gynec wards are the results of infection or injury in child birth’ (combined text-book). There is thus some truth in the statement that the obstetrician furnishes the chief work of the gynecologist. True, these injuries cannot always be prevented in difficult labour and may occur at times in the best conducted institutions from occasional errors of judgment to which the best of us are liable. Their entire elimination may not therefore be feasible. But it should be possible to reduce them to the unavoidable minimum. The aim should be to prevent grave injuries and immediately repair unavoidable less grave ones. It is not merely enough to save difficult labour patients, it should be done with the least possible injury

to them. The problem is not so complicated as that of maternal mortality immediate and remote causes of which cover a wide field, partum and extra partum, such as patients' health and physique, nature of labour and available help, sanitary, social and economic conditions, as poverty and ill-nutrition, bad housing and overcrowding, illiteracy and ignorance, insanitary surroundings, habits, customs and superstitions, early marriage and pregnancy, illassorted coupling etc. Maternal injuries have but one cause—lack of proper intrapartum help. Attention in this one direction is all that is needed *i.e.*, sound practical training of midwives and medical students—future practitioners who have to attend most labours, and provision of such trained hands to areas yet unprovided. Their present training is not quite adequate. At examinations they generally do well in theory but break down in principles of care of perineum, placental delivery, and demonstration of mechanism of labour and operative technique, on the dummy. One cannot also help noticing their tendency in practice to become slaves to routine without using individual judgment. Thus, in normal labour before ‘crowning’ of head—the signal for active help—there is little active to do beyond watching and looking to patient's creature comforts. All text-books emphasize care of perineum and placental delivery as most important duties, but few pay due attention to these. With care perineum can nearly always be saved. As the Ten Teachers say even the so called ‘inevitable’ fourchette tear is not absolutely inevitable. Yet most midwives wait passively till the head delivers itself, even when obviously threatening to tear through the perineum and then hurriedly pull out the child, often causing or extending tears. In the 3rd stage many impatiently hurry placental delivery from a flaccid uterus, by pulling on cord or fundal pressure, often initiating partial separation or retention of pieces of placenta, P.P.H. or even inversion uterus. Many in practice do not trouble to keep themselves in trim grow rusty, cannot read the thermometer, count pulse or F. H., recognise foetal parts position or presentation—much less, abnormalities—often leave foetal cord-stump bare, undressed, or rarely examine the placenta if entire. As to general practitioners and high maternal mortality and morbidity at their hands what is said by eminent British authorities about Britain applies equally here. It may be—as the Combined Text book remarks—that busy practitioners are tempted to unnecessarily forestall nature's efforts with forceps or dragging on limbs as harmless, and in their anxiety to deliver quickly, forget about possible maternal injuries. But this itself is due to inadequate training. As medical students, while they have a 3 years' course in Medicine and Surgery, they get even less than a year's course—six month's lectures and 3 months hospital in obstetrics which, unlike medicine and surgery, imposes double responsibility—handling of two lives, mother and child—every time, and therefore certainly deserves more attention. With this weak foundation practitioners can only gain experience at the expense of patients at first, and maternal and foetal mortality and morbidity are bound to be high in their practice. It is a moot point why obstetric course should not be on a par with a medicine and surgery or at least hospital course six months, 3 in the fourth and 3 in the final year. Practitioners are also otherwise handicapped in country obstetric practice, being mostly called in emergencies often mishandled by *dais*, or midwives and calling for immediate action on their own unaided judgment, even without anæsthetic help which is rarely available opportunely in country practice. Result is often discouraging, apt to bring undeserved discredit. Their

most paying practice is chiefly medical, with perhaps a sprinkling of minor surgery and few emergencies, therefore enough time for reference in treatment. Hence they are more concerned with their efficiency in medicine and surgery than the more taxing and less paying obstetrics. These drawbacks in our obstetrics once or twice commented on by the writer, have to be remedied for better results to be obtained. Midwives and medical students should receive more practical training. They should be made to conduct their cases under the eye and guidance of seniors, after one or two demonstrations, and not left to themselves to manage as best as they can. Medical students particularly should assist in difficult labour as often as possible, to learn by observation operative technique as demonstrated before them. They should have frequent tutorial 'Dummy' classes in mechanism of labour and operative technique, and after passing, should have post-graduate training with opportunities for simple operations *e.g.* low forceps to start with, under guidance, thus giving them sound training in 'applied obstetrics.' It is sometimes said that midwifery is largely a subject where practical instruction is possible only after graduation. This is as it may be. But it does not absolve us from the responsibility of giving the best possible training to medical students. In surgery, they have an operative surgery course on cadavers. This is obviously impossible in operative obstetrics, which is obstetric surgery. Dummy practice should take its place in their training and Dummy demonstration tests in examinations. Knowledge and experience as the combined text-book rightly says, cannot be gained from text-books but only from clinical and practical training. If the present course is too short it should be adequately extended both for midwives and medical students. Half training is worse than no training. A little knowledge as Pope says, is a dangerous thing. Until a more practical turn is given to the training of midwives and practitioners who are responsible for most labours, little improvement can be expected in maternal deaths or injuries. Midwives training should include:—(1) asepsis and anti-sepsis, (2) efficient conduction of normal labour, (3) recognition of ante-, intra-, and post-partum abnormalities, (4) first-aid in P. P. H. till help arrives and (5) chloroform anaesthesia to help at a pinch. DR. SCUDDER of Vellore has successfully trained her midwives in chloroform anaesthesia, even for sections (her pamphlet on V.V.F.). For midwives in practice frequent inspection of their work, periodical refresher courses, and Efficiency bar tests with suitable penalties for persistent indifference and inefficiency should help to keep them in trim. There remains the question of the principles and technique of the prevention of these injuries. This will be discussed in a later article.

Plot 64, behind Aurora Talkies,
Matunga, Bombay 19.

Cases and Comments

Some Interesting Cases

BY

HARENDRA NATH BAGCHI, M.B.,

Medical Officer, Bengal Engineering College, Howrah.

I. A Case of Recurring Vomiting

THIS disorder of cyclic vomiting is peculiar to childhood, and generally occurs within the first five years of life, especially in unduly excited nervous children.

"R" M. child $5\frac{1}{2}$ years had sudden onset of vomiting for which no apparent cause could be ascertained except probably auto-intoxication. The child had no fever or headache but was constipated. The vomiting was severe, occurring every hour and even water was not retained. The vomitus was coloured green with bile and the child was restless, feeling thirsty and could get no sleep. She passed urine thrice in 24 hrs. and there was a sweetish smell in her breath. Stool—no ova, hookworms or round-worms.

Treatment.—

Tinct. Iodine (rect)	...	℥ 4
„ Belladonna	...	℥ 4
Vinum spec.	...	℥ 4
Aqua Anethi	...	3 i
mixt. one dose every 15 minutes.		

Vomiting did not stop but was taking place in every 3 or 4 hours now.

℞

Bismuth Carb	...	gr. 4
Sodi Bicarb	...	gr. 4
Acid Hydrocyanic dil	...	℥ 2
Aqua Anethiet mucilage	...	3 i
misc. t.d.s.		

Vomiting did not stop but the intervals increased to 5 hours or so.

Then I decided to give her a rectal injection of Sodi Bicarb 3 ii Aqua O i.

This stopped her vomiting altogether.

DIET: Iced milk, Iced ghole, Green-cocanut water; Orange juice, Glucose drink *ad libitum*.

II. A Case of Quinine and Plasmoquine Intolerance

MRS. B.G. 30 yrs, was suffering from B.T. Malaria with relapses. She is intolerant to Quinine as its administration is followed by giddiness, nausea, vomiting and temporary deafness. She was given two tablets of Plasmo-Quine Simplex. After about 2 hrs. she felt giddy. Cyanosis of lips and finger nails was present and there were dyspeptic symptoms of nausea, vomiting and diarrhoea. Her pulse was feeble and rapid, 120 per minute and her temperature was 100° F.

Treatment.—Hypodermic injection of $\frac{1}{2}$ c.c. Adrenalin Chlor preceded by Brandy 3 ii in water and followed 2 hrs. later by Glucose Sol. 12½% 25 c.c. subcutaneously.

℞

Aristochin	...	gr. 5 b.d.
Sodi Bicarb	...	3 p
„ Citras	...	3 p
Aqua Chloroform	...	3 i t.d.s.

III. A Case of Persistent Hiccough

According to OSLER, hiccough is caused by intermittent sudden contraction of the diaphragm.

*He gives its etiology as follows:—*1. Inflammatory *e. g.*, gastritis, hernia, appendicitis and internal strangulation.

2. Irritative, as indirect stimulation of the diaphragm when very hot substances are swallowed.

3. Idiopathic, where no apparent cause is present.

4. Neurotic, hysteria and epilepsy.

5. Where some constitutional taint is present *e. g.*, gout, diabetes, chronic Bright's disease.

"R" H. M. 48 had a carbuncle in the scapular region of the back. This was operated and he had no albumen or sugar present in his urine at the time of operation. After the 5th day of the operation he suddenly developed hiccough in which the paroxysms extended to about 3 days. His urine was examined and it showed marked trace of albumen and few hyaline and granular casts in addition.

Treatment.—By holding the breath for a minute or taking a long draught of water thereby causing a forcible action of the diaphragm in mild cases, relief is obtained, or forcible traction on the tongue maintained for one or two minutes at a time.

When it arises from indigestion the following is useful:

℞ Mag Carb	...	gr. 10
Tinct. Rhei co	...	℥ 10
Spt. Ammon Aromat	...	℥ 20
.. Chloroform	...	℥ 10
Menth Pip	...	℥ 1 t.d.s.

In cases with neurotic history:—

℞ Sodi Bromide	...	gr. 5
.. Valerians	...	gr. 4
Elixir Aromaticus	...	℥ 2
Aqua add	...	℥ 1 t.d.s.

Carbon Dioxide inhalation—Place a paper bag tightly over the mouth and nose and instruct the patient to breathe into it. By re-breathing the expired air the concentration of Co₂ in the blood is raised.

In persistent hiccough: Nitro-Glycerine gr. 1/100 tablets t. d. s. also the following:—

℞ Chloretone	...	gr. 2
Calomel	...	gr. 1
Sodi Bicarb	...	gr. 5
ft pulv: one every half hour. (maximum 8 pulvs)		

In the case under report I succeeded with the following:—

℞ Chloretone	...	gr. 10
Caffein Citras	...	gr. 2½
ft pulv: t.d.s.		

IV. Epidemic Dropsy

Epidemic dropsy is dropsy with cardiac symptoms. According to ACTON and CHOPRA E.D. is caused by injection of Toxins in damaged rice or by injection of adulterated mustard oil or by both. I held postmortem examinations in some of the cases of E. D. and found general oedema, occasional pleural or pericardial effusion and general wastage of all organs.

"Mrs. N." 39, a primipara of 8 months' pregnancy. In her I found dropsy in both the legs, fever (temperature 99° F or so) Knee jerk is present, slight anaemia, pulse was rather weak, pulse being 100 beats p. m. B. P. Systolic 145 m.m. of Hg. slight breathlessness on exertion; urine clear, acid, Sp. gr. being 1012 albumen and sugar nil.

Treatment.—Food should be cooked in ghee, rice and mustard oil to be eliminated. Try brown bread, fruits, oat meal, eggs, butter and fish.

Abidol "C" Capsules or B. G. Phos Elixir. Calcium Gluconate, yeast or Marmite. Change to a dry climate and rest in bed.

Dagenan (M & B 693) in Bacillary Dysentery

BY

A. J. C. FARIA, M.B., B.S.,

Deihi.

ON the eleventh December, 1941, Mrs. S., 34 years of age, consulted me for diarrhoea of one year's duration. She said she passed about eight stools a day accompanied with tenesmus, blood and mucus and had undergone intensive Allopathic and Indigenous treatment without any improvement in her condition.

I had her stools examined by a bacteriologist who suggested that the case was probably one of bacillary dysentery.

In an outbreak of bacillary dysentery among the troops in Cairo a drug known as Sulphaguanidine was used with remarkable success, but being unable to obtain this drug locally I decided to try M & B 693, on the patient and accordingly prescribed eight tablets instructing her to take four tablets a day. The patient responded dramatically to this therapy as within only two days the number of stools had come down to two a day, blood and tenesmus had disappeared but slight mucus persisted. The treatment was continued for six days in all and the patient was perfectly cured. The patient saw me again last October for some other ailment and I noted that the cure of her dysentery was still maintained.

As one swallow does not make a summer and I had no opportunity of testing the efficacy of this drug in more cases of bacillary dysentery, I had to withhold publication of this clinical observation for lack of sufficient statistical data.

Now that DR. J. N. BHATTACHARJEE in *The Antiseptic* of Dec., 1942 quotes a Case of Bacillary Dysentery treated successfully with M & B 693 I have not the least hesitation in stating that this drug is as efficacious in bacillary dysentery as it is in gonococcal and pneumonic infections.

A Case of Primary B. Complex Deficiency with Slight Deficiency of Vitamin A also

BY

CH. KRISHNAMURTY, L.M.P.,
Selection Grade Sub-Asst. Surgeon, Markapur.

V., H.M., aged 23 years came in with tingling, numbness, tenderness of calf muscles, atrophy, loss of knee jerks positive, Romberg's sign, angular conjunctivitis, angular stomatitis, glossitis, angular scarring of the nose, slight xerosis, lethargy, absent mindedness and hoarseness of voice. Heart sounds normal, no pendulum rhythm. History of having had native treatment for 3 months. The case was taken to be a "B" Complex deficiency mainly and "A" slightly as there were signs and symptoms of deficiency of B₁, B₂ and Riboflavin. He was put on Thiamin injections, Mist. Ol. Morrhœa, Cal. Lactate, and Iron and Strychnine with a diet liberal in Vit. B (*e.g.*) hand pounded rice, whole wheat bread, germinating dhal, milk, curds, fruits, bran tea (2 ozs. in 6 oz. of hot water, strained and given with Jaggery) and massage of the lower limbs with oil daily. The patient was improving but the lethargy and absent mindedness continued and as it appeared the anti-pellagra factor, B₂, was insufficient, and a course of Nicotinic Acid injections was decided upon. Pelonin (Glaxo) one ampule was given subcutaneously. The patient was warned that he may have some pricking sensations for a few minutes after the injection. This occurred and appeared to pass off in about 10 minutes but half an hour later, I was urgently called upon to see the case as the patient was very bad. He was stated to be behaving like one possessed of a devil, tearing his hair, chattering his teeth, getting out of bed and having violent jerky movements of his upper limbs. I rushed to see him and the following was his state. His face was covered with sweat, ashen-gray in colour, he was constantly grinding his teeth, eye lids closed constantly groaning with a laryngeal stridor and in a few minutes began to have violent jerky movements of his trunk, upper limbs, head and neck. The fingers were flexed and stiff, pulse rather feeble. The sort of fit was said to have occurred 3 or 4 times before I saw him. After the fit passed off, I asked him what it was that ailed him then. He said he was having inordinate itching and pricking of the whole body. I injected $\frac{1}{2}$ c.c. of Liq. Adrenalin Hydrochloride followed by 1 c.c. of Collosol Calcium with Ostelin and Vitamin D. A dose of 30 grs. of Pot. Bromide in an ounce of water was given by mouth and the body was sponged with cold water to relieve itching. In about 15 minutes he was relieved and was quiet. Calcium Lactate and Sod. Bicarb were given by mouth later. The phenomena passed off completely in about 6 hours. He complained of burning sensation in the stomach and intense hunger. He was put on Bismuth, Mag. Carb., Sod. Bicarb mixture and the symptoms were relieved. The signs and symptoms exhibited, appeared to me to be due to gross calcium deficiency. He never exhibited any signs of urticaria, angioneurotic œdema etc., before the Pelonin injection. In fact he was having a liberal amount of Calcium in his diet in the form of milk, curds, oranges etc. Could this injection of Pelonin (Nicotinic Acid) be responsible for producing these phenomena of anaphylaxis and acalcœmia? It appeared to me giving Nicotinic Acid injection. A few tablets of Pelonin by mouth were given later cautiously with Calcium Lactate and Sod. Bicarb internally. The patient made an uninterrupted recovery and went home being able to walk freely.

An Interesting Case

BY

BACHAN SINGH, L.M.P.,
Jemadar, Ex-I. M. D., Prop., Jubilee Medical Hall,
Lalkurti Bazaar, Rawalpindi Cantt.

I TAKE this opportunity to publish an extraordinary experience of my career as a medical man, which some of the readers may or may not believe *viz.*, a portion of tape-worm (cestode) was coughed out by a patient of mine.

On the 1st August, 1941, a Gurkha woman, aged 40 years, wife of a pensioner, Jemadar 10th, Gurkha, resident of Barbatyia Basti, Maymyo (Burma), came complaining of irritable cough with little expectoration and as well of stoppage of her periods since 4 months. She, at the same time produced an ounce bottle containing water and rectangular white pieces about 20 in number some of them measuring 0.1" in breadth and 0.05" in length, three pieces attached together in chain, others two together, rest single segments. They all looked like segments of a tape-worm to the naked eye and my hand-lens, confirmed it.

The patient is well built, of short stature Gurkha type woman, mother of seven children, six living and healthy. She was married after the age of thirteen years. She was born and brought up in Maymyo. She has been outside Burma with her husband in Quetta and Darjeeling. Since last five years she is in Maymo. She does not give a history of passing worms of any kind through any of the orifices in her life before. She never suffered from any serious disease except occasional attacks of malaria.

On the examination of the patient there were no signs of pregnancy and other systems appeared to be normal. But both the bases of lungs showed signs of bronchitis. I put the patient on stimulant expectorant mixture with the instruction to keep an eye on any segment of worm coughed out to be brought to me. I also gave the patient purgative and two drachms of liquid extract of Male Fern with the instruction how to use it and preserve the stool and search for any segments. On departure of the patient I examined the contents of the bottle and consulted my notes of student days on Helminthology as well as the notes I took during my training in laboratory duties and other books on the subject but could not find any reference to tape-worm being coughed up or segments passed in sputum. No more segments were passed out with the above treatment.

Description by the Patient How they were passed out.—On 27th July, 1941 in the day time, she began to feel a funny sensation in the pit of stomach which she called as *Jhun Jhun* following a severe fit of coughing which was relieved after coughing out some mucus and small roundish ball about $\frac{1}{4}$ " diameter in size which she was observing and to her great wonder it began to open out $1\frac{1}{4}$ " in length and move like a worm about 2" distance. At this moment she shouted and called her husband and children as well her neighbours to come and see the fun. After seeing it thoroughly her husband picked it up and put in the above bottle with some water in it. Next day, *i.e.*, 28th, she got a similar attack as on 27th, and passed out two small roundish pieces which behaved as the previous one and one she put in the bottle along the specimen of 27th, and the other she dissected out into small pieces with a bit of strong straw for the sake of curiosity.

When she could manage to collect some money to pay up my bill she came to me on 1st August, with specimen and the complaint.

N. B.:—Sixteen days before coughing out the above segments their whole family had taken pork-meat of a pig killed in their village. Her husband and children enjoyed the meal but none of them suffered from any complaint whatsoever.

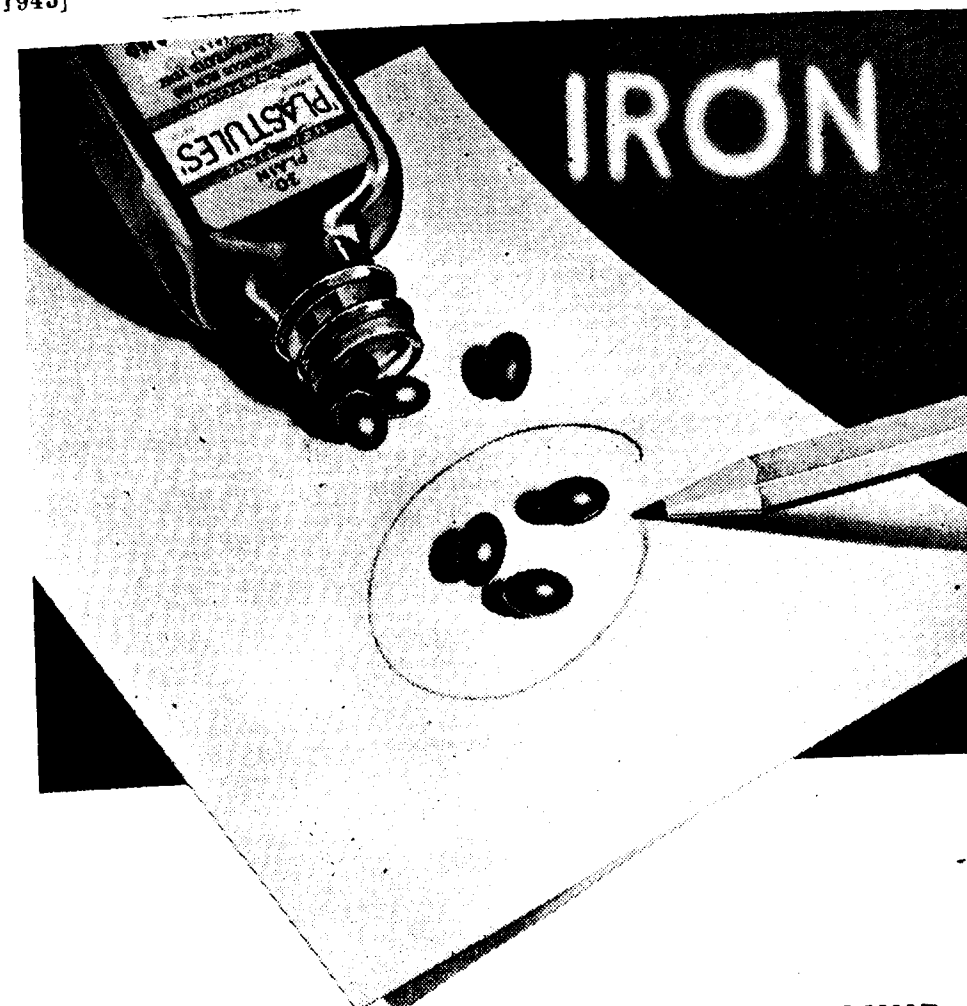
On 13-8-41 Microscopic examination of stool showed: no ova, no amoeba, no cysts, no flagellates.

Blood differential count: poly morphs 57%, lymphocytes 36%, large mono nuclears 1.5%, eosinophils 5.5%.

In spite of thorough examination of most of the segments in the district laboratory I could not make out the type of the worm. Neither could I pick the head portion of the worm to identify it. I shall be glad to send the whole specimen to any one interested at the Calcutta School of Tropical Medicine for further investigation and would like to know (1) what worm it is, (2) whether there are any cases on record of passing such worms through the lung.

I give below the report of Dr. MAPLESTONE's examination of the worm. "Seven segments were examined. They are unfortunately so immature that no genitalia except imperfectly developed cirrus pouch, vas deferens and vagina can be seen. The genital pore is about the middle of the lateral border, but the segments were separated and so it could not be determined whether the pores are unilateral or alternating. The size of the segments varied between 1.8-2.8 mm., in length by 2.3-3.4 mm., in breadth. All that can be said in the way of diagnosis is that these segments belong to a cestodes of the *Taenioides* group.

I thank DR. A. D. SAGAYAM for the kind help he has given me in writing and correcting this note before sending for publication. My thanks are also due to the Asst. Surgeon-in-charge, District Laboratory for allowing me to examine the specimen.



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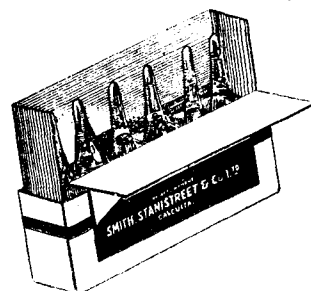


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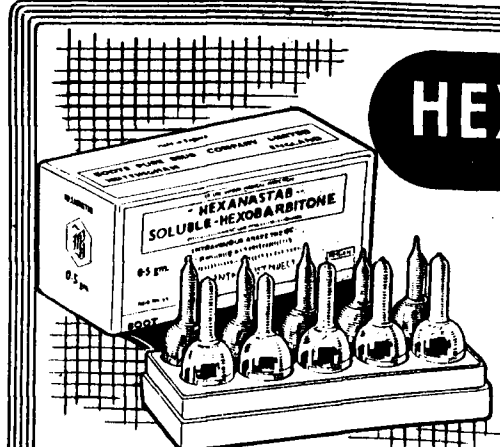
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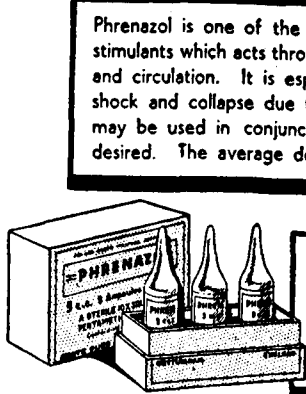
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Delay is Dangerous

THE Government of India have for some time been considering the question of controlling the import of drugs and medicines from abroad with a view to ensure that only the most suitable medicines and in the most suitable quantities are imported into this country under the Import Trade Control Scheme. With this object, they have set up an Advisory Panel on Drugs and Medicines with the purpose of advising the government as to what drugs and medicines other than those included in the Official Pharmacopœias of the exporting countries and which in the opinion of the Committee are essential to import into India from abroad.

This Panel met for the first time in New Delhi on 10th Dec., '42 and issued a set of Questionnaire to appropriate parties in this country with a view to collect representative opinion regarding the drugs and medicines which should be imported into this country. While having nothing to say on the Questionnaire itself we would only urge on the government and on this Committee, the urgent necessity of expediting their report. This Questionnaire has, we understand subject to correction, been addressed to prominent chemists and manufacturers of drugs in this country and replies and all other communications are required to be addressed to the Secretary of this Panel so as to reach him by the 1st March, '43. To many parties this Questionnaire arrived so late as to make it difficult for the parties in question to give a thoughtful and collected opinion. Opinions therefore had to be given on the spur of the moment with little thought for the possible repercussions of their opinion. It is now April and we have not yet seen the report of this Panel or what action the government propose to take on their report, if it is confidential. We would urge on the government to expedite this report as any delay may positively be dangerous to the sick people in this country. There is no use in asking the manufacturers as to what they think are essential from the point of view of utility to the medical profession or the public. No manufacturer will ever say that any of his products are not essential or are superfluous. It must be the duty of the Panel which contains amongst its members distinguished physicians and men in the know of things to decide as to what in their opinion constitute essential drugs, or medicines absolutely necessary for use in this country and which cannot be manufactured in India.

They should then urge on the government to reserve shipping space from other countries for these essential drugs and they should insist on the stoppage of all other drugs which are not considered essential. Delay in this action by the Central Government may have a bad effect inasmuch as the countries which are now in a position to spare the drugs which are essential for India may not in the future be able to spare them as they may require them for use in their own country. A quick decision is absolutely essential.

Gleanings From Medical Press

Ophthalmology

Glaucoma.—Early Recognition and Treatment, L. HERBERT LANIER, M.D., *Texarkana, Ark-Tex.*

No chapter in ophthalmology has been so prolific of hypothesis nor so productive of such serious and laborious investigation as that on glaucoma. It is a disease characterized by increased tension of the globe and pressure excavation of the optic nerve. Broadly speaking, the term glaucoma is applied to all those conditions in which the intraocular pressure is abnormally increased. Priestly Smith has defined it tersely as "an excess of pressure within the eye, plus the causes and consequences of the excess." In this study we shall consider principally the noninflammatory types of glaucoma, animated by a desire to prevent the morbid changes which precede the final stages in the inflammatory types.

It is common for both eyes to be subject to attacks of glaucoma, which connection depends not in the way of sympathy, but upon the fact that the conditions which are likely to lead to the disease usually exist in both eyes.

While it is always convenient to estimate the degree of intraocular tension by means of the finger, the method is nevertheless inexact, since the introduction of the use of the terms of pressure degrees or pressure weight. With the Schiotz tonometer the normal tension varies between 12 mm. to 27 mm. of mercury. A tension of more than 27 mm. is certainly pathologic.

Even in the earliest involvement of any eye through glaucoma, there may be and usually is cloudiness of the cornea. In acute glaucoma there is ciliary injection. There may be hyperemia of the conjunctiva and often chemosis. The vitreous may be clouded and the lens cataractous with a greenish reflex from the surface of the lens, with change in the depth of the anterior chamber and the invariable dilatation of the pupil, which is usually not rounded but oval. The aqueous is turbid and the iris may be discolored.

Now this, picture, accompanied by contracted fields, by increase in intraocular tension, and by excavation of the nerve

head, exceeding the physiologic cupping, together with the usual clinical symptoms, makes the diagnosis easy.

The cornea and globe attain their maximum growth in early adult life, but in the 40 years from 25 to 65 the lens increases in size by one-tenth of its diameter and one-third its volume.

Naturally, increasing the intracular tension, particularly in small hyperopic eyes, accounts for many cases of glaucoma. We must not forget that in many, even in early adult life, there is hypersecretion, with a tendency for the secretion to become serous and turbid, which interferes with drainage at the filtration angles. The whole content of the aqueous chamber changes each hour, necessitating good drainage. The rate of formation of the secretion is about 5 cm. per minute. The chief secreting organ is the ciliary body.

Anyone who is subject to glaucoma has had such predisposition for many years. It is rare before 20, its incidence increasing as age advances. Therefore, we are chiefly concerned with preventing its development into serious stages.

One of the earliest symptoms of the ordinary type of glaucoma is diminished power of the accommodation, with change of the reading glasses far stronger than what the age of the patient warrants. There is usually slight anesthesia of the cornea, even in the incipency of the disease. It is not safe to depend on the visual acuity as a guide in glaucoma. In advanced cases there is a marked diminution of vision but there may be good central vision until just before blindness ensues.

In the type of cases we are concerned with here, there is usually a history of frequent frontal and occasional occipital headaches. Vertigo, nausea at times, mild conjunctivitis, alteration in visual acuteness and frequent change of lenses are common symptoms. There is no appreciable contraction of the visual fields. Yet the ophthalmoscopic examination reveals a slight amount of cupping of the nerve head (just exceeding the physiologic cup.) The arteries begin to

narrow, the veins to dilate, or there is an avascular pearly white nerve head unlike the normal tint.

One of the tragic mistakes in ophthalmology is the routine use of atropine or other mydriatics in the eyes of patients for the purpose of refraction without knowing whether the patient has incipient glaucoma or a predisposition toward it. There may be slight cloudiness of the vitreous as well as of the crystalline lens, with steaminess of the cornea or a glassy appearance.

There is usually a history of flashes of light or transitory streaks of light before the eyes and some have the halos around lights just as one finds in the advanced cases. These occasional phosphenes before the eyes, together with other prodromal symptoms of glaucoma, usually extend through a period of years. This is the time to recognize it and begin treatment.

Seidel has used Bjerrum's method in the diagnosis of doubtful cases. He found the test to be more delicate than Bjerrum believed. This is true in some cases even when the eyeball, fundus, and the intraocular pressure are normal, and where the symptoms complained of are only those of asthenopia. In such cases Seidel found paracentral scotomata and, he believes, these paracentral scotomata are developed from scotomata which at first are scattered above and below but later coalesce and unite to form crescentic or sickle-shaped scotomata. He advises that in all early cases search be made for these scotomata as well as to map out the area of the blind spot, and to note how they later become included with areas assuming the forms so well known.

If glaucoma progresses, all the vessels occupying the region of the papilla become paler and indistinct as though veiled by a thin grayish haze, and ultimately almost wholly disappear. The retinal veins and arteries then appear to spring directly from the margin of the disk. The large veins seem to end in a roundish point, of a much darker tint than the rest of the vessels.

As the disease progresses, the contraction of the color-fields is usually proportionate to that of the form-field. Under the influence of operative measures or miotics very decided improvement in the extent of the visual field may take place.

TREATMENT.—Reading or near work, especially under artificial light, should be restricted. The individual should lead a quiet uneventful life. He should have a complete physical "check up" every six months. Outdoor exercise is valuable. A change of occupation is frequently necessary. Frequent checks on the refractive errors should be done. Instillation night and morning of a very weak solution of physostigmine; avoidance of habits and exercises that may materially increase the blood pressure; removal of all foci of infection above the collar bone; and a diet including minerals and vitamins in proper balance are important considerations in management.

Numerous new drugs have been used in the treatment of glaucoma. We have used all of them and discarded them in treating incipient glaucoma. Epinephrine, Glaucon, Sorvitol and Prostigmine have a field of usefulness in some types of glaucoma in the advanced stages. A recent statement in a special journal follows: "It would appear that splenic extract is not in itself a cure for glaucoma, but that its greatest value is in the non-congestive type of glaucoma." The iodides favourably influence nearly every case of glaucoma.

Almost all ophthalmologists would prefer to do their favorite type of operation for glaucoma, even in the early stages. But we find it difficult, if not impossible, to induce patients to submit to a serious operation before serious impairment of vision and severe pain are experienced.

In prodromal, acute and chronic irritative glaucoma, hemorrhagic glaucoma, chronic glaucoma, simplex and secondary glaucoma, or so-called iritis serosa, each and all may be benefited by some type of operation. We prefer iridectomy. If the patient refuses operation, begin promptly with the instillation of physostigmine salicylate in weak solution, $\frac{1}{4}$ to $\frac{1}{2}$ gr. to ounce of water. Increase strength as patient acquires tolerance for whatever solution is used.

Miotics are of great value, often reducing the glaucomatous process in a few hours sufficiently to permit operation. They should always be instilled into both eyes, as their use in the unaffected eye may prevent a post-operative acute attack of glaucoma. This has been observed not infrequently within a few hours after operation on the affected eye. One or two drops of solution of eserine (gr. i to f. $\frac{3}{4}$ i) or of pilocarpine (gr. ii to f. $\frac{3}{4}$ i) may be employed and should be instilled into the eyes every hour until the pupils become small and the inflammatory signs less.

It must be cautioned, however, that even though this plan of treatment causes the glaucomatous symptoms to disappear, it is unwise to postpone operation in the inflammatory types of glaucoma and to rely upon the continuous use of miotics. While in a few cases apparently favorable results have been obtained by this means, in the majority the glaucomatous process will develop insidiously in spite of the drug; the adhesions between the root of the iris and the cornea will become closer, and the excavation in the head of the nerve deeper until vision is hopelessly compromised.

In view of these facts, it is evident that the prognosis for the restoration of vision after iridectomy depends upon the variety of glaucoma and the duration of the disease. In the acute and subacute inflammatory types, it may be said to exercise a curative action. This is true in proportion to the time that the operation is performed after the appearance of the attack. If performed early, when the blocking of the chamber is

due to vascular congestion and not to permanent causes, the filtration angle may be permanently opened and the disease actually cured. In acute fulminating glaucoma the results of operation in recent cases are especially favorable. If iridectomy is performed soon after the outbreak of the inflammatory attack, a degree of sight is secured which is somewhat, but not much, smaller than it was before the attack, with permanently good results. The operation must be performed, however, for it is delayed and there has been no perception of light for two or three days, the chances of restoration of vision are very small. Full vision may, however, be regained after even some hours of absolute loss of light perception. In a certain small proportion of cases (malignant glaucoma) iridectomy, even if repeated or associated with sclerotomy, will not control the process, and blindness will ensue. As has been mentioned, operations done in the prodromal stage give particularly favourable results, so that this may be regarded as the time of election for iridectomy in inflammatory glaucoma.

The prognosis for conservation of vision after iridectomy in subacute glaucoma is also favorable. The operation should always

be resorted to. The emergency for an immediate operation is not so great since miotics may hold the disease in abeyance for a time. It must be cautioned, however, that the continued use of these drugs in any form of inflammatory glaucoma is to be deprecated, as any permanent effect upon the progress of the disease can be secured by operation alone.

Both primary and late infection following trephining in some cases, especially in acute glaucoma, convinces us that iridectomy should be tried first in all cases. It is easier than trephining for the average operator. Since no two cases of simple glaucoma are alike, the treatment in each case will depend on the behaviour of the eye, with and without treatment. The factors, the central field of vision, the peripheral field of vision, and the central visual acuity must be frequently recorded. On these findings subsequent treatment must be based. Miotics as weak as is required to control increased intraocular tension is to be used. Frequent measurements for intraocular tension are necessary. Increase the strength and frequency of the miotics, and if this fails to control the tension, surgery must be employed.—*The Eye, Ear, Nose and Throat Monthly*.

Ear, Nose and Throat

Electric Currents in the Diagnosis and Treatment of Aural Diseases.—M. Tamari, M.D., and A. M. Berman, M.D., Chicago, Ill.

With newer discoveries in the field of medical electricity came a wave of enthusiasm to investigate its possible applications for diagnosis and therapy in the various medical specialties. In the field of otolaryngology one of the earliest uses of electrical apparatus was in the correction of derangements of the ear mechanism. Since its discovery, emphasis has always been placed on the therapeutic application of electricity and only recently has there been any attempt made to use electrical apparatus for diagnostic purposes in the ear.

About half a century ago d'Arsonvalization was the only medical therapeutic procedure with some merit. As our knowledge of the anatomy and pathology of the labyrinth increased, use of electricity in inner ear therapy gradually was relegated into the background. Another reason for this trend was the fact that newer studies of the physiology of the vestibular apparatus opened up a wider field of investigation than that of the cochlea itself; and even at this late date the physiology of the labyrinth remains an enigma to the otologist.

In discussing the modern usages of electrical apparatus and electrical methods for diagnosis and therapeutics of the ear we shall omit in this paper the hearing aids because we feel that is a separate subject.

The otologist began to use more electrical instruments and machines after it was found that electricity could produce adequate heat, as for instance in diathermy, or

in infra red. Experiments on animals with the various forms of light rays and the discovery of the "Piezo effect" stimulated the otologist into using electricity for the newer theories of hearing and also for therapeutics of the ear.

The Galvanic Current:—The galvanic current was one of the first and perhaps still is the most widely used type of electrical current in otolaryngology. Four functional tests of the vestibular apparatus more refined uses of this current were devised. Malinie, for instance, contacts the electrode directly to the long process of the malleus and by this method produces a nystagmus with less than one milliampere of current. Formerly we had to use two to three milliamperes and had to apply the electrodes in the external canal. While the theory of the galvanic effect upon the labyrinth still remains unproved and not altogether clear, it is known, as experiments have shown on both animals and humans, that the galvanic current in the absence of the labyrinth irritates the bundles of the vestibular nerve and produces a nystagmus. Whether or not in a live labyrinth the ampullas or the nerve plates of the utricle and saccule and the otoliths have the power of transforming current, as Magnus assumes, cannot at this time be demonstrated. It may be of interest to know that in cranial injuries where the dura is torn, the galvanic reaction shows a hyperirritability, while in cranial injuries where the dura is intact, the galvanic reaction remains normal.

In the fields of therapeutics the galvanic current is still used in the treatment of tinnitus. The effect here may be partly due to

the action on the middle ear muscles and partly on the nerve ends. The galvanic current is used in treating certain cases of vertigo. Here the anode is used in producing a sedative effect.

Based on a newer theory of hearing, E. Kupfer advocates the galvanic treatment for tinnitus and tinnitus combined with hearing loss. She employs not the galvanic current itself but rather the changes in the current that occur when it is switched on and off; as well as the oscillations of the current itself.

Faradization is another therapeutic procedure which is a modification of the electric current. While it is not very often recommended and is not frequently mentioned in textbooks on otology, the faradic current appears to be more comfortable to the patient and less dangerous to use than the typical galvanic current. Therapeutically and physiologically it is regarded as an interrupted galvanic current. In cases of middle ear adhesions with retraction of the drum membrane and scarification of the middle ear space, it activates the middle ear muscles by increasing their excitability. Control of the action of the faradic current is easily obtained by watching the contractions of those muscles which are supplied by the branches of the facial nerve. The advantages of faradization lie in the simultaneous bilateral application to the ears and the omission of dizziness. The faradic current is usually applied for ten or fifteen minutes every other day for one month, and then six months later the same course is repeated again. These changes in current are alone responsible for the effects on the nerves. Kupfer calls the above "the impulse technique." She believes that tinnitus is caused by an "autogenic nerve current," and by treating the ear with a compensatory current and by finding a corresponding pole, the direction of the autogenic current is reversed, thus relieving the tinnitus. The results reported were amazing.

The sedative effect of the positive pole of a constant current suggested its use in the treatment of seasickness. Small devices with anode batteries were distributed to many overseas travelers. The result of this type of treatment were not very encouraging because individuals do not react alike. Seasickness, which in a way resembles a mild Meniere's attack, appears to be not only a labyrinthian reaction, but also a change of the entire vegetative system and seems to be dependent upon the acid-base balance. Research in the later theory is now under way.

Another application of the galvanic current is in the form of iontophoresis for treating chronic middle ear infection. From the very beginning of this therapy most otologists agreed that only uncomplicated middle ear infections having large perforations and without cholesteatoma or granulations are suitable for ionization. According to Viggo-Schmidt, usually two ionization treatments in chronic tubal

infections were sufficient to stop the discharge and obtain a dry ear. The technique for the above is as follows: The affected ear is packed with a strip of gauze saturated with $\frac{1}{4}$ to $\frac{1}{2}$ per cent zinc sulphate solution and a specially constructed pharyngeal cathode is placed into the pharynx. The current is allowed to pass through for fifteen minutes. This treatment is based on the fact that the zinc ions coagulate albumen of the cells and the current carries the ions into the deeper structures.

Although the value of zinc ionization sounds very favourable and reports appear from time to time in the literature, only a limited number of otologists employ this method. It is seldom used on a large scale in hospitals or dispensaries.

Diathermy.—Medical diathermy produced by a high frequency generator and known as conventional diathermy has been replaced in recent years by so-called short wave diathermy. One of the difficulties encountered in using shortwave diathermy for the ear is that the electrodes were made very small in order to produce sufficient heat which was directed toward the inner ear. Another factor is the possible danger of producing burns. If the electrodes were made larger, the heat would have to be distributed over a larger area and hence would lose its effectiveness. Secondly, the labyrinthian nucleus which is the target area in inner ear pathology is separated from the surface by two air spaces, i.e., the air column in the external canal and the air column in the middle ear cavity. These two air columns thus lie directly between the electrode and the inner ear. Should the electrode be applied over the mastoid itself, then an even more complex system of air columns are present to oppose the heat waves. Currently the most important objection to the use of diathermy for diagnostic and therapeutic purposes is the lack of accurate control of the amount of heat used. The tolerance differs in each individual patient, especially in the deeper tissues. Acute infections should be excluded for treatment with diathermy because any additional hyperemia in deeper tissues may mask symptoms or produce an additional destruction of inflamed tissues. In chronic cases, local hyperpyrexia may be just as deleterious. Many attempts have been made to combat aural tinnitus with diathermy in otosclerosis and other adhesive processes, but all the reported results were confusing and certainly not convincing as to their value.

Recently Mittelman constructed an instrument which measures the absorbed heat in the human body. Perhaps this method will later be used in controlling diathermy heat in the patient. The new high frequency Watt-meter controls the heat dosage with an error factor ranging from plus 5 per cent to minus 5 per cent. The principle of this measurement is based on a damping calculation or a determination of the various loss resistances, which depend upon the area of the electrodes, the size of the air column

interposed, and the volume of the mass introduced. It may be possible with the new Mittelman instrument to use diathermy for the production of nystagmus in all ear cases where caloric and rotating tests are not practical, or in cases where there is a dry perforation or where labyrinthian inflammations exist, which are not suitable for the Barany test.

Hollender and Cottle, experimenting on dogs, came to the conclusion that diathermy introduced via the external canal does not reach the inner ear because they were not able to produce nystagmus in their animals. Kubo's experiments and findings on human beings have not as yet been duplicated by other investigators. He found that by introducing diathermy via external canal with the head inclined 60 degrees above the horizon, a horizontal nystagmus was produced. However, since these findings are incomplete, they are clinically of little value.

At the present time, besides coagulation, which we are not discussing in this paper, the only other use of diathermy remains in evolving a method for diagnostic purposes, which, with the help of Mittelman's instrument, will give the patient and the physician a greater security because the exact dosage and the amount of heat will then be accurately measured.

Summary:—1. The galvanic current was one of the first and perhaps still is the most widely employed electrical current for diagnosis and treatment of certain aural conditions.

2. The faradic current has been employed in the treatment of tinnitus and good results have been reported by Kupfer when employed according to her special technic.

3. Iontophoresis for middle ear suppuration is still occasionally employed by a few otologists in selected cases.

4. Conventional diathermy has been replaced by short wave diathermy, which with more perfected means of dosage measurement, may find wider utilization in certain aural conditions.—E.E.N.T.M.

Tinnitus Aurium: Etiologic and Therapeutic Considerations.—When one reviews the etiology of persistent tinnitus, he is impressed by the fact that there is so large a variety of causes for "only a symptom." There are, of course, some cases of tinnitus which are promptly relieved by removal of the cause. Lederer points out, on the other hand, that there are certain common causes of tinnitus which are not readily influenced by treatment. These are otosclerosis, senile nerve deafness, degeneration of the organ of Corti resulting from acute trauma, primary nerve deafness of unknown etiology, and secondary degeneration of the eighth nerve following chronic suppurative or nonsuppurative otitis media.

Hayden and Chainski have correctly stated that tinnitus includes all general auditory sensations not caused by sounds outside of the body. They call attention to

the outline of Koester in which these noises are divided into two distinct groups: (1) the so-called entotic and the periotic noises, and (2) subjective noises. "When these noises occur in the ear itself and are caused by an impairment of the auditory conducting apparatus, they are called entotic; when they occur in the vicinity of the ear or are brought to it from elsewhere in the body they are called periotic, and when they are purely affectations of the sound perception apparatus they are called subjective noises."

It is hardly necessary to restate here the various entities in which the different types of tinnitus occur. We know, as Hayden and Chainski have related, that tinnitus and deafness are usually parallel and that patients are encountered without head noises but with impaired hearing, and vice versa. These authors believe that noises in the ear which can only be heard if the external noises are excluded are probably caused by inadequate stimulation of the cochlear apparatus. "If the external auditory meatus is closed by some foreign body, three types of tinnitus can be heard, namely, extremely low cardiac sounds, hissing sounds that synchronize with the cardiac systole, and weak, almost constant buzzing and roaring noises. The two latter types of noises are caused by the mechanical pressure exerted by the foreign body in the canal but are too weak to drown out the physiologic noises. The hissing noises that synchronize with the cardiac systole are due to arterial pressure, and the continuous buzzing and roaring noises are the result of pressure from the arterioles, capillaries and veins." While the otologist usually endeavors to determine the underlying cause of persistent tinnitus, he frequently fails unless he is able to associate the symptom with an impaired hearing such as otosclerosis or nerve deafness.

On the assumption that the essential causative factor in otosclerosis is a gradually increasing defect of the vasomotor mechanism which governs the nutrition of the entire structure of the organ of hearing, experiments have been conducted by McNally and his co-workers toward alteration of the cerebral circulation or cerebral pressure. "They presume that since it is possible to influence the vasomotor mechanism by the use of drugs which act specifically on the sympathetic and parasympathetic nervous systems, it should be possible similarly to influence the cerebral vasomotor mechanism and circulation." The best results have been obtained with ephedrine and belladonna, either alone or in combination.

The otologist should attempt to classify every case of tinnitus, first as to its etiology, and second as to appropriate treatment. Symptomatic therapy seems not only justifiable but highly essential to the welfare of the patient. Finally, it should be emphasized that the problem of tinnitus is one of the most difficult ones in all otology, requiring not only perseverance in management but close specialistic cooperation for

diagnosis, for the utilization of effective measures, and for the constant encouragement of the afflicted person.—E. E. N. T. M.

Problem of Deafness in Aviators.—C.C. Bunch. *War Medicine* 1:873 (Nov.), 1941.

Bunch states that it appears that exposure to excessively loud noise, whether in aviation or boilermaking, is the common cause of hearing losses: in aviation, he concludes, the loud noises of air-planes and air-plane motors often impair the hearing of pilots. Not all pilots are similarly affected. The hearing losses most frequently encountered are for tones near c-4 (2,048 double vibrations) and c-5 (4,096 double vibrations). As the loss progresses with continued exposure, the acuity for lower tones is also affected. Pilots with a decreased acuity for tones near c-3 (1,024 double vibrations) will have difficulty in understanding certain words over the radio and may not hear landing instructions correctly. If the radio guide beam has a frequency near c-3 (1,024 double vibrations) pilots with hearing losses for tones near c-3 can follow it only if they have their radios turned on louder than is ordinarily necessary. Lightning created static in the ears of such pilots may cause additional temporary or permanent hearing losses, incapacitating them to such an extent that they may be unable to hear the radio beam. The hearing losses discussed often escape detection, as the persons affected may be unaware of the impairment because they usually hear the spoken voice. It is possible that the hearing of the pilots involved in the recent airplane accidents may have been impaired, or it may be that permanent losses made it impossible for the pilots to follow the radio beam or to understand exact landing instructions. The problem of hearing losses can be solved only by frequent and accurate audiometric tests.—J.A.M.A., Jan. 31, 1942.—E. E. N. & T. M.

Powder Treatment of Otogenic Infections.—The treatment of chronic suppurative otitis media is nearly always a difficult problem. In spite of careful and rigid management suppuration continues, menacing not only the intracranial structures but also the general health of the individual. The necessity for surgical intervention is frequently an urgent consideration.

If one were to describe the various procedures and drugs utilized to cure chronic running ears a volume would be required for the purpose. Some otologists cling to special therapeutic methods which in their hands have been most successful. Others are constantly experimenting and willing to try any of the newer measures in the hope of improving their end results.

In reviewing some of the more prominent treatments practised in recent years to cure discharging ears devoid of absolute surgical indications, the use of boric-iodine powder stands out as one of the most effective. Few if any otologists will fail to agree on this. This treatment was popularized by Lederman who has contributed several valuable articles dealing with its correct technical application. Dr. N. Sulzberger, a chemist of New York City, was the originator of boric-iodine powder, which, since its clinical trials in 1914, has proved to be of unusual therapeutic value in aural suppurations. Lederman does not contend that this treatment is a panacea, but "it has produced such amazing results in the hands of competent specialists as to warrant its use in properly selected cases before radical surgery is advised."

The favorable results obtained with BI powder has led to trials with other powder preparation. More recently experiments have been conducted with the sulfonamide preparations. Bryant's account of his experience with the local use of sulfanilamide powder in a group of 15 patients is interesting and instructive. This group included three patients who had undergone radical mastoidectomies, and had continued purulent exudation from the operative cavity. In 9 of 11 cases, local treatment had been given previously with but temporary or practically no benefit. This treatment included drops and a powder, which, however, was left unnamed. "When a patient presented himself for examination and treatment, the middle ear cavity was cleansed carefully by the use of cotton-tipped applicators or by gentle irrigations with 70 per cent alcohol. The aural cavity was dried before any powder was used. A not too heavy film of sulfanilamide powder was insufflated into the middle ear cavity." In 5 of 11 patients the treated ears have remained completely dry. "It is significant that in the patients whose middle ear cavities became dry and remained so during an acute infection of the respiratory tract, no exacerbation of the otitis media occurred." It is interesting also to note that of the group of 15 patients 14 derived benefit from the local use of sulfanilamide powder. The conclusion seems justified, therefore, that the local use of sulfanilamide powder is a safe and effective method of treatment for certain otogenic infections.

Here, then, we have two valuable drugs to combat suppurative otitis media. It is of course impossible to determine in advance which drug will be effective in a given case, or, for that matter, if either will. From the results reported, however, it seems reasonable to assume that with these newer remedies we are better able to combat otogenic infections and to reduce potentially surgical cases to a minimum.—E.E.N. & T.M.

Surgery

Action of drugs on the colon.—The drugs in common use for the treatment of post-operative distension and paralytic ileus belong to two groups—the para-sympathomimetic and posterior pituitary. The theoretical basis for employing the former group is well established, and its actions is explained either by the replacement of the natural neuromuscular transmitter by synthetic choline derivatives, or its enhancement by physostigmine or prostigmin, owing to the inhibition of cholinesterase. In practice it has been found that although carbamylcholine and acetyl-B-methylcholine are effective stimulants of the gastro-intestinal tract, since they are not so rapidly destroyed as the natural acetylcholine, yet for that very reason they cause ineffective doses unwanted side-reactions such as flushing, sweating, increased salivation and lacrimation, and a fall in blood pressure. Physostigmine, though equally effective in stimulating the colon, is open to the same criticism; but prostigmin, the synthetic substitute introduced in 1931, is singularly free from these objections and has been used with success in the prophylaxis and treatment of postoperative distension and paralytic ileus. The action of the posterior hormone on the large intestine has been strongly disputed, chiefly on the basis of experiments in dogs, which is not necessarily applicable to man. The vasopressor fraction can be used in the treatment of these conditions, though it is contraindicated in the presence of cardio-vascular disease because of the coronary vasoconstriction. It has been argued that to be effective a drug should increase the propulsive activity of the large intestine rather than its segmenting movements. It is not true that any substance which is at all active will stimulate both equally, for morphine depresses, peristalsis in the colon while increasing the tone. On this basis physostigmine and prostigmin, which are believed to work by the enhancement of the natural processes (and an enema is an invaluable accessory), will be the drugs of choice. Adler, Atkinson, and Ivy have studied the action of various combinations of drugs upon 4 trained dogs with appendicostomies and 4 'fit' adults with colostomies. They used a modified bullon technique by which the propulsive force of peristalsis could be directly measured. In man, pituitrin, physostigmine and prostigmin all increased the 'propulsive motility' of the colon, but it was not possible to grade the dosage of physostigmine so as to avoid side reactions. Oral administration of prostigmin (15 mg.) was effective after several hours delay. Ergotamine given by itself had no discernible effect, but greatly increased and prolonged the action of the other drugs; and the authors concluded that a combination of ergotamine tartrate (0.25 mg.) prostigmin methylsulphate (0.25 mg.) and pituitrin (1.25 units) was the most effective and worth trial in the treatment of postoperative distentions and paralytic ileus. There is as yet no entirely

satisfactory explanation of the synergistic action of ergotamine, though it is known that relatively bigger doses may stimulate the large intestine in intact animals. But this property may be used to increase the activity of the other drugs on the colon and so diminish their unwanted side effects.

—B.M.J., Oct. 1942.

The Use of Hypertonic Saline in Surgical Practice.—By Harold Dodd, CH.M. (L'POOL), F.R.C.S. (ENG.), (From 'The Post-Graduate Medical Journal').

Hypertonic saline, injected intravenously in 30 per cent. solutions in amounts of 20 to 40 c.c. is a valuable remedy to the surgeon. The purpose of this note is to sketch some indications for it and to give illustrative cases.

1. *Spinal anaesthesia.*—The disadvantages to be overcome with nearly all spinal anaesthetics is that of the prevention or restoration of the serious fall in blood pressure which occurs in almost every case. Dr. Joan Walker (1938), of Leicester, pointed out the great value of an intravenous injection of 40 c.c. of hypertonic saline for the restoration of blood pressure. It is given immediately an operation under a spinal anaesthetic has begun. It raises and maintains the blood pressure around normal limits. The writer's experience is in accord with Dr. Walker's statements.

2. *Post-operative spinal headache.*—Since 1934 hypertonic saline has been used with consistent success for post-operative spinal headaches. The dose is 20 c.c.; it should be given as soon as the patient complains of the cephalalgia. Delay in its administration in the hope that it will pass off or that giving tablets of A.P.C. or ephedrin orally will give relief is waste of time, and the patient continues with discomfort, some degree of mental confusion and "muddle-headedness." The injection is made promptly and repeated if necessary once or twice, but this is not often required. An ache at the back of the neck or in the occipital region is also a post-spinal ache and is treated in the same way. This point of the post-operative headache was explored further in a personal communication with Dr. Walker; the enquiry being, was the incidence of post-operative spinal headaches less after the injection of hypertonic saline during operation than in those patients who did not have it? The reply was decisively, "Yes." Fortunately, notes had been kept and these showed that the headaches after saline injection were 5 to 10 per cent. as against 25 per cent. in cases without it.

3. *Blood pressure falls at major operations.*—At operations performed under all types of anaesthesia other than spinal, considerable falls of blood pressure have been recorded, especially towards the end of long procedures, such as resections of the stomach and colon. The hypertonic saline injection has again proved to be dependable as well as improving the patient's colour.

4. *In head injuries.*—Head injuries have been treated by hypertonic saline when the following symptoms have presented.—(a) continued cerebral irritation after four days of the injury. The hypertonic saline is repeated intravenously daily and with ultimate complete relief, but it may take a week or two.

5. *Mental confusion.*—"Muddle-headedness," inability to read for long, to concentrate or fix the interest, are sometimes met after head injuries and spinal anaesthesia. Hypertonic salines will clear this.

6. *After lumbar punctures.*—Over a period of years it has been the writer's experience to see a few patients complaining of persistent headache after simple lumbar punctures for routine medical diagnostic purposes. They have been referred to the surgical department when the usual remedies have failed. All those symptoms have disappeared on the injection of 20 c.c. of 30 per cent. hypertonic saline.

7. *At cerebral operations.*—At intra-cranial operations the intra-cranial pressure may be so great as to cause bulging of the brain and prevent the operation proceeding. This obstruction can be overcome sometimes by an injection of hypertonic saline.

8. *For a case of post-operative encephalitis.*—A man aged thirty-eight was given a low spinal anaesthetic for the radical cure of an inguinal hernia. The anaesthetic was administered by the writer. The practice of boiling the syringe, needles, ampoule of anaesthetic and the file in distilled water was followed. The technique of administration was carefully performed.

Four days after the operation he complained of indigestion. He had suffered from duodenal ulcer dyspepsia for several years; suitable treatment and diet were prescribed. For a few days he improved, but then in the following three weeks a deterioration set in, he began to vomit, developed double vision, became completely unconscious, paralyzed and incontinent of urine and faeces. A lumbar puncture showed a small increase in the number of cells in the C.S.F. His care was undertaken by physician colleagues; after a week at a joint consultation the diagnosis of encephalitis was pronounced and a hopeless prognosis given, three to four days only being estimated. Further treatment was discouraged as useless.

From then onwards a regime of daily injections of 20 c.c. of hypertonic saline was begun together with intravenous injections of T.A.B. vaccine every fifth day, beginning with 50 million and subsequent doses increasing by double, i.e., 100, 200, 400, 800. Improvement began slowly. He was occasionally conscious, then continually so, continence returned and control of his limbs. In three weeks he was discharged and two months later he returned to work.

9. *For paralytic ileus and pulmonary oedema.*—Professor Flint (1939) writes that hypertonic saline has a beneficial effect on

these conditions. In early post-operative gross oedema of the lungs the results have occasionally been dramatic. He has recorded that in some patients with ileus the blood pressure is low and the relationship of the diastolic and systolic pressure seriously altered. It may be that the increase in blood pressure which follows the administration of the saline and the exchange of tissue and venous fluids which it causes contributes to the improvement. Again chlorides are always depleted in intestinal obstruction and emesis.

Difficulties.—The only difficulty experienced in the use of the hypertonic saline is that of finding a vein, which is a technical item and disappears with experience and resolution. Occasionally pain has been reported from a thrombophlebitis in the vessel which has been used, but this is rare. When it is given for headache patients are warned that for 20 to 30 minutes their discomfort or other symptoms will be aggravated and then the improvement will follow. One patient said she was unable to read the paper after the operation until after her injection of saline.

Rationale.—The effect of the saline is to attract fluid from the tissue spaces in order to dilute the 30 per cent. saline to normal saline strength in the blood. If this is regarded as 1 per cent. (actually it is less than this), then 20 c.c. of 30 per cent. saline is equal to 600 c.c. of 1 per cent. saline, so that the tissues must find 580 c.c. of fluid. This raises the blood pressure partly by filling the blood vessels. It also relieves congestion, especially in areas with traumatic and chronic inflammatory oedema, and by so doing the results support the supposition that it initiates resolution, especially in head injuries, for there is no space in the skull cavity for swelling. In some patients the chlorides are beneficial, whilst in others the increase in blood pressure improves the circulation and starts the process of return to normal.

—G. P.

Leg Amputations in Diabetic Gangrene. Saul S. Samuels. *Annals of Surgery*, CXII, 105, July 1940.

The author states that there are two major indications for amputation in diabetic gangrene: (1) rapidly spreading gangrene with no signs of healing or formation of a line of demarcation, and (2) uncontrollable infection of the foot. All of these cases have inadequate arterial circulation.

The author claims that teaching in the past has been to the effect that closed amputation in these cases is dangerous, because of the likelihood that the infection would spread throughout the body and into the thigh; therefore, guillotine or modified guillotine amputations should be done. (The reviewer does not believe this teaching has been universal). The author states that the mortality in this type of procedure has been as high as 75 per cent. in some hospitals. He goes on to state that the fear of infection

is groundless, and, if a simple procedure is carried out and proper postoperative care is given, the mortality will be low. He also advocates simplification of the preoperative treatment. If the patient is not dehydrated, transfusions and intravenous injections of glucose and saline with insulin coverage are not necessary. If infection is present, it will be difficult or impossible to bring the blood sugar down within normal limits, and delay may be disastrous. Immediate operation should be performed regardless of the diabetic status.

Cyclopropane is the best anæsthetic. If this is not available nitrous oxide should be used. The use of spinal anæsthetics is not advisable.

He describes the method of amputation in detail, including the method of draping. No tourniquet is used. A circular incision is made at the level of the upper border of the patella, at which level the muscles are also cut. Vessels are clamped as they are cut. The sciatic nerve is not injected with alcohol. The femur is sawed through two inches proximal to the level of the skin incision. Vessels are ligated with silk, which is also used to close the muscles and skin. No drains are used.

The patient may be allowed out of bed on the day following the amputation, and may be in a wheel chair every day thereafter. On the sixth or seventh day sutures are removed, and the patient may go home one to four days later. Postoperative care of diabetes is the same as before.

In thirty-three amputations performed by the author the mortality was 9 per cent.

The author describes a similar technique for amputations below the knee.—O.B. Bolibaugh, M.D., San Francisco, California.
—J.B.J.S.

Treatment of Fractures of the Patella by Partial Excision of Fragments.—Lionel D. Prince (*American Journal of Surgery*, Aug. 1941) says that partial excision of the patella for fracture with restoration of the extensor apparatus of the knee by suture of the patellar tendon to the proximal fragment has given uniformly satisfactory results. The period of disability is definitely shortened with rapid restoration of function in all uncomplicated cases. The uncertainty of union due to the low osteogenic properties of the patella and the protracted disabilities that may result from the long period of immobilization necessary to obtain union is obviated. The elliptical incision below the patella is the best method of approach. The lower fragments are cut away from the ten-

don, care being taken to disturb the tendon as little as possible. Bone fragments and clots are removed. The edges of the upper fragment are rounded and the fibrotendinous layer on the superior surface of the patella is elevated without disturbing its intactness. Three holes are then drilled through the upper surface of the patella downward and forward to emerge on the fractured surface of the fragment just above the articulating cartilage. The patellar tendon is then affixed to the fragment by means of 2 mattress sutures of No. 2 or No. 3 chromic catgut. The fibrotendinous layer over the patella is then attached to the patellar tendon with mattress sutures of the same material, the fascia overlapping the tendon. The contour of the knee joint is not appreciably changed and the protective mechanism of the patella is still present. A splint or cast is applied for 2 or 3 weeks. Walking is permitted in 10 to 12 days and joint motion in the third week.—G. P.

Diagnostico Radiografico Del Mal De Pott Dorsolumbar (The Roentgenographic Diagnosis of Dorsolumbar Pott's Disease). Carlos E. Ottolenghi. *Revista de Ortopedia y Traumatologia*, VIII, 394, 1939.

In the diagnosis of dorsolumbar Pott's disease, the author emphasizes the following points which are all brought out in the roentgenograms: the early appearance of the lesion, spondylitic scoliosis, narrowing of the intervertebral disc, herniation of the disc into the body of the vertebra, central lesion with collapse, multiple and irregular foci, mediastinal abscess, extended destructive lesion with angulation, and diffuse lesions extending over several vertebrae.

For differential diagnosis, dorsolumbar Pott's disease is contrasted with vertebral epiphysitis, metastases of diffuse carcinoma, tuberculosis of the vertebrae, tabetic arthropathies, hemivertebrae, and particularly the osteomyelitis and infectious spondylitis with osteophytic periosteal reaction.

In one case of Pott's disease the author demonstrates the central cavity of the vertebral body, which had not changed its normal form and showed only the presence of the large carious zone in its interior. In another form the disease is localized in the posterior arches. In the roentgenogram this is seen as loss of substance at the level of the lamina and pedicle, similar to that observed in cases after a hemilaminectomy.

His varied material demonstrates the polymorphous character of tuberculosis.—ARTHUR STEINDLER, M.D., Iowa City, Iowa.
—J. B. J. S.

Medicine and Therapeutics

Tourniquet for Heart Failure.—The application of venous tourniquets to the limbs has been practised instead of venesection in cases of heart failure for a number of years since its introduction by Danzer in 1928. The peripheral venous blood is turned into a reservoir in which may be stored about 12 to 15% of the circulating blood volume. The method was shown to be effective in the treatment of left ventricular failure by Weiss and Robb in 1933. An interesting light is thrown on its mechanism by Kountz, Smith, and Wright, who used a machine which maintained inflation of cuffs placed on all four limbs, for, four minutes and inflation for one minute; the latter so arranged, as to operate on each limb in turn, so that three limbs were always congested. The authors found that cases of left ventricular failure responded very well, but those with right ventricular failure, as in acute or chronic cor pulmonale, did not. The point of interest was this; while the venous pressure fell and kymographic pulsation of the heart diminished, the size of the heart as measured by its transverse diameter, increased appreciably in normal subjects and in two patients with mitral stenosis. Cases of left ventricular failure showed no such increase. On the contrary, two of them showed a smaller heart, shadow during venous compression. No explanation of this phenomenon is available. Cardiac output was not measured; but as neither the pulse rate nor the blood pressure altered appreciably, whereas the venous pressure and amplitude of the cardiac pulsation fell; it may be assumed that the cardiac output fell too. Before looking for the solution the facts should be confirmed, for very few cases, seem to have been studied in this paper. However, the method of treating orthopnea and paroxysmal cardiac dyspnea by compression of the limb veins is again brought before the notice of physicians.
—B. M. J., Dec. 12, '42.

Trigeminal Neuralgia.—On the hypothesis that the paroxysms of trigeminal neuralgia are ischaemic in origin, W. E. Adams and William Robinson (*The Lancet*, Nov. 1941) attempted the treatment of this condition by vasodilator drugs. They treated 7 patients—2 men and 5 women—whose ages ranged from 39 to 62 and in whom attacks had occurred over periods of 1-5 years. Nicotinic acid was used in doses ranging from 50 mg. twice daily to 75 mg. four times daily. In every case there was improvement, sometimes amounting to complete relief. This improvement has been generally maintained. In 2 cases a paroxysm at its height was relieved in a few minutes by an inhalation of amyl nitrite. Vasoconstrictor drugs (adrenalin, Benzedrine) were given in 3 cases; in 1, adrenalin provoked an attack before treatment with nicotinic acid had begun but failed to do so afterwards; in the other 2, Benzedrine increased the number and severity of the

paroxysms. Because it has been found in Meniere's disease and nerve deafness to be the most effective vasodilator, they relied mainly on nicotinic acid, and not on acetylcholin which was used by Cooper in trigeminal neuralgia. In 2 cases treatment with nicotinic acid was begun at once in an attempt to stabilize the dosage. It was found, however, that there is considerable individual variation in the response to this drug, and, unless relief was obtained earlier, it was at times necessary to increase the dosage until signs of generalized vasodilatation appeared.—G. P.

The Chemotherapy of Staphylococcal Infections.—Edwin E. Osgood and Inez E. Brownlee, *J. Pediat.* 17: 740 (Dec.) 1940.

"In cultures of living human marrow infected with hemolytic or nonhemolytic *Staphylococcus aureus*, neoarsphenamine and sulfathiazole have proved superior to sulfanilamide and sulfapyridine. . . .

"The most desirable concentration of neoarsphenamine is 1:150,000; this corresponds to about 130 gamma of arsenic per 100 c.c. . . .

"The optimal concentration of sulfathiazole is from 5 to 10 mg. per 100 c.c., with relatively little difference in effectiveness in the lower and higher concentrations.

"In some experiments neoarsphenamine was definitely superior to sulfathiazole. In other experiments the reverse was true. The combination of the two drugs was often more effective than either alone and was always more effective than the less effective of the two used.

"Neither drug led to complete sterility of the cultures in as high a percentage of the cases as did sulfanilamide against the beta hemolytic streptococcus when similarly tested.

"The larger the inoculation of organisms, the less effective were the drugs.

"A tentative dosage plan to attain the proper blood levels of these drugs clinically is outlined.

"In a limited number of cases of serious staphylococcal infections, neoarsphenamine alone and sulfathiazole alone or the two in combination have demonstrated definite therapeutic value." **AUTHORS' SUMMARY.**
—A. J. D. C.

Pathogenesis of Thyrotoxicosis.—Rundle states that, although the ocular component and thyroid intoxication are usually associated, they may occur as independent phenomena. Thus in 332 consecutive instances of thyrotoxicosis there was retraction of the lids or proptosis or both in about 3 of every 4 patients. But ocular signs without goiter or hypermetabolism are not rare. The clinical evidence that the ocular changes have an extrathyroid origin supports the pituitary theory of exophthalmic goiter.

Experimental data provide the most suggestive evidence. Extracts of anterior lobe not only activate the thyroid and cause secondarily all the manifestations of thyrotoxicity but also result in exophthalmos. Some of the clinical factors associated with the onset of thyrotoxicosis appear to act by disturbing the higher controlling mechanism of the gland. There is evidence also that the responsiveness of the thyroid epithelium is variable. Certain thyroid conditions, notably simple goiter, may predispose to the thyroid intoxication of exophthalmic goiter. Therefore it is convenient to speak of pituitary and thyroid factors in the pathogenesis of thyrotoxicosis. There was a family history of thyroid disease in 22 per cent of the 322 patients with thyrotoxicosis. Antecedent simple goiter had been present in 18 per cent. It was associated with psychic trauma with the onset of symptoms in 42 per cent. and the disease developed within two years of the menopause in 20 per cent. When a psychopathic personality or a psychic trauma is associated with the onset, psychoneurosis may coexist with thyrotoxicosis, but it is not an integral part of the syndrome. Follow-up studies show a comparatively heavy incidence of nervous disorder after thyroidectomy. This seems to favor the concept of thyrotoxicosis as a general neuroendocrine disorder in which thyroidectomy removes only the most important of the glandular components, leaving untouched the fundamental disorder. It has been claimed (Crile 1935) that persistent hyperexcitability suggests that a constitutional sympathicotonia forms the background on which thyroid hyperplasia develops. Although it is possible that a labile autonomic nervous system predisposes to thyrotoxicosis, it is doubtful whether a division of that system is especially affected.

—J.A.M.A.

Alternating Tremor and Its Relation to Cortical Pathways.—B. H. Balser (*Archives of Neurology and Psychiatry*, 47: 962, June, 1942) reports a case in which the patient had

shown tremor and rigidity (paralysis agitans) of both hands, forearms and legs for twelve years before thrombosis of the right middle cerebral artery caused left hemiplegia. As the patient regained motor activity to a considerable extent during a three year period of observation the tremor did not recur but the rigidity remained the same. Death was due to cardiac disease, and a careful study of the brain and spinal cord was made postmortem. There was no history of encephalitis in this case and no primary specific lesion in the basal ganglia or the substantia nigra "to explain the presence of paralysis agitans." The question arises whether the cessation of tremor in this case was due to degeneration of some definite part of the brain; this question is of interest in relation to the neurosurgical treatment of severe paralysis agitans that does not respond satisfactorily to medical treatment. In 35 cases of postencephalitic paralysis agitans studied pathologically and clinically, there was involvement of the pyramidal tract in 6 instances, but all these patients had persisting alternating tremors until the time of their death. In the case reported it was found that the pyramidal tract for the leg was "relatively intact," yet tremor disappeared from the leg as well as from the arm. Three-fifths of the pyramidal tract was destroyed, and this tract evidently has some relation to tremor, but other "pathways," all of which had their origins in or connections with the frontal lobe, were affected by degenerative changes; this includes the frontopontine system and part of the temporo-pontine system, the fronto-thalamic fibers to the anterior lateral thalamic nucleus, the corticorubral and corticonigral fibers. These findings indicate that not only area 6 but the parapyramidal area in the frontal portion of the brain "is closely related to tremor;" thus in attempting to destroy all the fiber connections of the superior frontal convolution, "it is not sufficient" to eliminate area 6 only.

—Medical World.

Obstetrics and Gynecology

Sacral Anæsthesia in Obstetrics.—W. H. Poole has reported the results he obtained when using sacral nerve block in obstetrics. The needle can be introduced in the hiatus between the last sacral spine and the first piece of the coccyx; the hiatus is $\frac{7}{8}$ in. long by $\frac{1}{2}$ in. wide and is guarded by the posterior sacrococcygeal membrane. A fine lumbar-puncture needle is used and the bony landmarks carefully defined, especially in an obese patient. The subject lies in the left lateral position and the tip of the coccyx is marked; $1\frac{1}{2}$ -2 in. above this the transverse processes of the first coccygeal vertebra are felt and superior and lateral to these the more prominent sacral cornua. Just below these lies a diamond-shaped depression like a miniature fontanelle marking the sacral hiatus. The posterior sacrococcygeal

membrane lies 3-12 mm. below the surface. Having pierced the membrane the advancing needle impinges on the bony anterior wall of the canal; it is withdrawn and guided about $1\frac{1}{2}$ in. up the canal. Neither blood nor cerebro-spinal fluid should escape from the needle, and no resistance should be encountered to the injection of the anæsthetic. Poole made several experiments to determine the best solution for injection and after a trial of 2% Procaine with 3% Quinine and Urethane, 2% Procaine only, and 1 in 1000 Procaine in aqueous solution, he rejected them all because of the brevity of the anæsthesia. Instead he used 1 in 1000 Procaine in normal saline in dosage of 25 c.cm.; this gives anæsthesia lasting at least 4 hours and often longer, of sufficient depth to allow the application of forceps in

the low operation and the repair of the perineal tears. Any obstetric anæsthetic is required for two main critical periods of pain; that accompanying the later stages of cervical dilatation and that produced by the final stretching of the soft parts of the pelvic floor. If carefully timed, sacral anæsthesia will successfully relieve both these painful crises, but it must not be employed too late for the first nor too early for the second. In primiparae the optimal time for injection is towards the end of the first stage of labour, in multiparae naturally at an earlier stage. The immediate results of a successful injection will be a decrease or even cessation of uterine contractions; this is a transient action lasting about half an hour, and provided the pains were previously strong and regular, they will return with equal vigour. Inefficient uterine action, as in primary inertia is an absolute contraindication to this method of anæsthesia. Poole analyses his results critically in 32 cases in which he has used sacral nerve block. He assesses his failures at 10 cases with the following causes: Faulty technique in 3, too early administration in 2, and inefficiency of uterine action after the injection in 5. All these failures with attention to technique and careful selection of cases could have been eliminated. No ill effect in the mothers or the babies could be blamed on the anæsthetic. The method has obvious advantages at least from the fetal point of view, because of the avoidance of cardio-respiratory depressants in the circulation. Should the occasion arise for a major obstetric procedure, it is a simple and safe matter to supplement the regional with a general anæsthetic, the total dosage of which will be proportionately smaller and consequently less toxic.—*Lancet*.—G. P.

Low Backache and Gynecological Lesions.—By Margaret Moore White, F.R.C.S., (From "The Journal of the Society of Massage.")

Low backache is symptom of so many conditions that in order to ascertain the underlying cause in each case it is necessary to take an accurate history of the character, situation, and mode of onset of the pain, and to make a thorough general examination of the patient.

First and foremost, backache is a symptom of general fatigue, and the woman who is overworked, undernourished, and insufficiently rested is likely to be a prey to it. Backache may date from a long confinement to bed, a gynecological operation, or childbirth. If care is taken at the appropriate time, these unfortunate sequelæ may be prevented. A patient confined to bed in the sitting position should have a pillow placed low down behind the lumbar region, and a "donkey" firmly fastened beneath the knees to prevent slipping. When a gynecological operation is performed in the lithotomy position, care should be taken that the lateral uprights on the table, to which the legs are affixed, are adjusted to the same height

so that no strain occurs at the sacro-iliac joints. Finally, backache occurring during pregnancy should be dealt with at the time.

We know that in certain acute infections such as smallpox, typhoid, influenza, and septicæmia, backache is a prominent feature, but we do not so readily realize that low-grade infections may be its underlying cause, e.g., dental infection, purulent sinuses, and septic tonsils. Our examination of the patient should therefore include a search for a possible septic focus.

Debilitated and anæmic persons complain of backache on slight exertion. Backache due to a lumbar fasciitis may occur in young persons suffering from gonorrhœa, and is not infrequently accompanied by pain in the feet due to inflammation in the plantar fascia.

BACKACHE AFTER CONFINEMENT.—Backache may be a sequel to pregnancy and childbirth in several ways.

Coccygodynia.—During the expulsion of the foetal head from the pelvis, the coccyx is deflected backwards and excessive movement takes place at the sacro-coccygeal joint. If this is not possible, there may be fracture of the small bones of the coccyx, dislocation of the joints, or ligamentous tears. Coccygodynia may be associated with sacro-iliac strain, or it may be a local neuralgia. It is more common in highly-strung or neurotic individuals. The patient complains of pain in the affected area on sitting, and especially manifest on rising from the sitting position, since the muscle action which this involves pulls on the coccyx. Pain may also be excited by the act of defæcation. In order to avoid pain from direct pressure on the coccyx, the patient often sits on one buttock so that the weight is taken on one ischial tuberosity.

Pelvic Girdle Pain.—During the later months of pregnancy there is a relaxation of the pelvic joints and ligaments in preparation for the expansion required during childbirth. X-ray examination has shown that there may be from $\frac{1}{4}$ in. to $\frac{3}{4}$ in. separation of the pubic bones at the symphysis and minor degrees of separation at the sacro-iliac joints. The separation may occasionally be so wide that the patient is unable to walk during the last weeks of pregnancy. In minor degrees great support may be obtained by the application of a firm piece of strapping round the pelvis; or in those cases where pain is only felt in the back, strapping may be applied from in front of one anterior superior spine across the sacro-iliac joints to the front of the other. This strapping should be continued for a few weeks after delivery.

PELVIC CONGESTION.—Broadly speaking, the gynecological disorder responsible for backache are those causing pelvic congestion, or displacements which drag on the uterine supports. Congestion may be caused by chronic inflammation of the cervix, the uterus or its adnexa; by varicose veins of

the broad ligament, or by tumours of the ovary, uterus, or pelvis.

Cervical Lesions.—Chronic infection of the cervix frequently follows injury to the cervix at childbirth or an acute gonorrhoeal infection; or, like a chronic appendix, it may be of insidious onset. The condition is usually associated with a discharge. Erosion, a shallow ulcer on the neck of the womb, is also associated with chronic infection and a discharge.

The Uterus.—Chronic infections of the uterus may lead to a feeling of heaviness in the pelvis, and backache. Similar symptoms may be due to fibroids. These may grow large, press on other structures in the pelvis—e.g., vessels, nerves, or the bladder—or become impacted. Those particularly which are very vascular, and those which press on the back wall of the pelvis, cause backache.

Retroversion of the uterus can also cause backache. In a small percentage of cases it is congenital; the uterus is mobile and its position can be corrected (though usually it slips back again). The retroversion is then unlikely to cause backache, but if the uterus is held back and bound down by pelvic inflammation or falls back after childbirth and remains congested and flabby, it may cause backache.

Infected Fallopian Tubes and Ovaries:—The tubes are quite often the seat of infection. They may be infected by direct extension upwards from an infected uterus or cervix after an abortion or a gonococcal infection; or by direct extension from an

adjoining infected organ—e.g., the appendix—or, lastly, by blood-borne or lymphatic spread, as in tubercular infection. The only symptoms may be aching and heaviness in the pelvis and backache, but often the periods are heavy and painful.

The infection may never be acute in onset, and is hence diagnosed with difficulty; but palpation may reveal fixed swellings on either side or behind the uterus, and a non-mobile uterus. In cases such as this, pelvic diathermy or infra-red ray therapy may be of assistance, as operation is in many cases not justified and may be followed by more pelvic adhesions.

Ovarian Cysts and Tumours do not often give rise to backache unless they are (1) impacted in the pelvis, (2) solid and so heavy that they drag on the pedicle of the tumour, (3) inflamed or malignant and adherent to other structures.

Vaginal and Uterine Prolapse.—Any condition that weakens the floor or stretches the supports can alter the position of the uterus. This alteration may occur, in childbirth if the levator ani muscles are stretched or torn, if tears of the ligaments occur, or if infection sets in and damages the tissues.

Displacement may be merely dropping of the vaginal walls (vaginal prolapse), dropping of the uterus (uterine prolapse), or backward displacement (retroversion). Backache and chronic ache on the left side of the pelvis are the usual symptoms. Minor degrees of vaginal prolapse can be corrected by exercises which tone up the pelvic and perineal muscles.—G. P.

Dermatology

Treatment of Infantile Eczema.—*Local Treatment:* In the seborrhoeic type where the scalp is covered with large thick crusts, frequent applications of a mixture of two per cent salicylic acid in equal parts of castor and olive oils will prove effective as a softener. This may be alternated with a three to five per cent ointment of ammoniated mercury. Following are the prescriptions and the routine:

1. $\mathcal{R}$ Acidi salicylici ... 4 Gm. $\mathfrak{Zi}$
Olei olivæ ... 90 cc. $\mathfrak{f}\mathfrak{Z}\mathfrak{iii}$
Olei ricini ... 90 cc. $\mathfrak{f}\mathfrak{Z}\mathfrak{iii}$
M. Sig.: Apply as scalp rub once daily (A. M.)

2. $\mathcal{R}$ Ung. hydrargeri ammoniati (three per cent) ... 60 Gm. $\mathfrak{Zi}$
Sig.: Apply as scalp rub once daily (evening).

1. Prescription 1 is to be rubbed in once daily in the morning. During this scalp rub, have the mother or nurse break up the crusts by means of the fingernails or a fine-tooth comb.

2. The ammoniated mercury ointment is to be rubbed in once daily [evening].

3. The alternating scalp rubs are continued for three or four days. The head is not to be washed during those treatments.

4. On the fourth day, the scalp is shampooed with soap and water and the loose crusts and scales removed.

5. If the scalp is not entirely cleared of crusts and scales, allow an interval of three or four days and then repeat the procedures.

In cases in which the scalp is mildly involved, with small, flaky crusts, a simple olive oil rub twice daily, followed by a shampoo after three or four days, will usually suffice.

In the acute stages of eczema, where the face is red and raw and exuding serum, mild astringent compresses are indicated. Boric acid, one tea-spoonful to a glass of water, is an excellent type of astringent. The compresses should be applied hourly and discontinued as soon as there is a cessation of exudation. Thiersch's solution, a combination of boric acid and salicylic acid, is often efficacious as an astringent compress:

- $$\mathcal{R} \begin{array}{ll} \text{Acidi boric} & \dots 12 \text{ Gm. } \mathfrak{Z}\mathfrak{iii} \\ \text{Acidi salicylici} & \dots 2 \text{ Gm. } \mathfrak{Z}\mathfrak{ss} \\ \text{Aque dest} & \dots 1000 \text{ cc. } \mathfrak{f}\mathfrak{Z}\mathfrak{xxxii} \end{array}$$
- M. Sig.: Apply undiluted as a wet compress.

During the exudative phase of the eczema cycle I have found calcium gluconate a valuable adjunct. Injected intramuscularly in doses of 3 to 5 cc. [45 to 75 minims] repeated at intervals of three or four days, it seems to have a drying effect, possibly by decreasing capillary permeability. Ointments and greasy preparations are absolutely contraindicated as long as there is serous exudation. Mild antipruritic lotions are in order, such as the following:

- $$\mathcal{R} \begin{array}{ll} \text{Pulv. calaminæ} & \dots 4 \text{ Gm. } \mathfrak{Zi} \\ \text{Pulv. zinci oxidi} & \dots 8 \text{ Gm. } \mathfrak{Z}\mathfrak{ii} \\ \text{Acidi boric} & \dots 4 \text{ Gm. } \mathfrak{Zi} \\ \text{Glycerini} & \dots 8 \text{ cc. } \mathfrak{f}\mathfrak{Z}\mathfrak{ii} \\ \text{Aque calcis. q. s. ad} & 180 \text{ cc. } \mathfrak{f}\mathfrak{Z}\mathfrak{vi} \end{array}$$

Menthol [1/4 per cent] may be added to the above for its cooling, antipruritic effect. However, phenol should not be incorporated in lotions applied to raw, serous surfaces.

When the eczematous areas become dry, with formation of scales and thin crusts, ointments are indicated. Of these, the commonly used chief ingredient is crude coal tar. This may be employed as a three to five per cent ointment. Sulzberger recommends the application of undiluted tar, painted thickly on the face and covered with purified talc. He finds this less irritating than other active remedies. He gives the following procedure:

1. The tar should be left on from one to three days. Following this, a face mask with borated petrolatum should be applied for 24 hours.

2. The tar painting should then be repeated, the layer left on for another two or three days, followed by a day of lubrication.

For many years I have used, with good results, an ointment consisting of one per cent oil of cade and boric acid in Lassar's paste:

- $$\mathcal{R} \begin{array}{ll} \text{Olei cadeini} & \dots 0.6 \text{ cc. } \mathfrak{M}\mathfrak{x} \\ \text{Acidi boric} & \dots 1.3 \text{ Gm. gr. xx} \\ \text{Pulv. amyli} & \dots 16 \text{ Gm. } \mathfrak{Z}\mathfrak{iv} \\ \text{Pulv. zn. oxidi} & \dots 16 \text{ Gm. } \mathfrak{Z}\mathfrak{iv} \\ \text{Petrolati} & \dots 60 \text{ Gm. } \mathfrak{Z}\mathfrak{ii} \end{array}$$

M. Ft. Ung.: Sig.: Apply to affected parts b. i. d.

Whether tar or other basic ingredients are used, the important thing to remember is that the strength of these ointments should not be too great. Strong medicaments often act as a therapeutic boomerang by causing irritation to skin areas already denuded. Bland ointments will give better results. This is especially significant in treating large surface areas.

The involved portions should be covered after the application of ointments. For this purpose the best material is a soft cotton or linen cloth. For the face this should be applied as a mask, with holes cut for the eyes, nose, and mouth. Other body areas must also be carefully bandaged. For the removal of ointments a pure olive oil or liquid vaseline may be used. Following a course of treatment with specific types of ointments the skin should be treated with bland preparations such as calamine-zinc oxide paste, Lassar's paste, or a weak boric ointment. These are applied twice daily. Superimposed impetiginous lesions respond to an ointment of three to five per cent ammoniated mercury, applied once daily. X-ray therapy may be tried in cases in which the response to other local forms of treatment is slow. The treatments should not be given too frequently. At best, this type of therapy is merely palliative. Recurrences are common following roentgenotherapy.

Constitutional Treatment: The general condition of eczematous infants must be carefully watched and supervised. The majority are usually well nourished and fat, but many show nutritional disturbances. Cod-liver oil and orange juice should be given daily, provided one is certain that they can be eliminated as allergic factors. If a baby shows sensitivity to orange juice, ascorbic acid should be substituted. This may be given in daily doses of 50 to 75 mg. [$\frac{1}{5}$ to $1\frac{1}{5}$ grains]. Where plain cod-liver oil is not well tolerated the substitution of small doses of vitamin A and D concentrates is indicated. The bowel function should be carefully regulated. Constipation can usually be overcome by suitable changes in the diet. In obstinate cases mild laxatives may be given. Water should be given frequently, particularly if there is evidence of dehydration. Where anemia is present iron should be given. This may be administered in the form of the elixir or syrup of ferrous sulfate, 2 to 4 cc. ($\frac{1}{2}$ to 1 dram t. i. d.) or as the saccharated carbonate of iron, 0.3 to 0.6 Gm. [$\frac{5}{16}$ to 10 grains t. i. d.]. If the anemia is marked, injections of liver extract are advantageous.

Kidney function should be carefully noted and, if sluggish, may be stimulated by the administration of mild alkaline diuretics, such as potassium citrate or acetate. Vitamins, notably the B complex, should be given in sufficient dosage to facilitate adequate nutritional progress.

Dietetic Treatment.—In the case of the breast-fed baby a careful investigation should be made to eliminate, as far as possible, causes other than suspected allergy to human milk. The mother's diet may include foods which have a sensitizing effect on the infant. If she is patient—and few of them are when their babies' respective skins are covered with eczema—the breast feedings may be continued while treatment is aimed at maternal dietary eliminations. Should this procedure fail, however, the question then arises: Should the baby be weaned?

Once it is established that the sensitizing factor is in the mother's milk, it has been my practice immediately to wean the baby. As substitute feedings there are available a large number of milk foods. The selection of a proper artificial food depends upon the suspected etiologic factors, notably the constituent fat, carbohydrate, and protein. If the particular case is one of fat intolerance, boiled skimmed milk may be given. If there is a favorable response within a reasonable period of time, the tolerance to fat can be determined by the gradual additions of cream until the optimum level is reached. Whole milk, subjected to prolonged boiling and properly diluted, with suitable carbohydrate additions, should be given a trial if protein sensitivity is suspected. Empirically, one may feed evaporated milk, goats' milk, lactic acid milk, or one of the synthetic foods now available. The results are sometimes striking.

For infants with definite sensitivity to all milks, rather than temporize with attempts at desensitization it is perhaps more practical to substitute a milk-free food. Soybean flour, with additions of carbohydrate, fat, and salts, is probably the leading milk substitute. It has been shown that a properly synthesized soybean food is adequate for the nutritional needs of most infants.

—*Medical World.*

Chilblains.—Chilblains or erythema pernio usually affects the extremities of subjects with poor peripheral circulation. It appears as various shades of red and purple infiltrated patches and plaques, which are tender and itch or burn, and, characteristically, cold weather incites their presence. The parts are cool to the touch, and the redness disappears on pressure. The manifestations tend to disappear in the warmer seasons. The disease is most prevalent in damp, cold climates. It affects people with the so-called chilblain circulation, which is feeble and is sometimes denoted by cold hands and feet.

In some cases chilblains and its background of impaired circulation becomes difficult to distinguish from livedo reticularis of the extremities, acrocyanosis and erythrocyanosis. A dusky reddish appearance may be imparted by permanently dilated superficial blood vessels, giving a reticulated and marbled pattern. Such changes in the vessels can be produced by syphilis, tuberculosis and toxemias; anomalies of the blood vessels and arteriosclerosis as well as infectious processes may be other causes. A tuberculous background not infrequently may be present in those with poor circulation and subject to frostbite.

Simple pernio needs to be differentiated from lupus pernio, which is a type of sarcoidosis. The latter is a manifestation of tuberculosis, a large number of observers believe. It manifests itself as erythematous symmetrical areas that are infiltrated and thickened. They vary in color but are often a type of bluish red. They may have dilated blood vessels coursing over them. The

diagnosis is readily made by microscopic examination. The tissue has a characteristic appearance. The treatment is with arsenical and gold administrations and exposure to roentgen rays. This type of lupus pernio is the so-called Besnier variety, probably due to tuberculosis.

A second variety of lupus pernio, the Hutchinson type, or chilblain lupus, is a manifestation of lupus erythematosus. This consists of infiltrated erythematous patches and plaques which are aggravated in cold weather. The lesions occur on the face and extremities. Early they look like chilblains but later become more infiltrated and permanent and then look like lupus erythematosus. This type lacks the brownish nodules seen in the Besnier type when viewed through a glass pressed against the surface. Later the plaques are bluish or violaceous and scale, and finally they show atrophy, beginning first at the centre. The histologic changes are those found in lupus erythematosus. The greatest difficulty in distinguishing these lesions from ordinary frostbite is present early before tumefaction occurs. Ordinarily, however, chilblains disappears in warm weather, but lupus pernio continues on, though the latter is worse in the winter.

The treatment of chilblains is by attention to the health in general. A tuberculous background, for example, may be present. The circulation should be improved with exercise and locally by friction and massage. Camphor liniment or bay rum may be applied. The extremities may be covered thoroughly with talcum and wrapped in cotton wool held in place by a bandage. The extremities should be kept warm continuously. The administration of arsenic before cold weather sets in is considered prophylactic. The cautious use of acetylcholine and related materials locally as by iontophoresis may be considered as of the newer remedies and not entirely evaluated at present.

—*J. A. M. A.—G. P.*

Ulcers of the Leg: Ecthyma.—George Millan Gutierrez, *Prensa med. mex.* 6:11 (Jan. 15) 1941.

Ecthyma starts as an impetigo, a lesion of the epidermis which through lack of care and neglect in poorly nourished infants becomes deep and reaches the dermis, producing an ulceration most frequently on the legs. The cause is the streptococcus, the same organism which causes the common impetigo. Ecthyma is inoculable and auto inoculable, and similar ulcerations or pustular lesions are found surrounding the primary lesion. The differential diagnosis is discussed.

The following treatment is recommended:

1. Elevate the leg.
2. Remove the crusts by the use of hot moist fomentations, as the lesions must be free of crusts before treatment can be effective.
3. Apply fomentations of resorcinol or of alcohol:

Resorcinol ... 1. Gm.
Mix and pulverize; place in no. 3 papers.
Directions: Dissolve 1 paper in 1 liter of boiled water.

or
Copper Sulphate ... 1.0 Gm.
Zinc Sulphate ... 1.0 Gm.
Distilled water ... 500.0 cc.

Allow fomentations to remain on for one-fourth to one-half hour.

4. Touch the ulcer with 1 per cent solution of silver nitrate.

5. Apply mild mercurial ointment U.S.P. or the following ointment:

Subcarbonate of iron ... 1.0 Gm.
Petrolatum ... 30.0 Gm.

6. If the ulcer is slow in healing, it must be stimulated, for instance by use of the following ointment:

Silver nitrate ... 0.25 Gm.
Peruvian balsam ... 5.0 cc.
Zinc oxide ... 5.0 Gm.
Petrolatum ... 50.0 Gm.

Giffen, Toledo, Ohio.—*A. J. D. C.*

Proceedings of Associations

The Kistna District Medical Association, Masulipatam.—(The Kistna District Branch of the Indian Medical Association, Masulipatam). Minutes of the monthly meeting of the above Association was held on 26-3-43 Friday, at Dr. A. Narayana Rao's "Nursing Home" at Gudivada.

The business meeting began at 6-30 P.M. with Dr. N. N. Sujee, in the chair.

Dr. M. V. Subba Rao, Secretary, read the minutes of the last meeting held on 27-3-43, at the Govt. Hd. Qrs. Hospital, Masulipatam which was passed unanimously.

Read letter No. 624 dated 23-3-43, from the Honorary Secretary, Andhra Provincial Branch, Masulipatam, and resolved that this association shall not incur any expenditure for sending delegates to the All India Medical Conference for the duration of war.

The meeting concluded with vote of thanks to the President and Dr. A. Narayana Rao who stood for Tea by the Secretary.

The Cannanore Branch of Indian Medical Association.—The monthly meeting of the Cannanore Branch of Indian Medical Association held on 23-2-43, Dr. Miss Kolandavelu, M.B., B.S., gave a grand "At home" to the members and some other citizens. After an entertainment with both vocal and instrumental music, Major J. Cameran, I.M.S., D. A. D. H., (Anti-Malaria) of the Southern Army gave us a very instructive address on "MALARIA CONTROL" pointing out the great importance of controlling and eradicating Malaria to preserve and promote the efficiency of Troops and the economic prosperity of Agriculture, Plantations, Industries etc. He quoted figures to show how seriously Malaria interfered with and frustrated the campaigns of Alexander, Napoleon, and the allies in Macedonia in the 1914-1918 war etc., and how it could affect the operations on the Assam Frontier nowadays. He pointed out the usefulness of spray killing and larvicidal measures and the systematic treatment of patients. The President Lieut. Colonel, T. S. Shastri, I.M.S., wound up stressing the

importance of "MALARIA CONTROL" on country wide scale to be organised adequately and unremittently by the Central and Provincial Governments on the lines advocated by Brigadier Covell, I.M.S., to prevent the spread of Malaria among the civil population and the paralyzing of our efforts to grow more food and more Industrial Corps and to increase the output of munitions.

With a vote of thanks to the charming hostess the enjoyable meeting was brought to a close.

West Godavari District Branch of Indian Medical Association, Ellore.—The monthly meeting of the above association was held on Sunday, the 7th February, 1943 5-0 p.m. in the Municipal Council Hall, Ellore.

After tea, Dr. V. Venkataratnam, M.B., B.S., was proposed to the chair. Dr. Mrs. Akhila Bai, Lady Assistant Surgeon, Government Head Quarters Hospital, Ellore, read an exhaustive paper on 'Eclampsia', and an interesting discussion followed.

Next Dr. P. Rama Rao, M.B., B.S., of Osler Hospital, Podur, presented a case sheet of an extensive Diabetic Cellulitis of the Hand, treated in their hospital, demonstrating the case under review with X-ray photos. He next narrated three cases of poisoning treated successfully in their institution (viz.) (1) Aconite poisoning, (2) yellow oleander poisoning and (3) copper poisoning.

Then Dr. R. Narasimha Raju, M.B., B.S., of Osler Hospital, Podur, made an exhaustive survey of 25 cases of malaria, atypical clinically, treated at Osler Hospital, Podur and presented the temperature charts of the more interesting cases.

Next Dr. C. P. Satyanarayana, continued his paper on Typhoid fever—its complications and sequelae and their treatment.

The Association accepted the invitation of Drs. R. Narasimha Raju and P. Rama Rao to hold the April 1943 meeting at 'Osler Hospital,' Podur.

The President in his concluding remarks summed up the interesting features of the above subjects.

Finally the meeting terminated, after Dr. C. Satyanarayana Sastry proposed a very hearty vote of thanks to the Chair, the speakers of the evening and particularly to the two young Doctors of 'Osler Hospital,' Podur, who have come all the way to Ellore to attend this meeting.

The Independent Medical Practitioners' Association, Tinnevely.

The following is the summary of the Sixth Annual Report 1942-43. The year opened with 27 members on the rolls. Four new members have joined the Association during the year and three have ceased to be members of the Association during the same period. One left the station on Government appointment and two died.

The Association held 10 clinical meetings usually on the Second Saturday of every month at Dr. L. Mahadevan's Eye Clinic, Vannarpet, Tinnevely.

The following is the list of subjects discussed at the monthly meetings:—

1. 'Pathology and Rational Treatment in

Medicine' by Dr. U. Ananthaya, M.B. & C.M. (14-3-42).

2. 'A Case of Dysentery' by Dr. V. San-karasubban, M.B., B.S. (9-5-42).

3. 'His Personal Experiences of Typhoid' by Dr. T. N. Govinda Aiyar, M.B. & C.M. (13-6-42).

4. 'Carbuncle' by Dr. K. Rama Aiyar, M.B., B.S. (11-7-42).

5. 'Diagnosis of Fevers' by Dr. N. Seshadrinathan, M.B., B.S., D.T.M. (12-8-42).

6. 'Kahn's Test' by Dr. G. Yesudian, L.M.P. (12-9-42).

7. 'Treatment of Malaria' by Dr. D. K. Visvanathan, L.M. & S., B.S.Sc. (10-10-42).

8. 'Pain in the Neck' by Dr. K. Ramachandra Naidu, L.M. & S. (9-1-43).

9. 'Cholera and its Treatment' by Dr. L.S. Ramachandran, M.B., B.S., D.T.M. (13-2-43).

Among the resolutions the following were also passed:—(a) Resolved to request the Government to grant temporary commissions in the I. M. S. to medical men holding L.M.P. qualifications just as they have given the concession to medical men holding D.M.S. qualifications. (b) The association strongly objects to the raising of the medical registration fee from Rs. 15 to Rs. 20 and requests the Government to retain the original fee of Rs. 15.

Acknowledgment

Nature Cure—By H. Lindlahr, M.D.: Publishers: Dr. M. B. Godbole, Consulting Naturopathic Physician, 431, Raviwar Petti, Post Box 19, Poona, 2 (India), pp. 438. Illustrated.

Notice

The 32nd Conference of The All-India Medical Licentiates' Association.—will be held at Delhi on 24th and 25th April 1943, under the presidentship of Dr. U. B. Narayanarao, Member, Bombay Medical Council and Managing editor, Indian Journal of Venereal Diseases and Medical Digest, Bombay.

Errata

In the February '43 issue of THE ANTISEPTIC, the article on "Coma" was contributed by Dr. H. L. Khoshla, M.B., Ch.B., M.D., New Delhi. We regret for the wrong printing of the name as Dr. H. L. Khosh. —(ED., ANT.)

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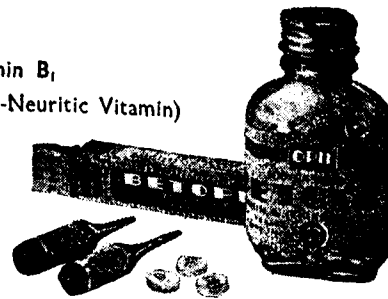
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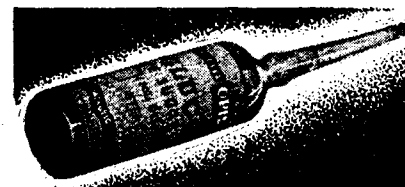
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Urethane	q. s.
Aqua (Bi-Distil and Sterilised) to	2 c.c.

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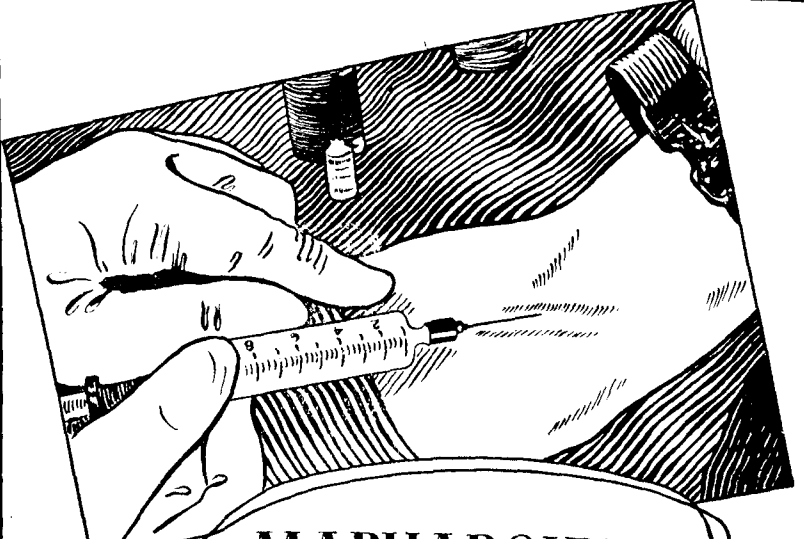
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