THE ANTISEPTIC

1924

MARCH - 21-3

APRIL - 21-4

1924. GD. NO. M. 429.
Vol. XXI, No. 3.
MARCH, 1924.

The Antiseptic

A Monthly Medical Journal

EDITED BY
U. RAMA RAU, M.L.C.

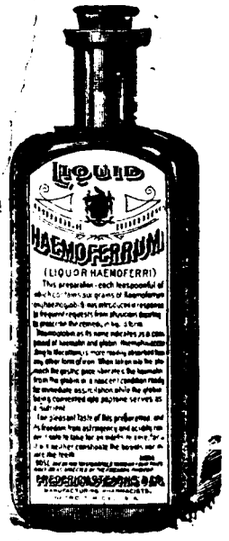
CONTENTS.

Editorial and Publishing Offices: 323, Thambu Chetti St., G.T. Madras.
Subscription Rs. 5, Foreign 10sh. a year. Post paid. Sigle Copy As. 12. In advance.

INDEX TO ADVERTISEMENTS—SEE PAGE XXXVIII

HAEMOFERRUM

A delicious cordial, each teaspoonful of which contains four grains of Oxyhæmoglobin.

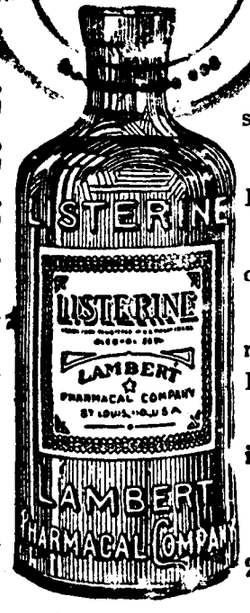


Hæmoferrum (Liquid Oxyhæmoglobin, Stearn's) represents in a natural condition all the necessary constituents of the healthy red-blood corpuscle, and in their normal proportions. It is nature's own compound for supplying the blood its characteristic oxygen carrying power.

Oxyhæmeglobin contains from 3.41 to 3.45 per cent. of iron. A small amount of absorbed iron is far more beneficial to the blood and system than large quantities of iron which traverse the alimentary tract in a form useless to the system. The entire amount of iron in the blood of a man weighing 145 pounds is only about 45 grains. Then why give enormous doses of iron to make up a deficiency in this amount?

FREDERICK STEARNS & Co.
MANUFACTURING PHARMACISTS.
DETROIT MICHIGAN U. S. A.

LISTERINE



A powerful, trustworthy, non-poisonous antiseptic—Agreeable-Safe-Convenient.

Used by the American Medical and Dental Profession with great success for the past 40 years.

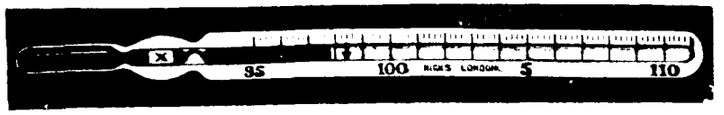
Promotes cleanliness and rapid healing of operative or accidental wounds, cuts, scratches.

Extensively used to protect the throat and mouth against infection of contagious diseases. Ideal as a gargle or mouth wash.

Affords immediate relief and beneficial results in all minor skin diseases

Lambert Pharmacal Company,
2101, Locus Street, St. Louis, Mo. U.S.A.

TRADE MARK * **JAMES J. HICKS** TRADE MARK *
8,9 & 10 HATTON GARDEN, LONDON
MANUFACTURER OF HICKS CLINICAL THERMOMETERS



Gold Medals & Diplomas Awarded from Exhibitions held all over the world.
Stocked by all the leading Medical and Surgical Stores throughout India.
The name "HICKS" on a Thermometer means Reliability.
Price lists and further particulars from the sole agents for India.
Messrs. Allen & Hanburys Ltd.
Block E. 2 Clive Buildings. CALCUTTA.

CHEAPEST & MOST RELIABLE DRUGGISTS OF BOMBAY.

JIVA KUKA & CO.,

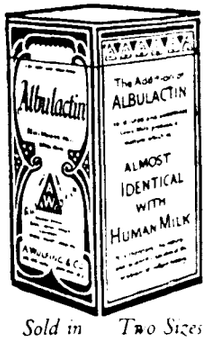
Princess St., Bombay No. 2.
TELEGRAMS: 'KIKANI.'

Fresh shipments of all sorts of Drugs, Chemicals and Hospital Requisites of well-known English and German Manufacturers arrive in regular succession every week.

Prompt execution, lowest prices and entire satisfaction all-round guaranteed. Price list on application.

TRIAL EARNESTLY SOLICITED.

Mother's Milk is equalled



only by adding Albulactin to cow's milk. Albulactin is the vital proteid lactalbumin, and added to properly modified cow's milk, gives the exact counterpart of human milk in composition and physiological properties.

This contains, in well balanced proportions, every element needed by the baby to form a strong frame covered with firm healthy flesh — not fat.

Sold in Two Sizes

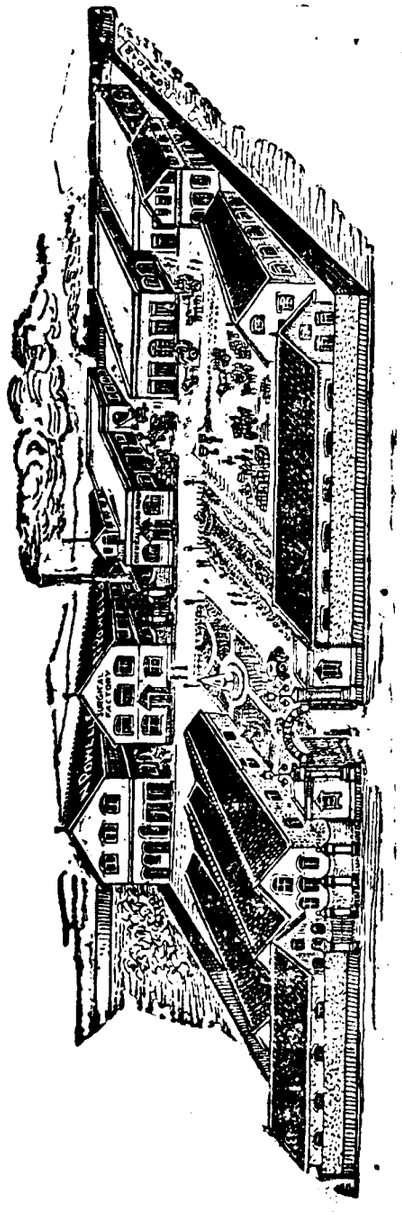
Samples will be sent free on application to members of the Medical Profession by Messrs. Martin & Harris 8, Waterloo Street, Calcutta or 15, Parsi Bazar Fort, Bombay.

Albulactin Wulfing

Obtainable at all Chemists and Bazars.

Manufactured by A. WULFING & Co.
Berlin and Amsterdam.

When writing to advertisers please mention The Antiseptic.



Having now brought our *Factory* and *Laboratories* to the highest pitch of efficiency, and having become the largest Manufacturing concern in Surgical and Drug lines we are desirous of extending our connection all over India to larger degrees. We have made up our charges of the various articles which we can offer you without fear of competition either as regards quality or prices.

We have built up our reputations and owe our success as manufacturers to the absolutely high grade standard of quality in which we turn out our goods, and we feel that this is a better foundation than cheaply made articles at low prices.

N. POWELL & Co., BOMBAY.

Zander Orthopedic, Medico Electric & Radium Institute.

(Incorported with N. Powell & Co.)

We have pleasure in announcing to the medical world that from the 1st of January 1924 our House has been appointed by the Secretary of State for India in Council to treat all cases of deformity and to prepare artifical limbs and Orthopedic appliances for all deformed patients belonging to the Civil and Military Hospitals in India. We have, therefore, been obliged to enlarge our Orthopedic Department in order to cope up with the increasing demand.

Our Institute is provided with full equipment for taking X-Ray Skiagrams for accurate and scientific diagonsis. We have very powerful X-Ray Machines at our place, one for Radioscopic and Radio therapy. Specialists are in charge of this department.

We request the medical profession, specially from mofussil to visit our Zander Orthopedic and Medico-Electric Institute, when they next visit Bombay and see for themselves how hundreds of cases are being attended to by our medical experts. Every facility will be afforded to them to form an adequate idea as to the real kind of Humanitarian work we are doing with the aid of the most scientific and up-to-date appliances.

The Antiseptic

VOL. XXI No. 3. | MARCH, 1924. | ANNUAL SUBSCRIPTION Rs. 5

ORIGINAL ARTICLES.

* TREATMENT OF TYPHOID

By

Lt. Col. Barnardo, C. I. E., C. B. E., I. M. S, Principal of the Medical College, Calcutta.

I. The five cardinal signs of infection, as given by Garrod, are:—

(1) Continued remittent pyrexia ending by lysis,

(2) A low pulse to temperature ratio,

(3) Toxaemia and stupor,

(4) Enlargement of the spleen, and

(5) Rose spots in the abdominal area between the nipples and the iliac crest. Typhoid fever was, in his experience, always true to type: "atypical typhoid" being largely a myth due to the pathologist. Bedside data were better than a positive 1 in 140 widal reaction. The pathologist scores over the clinician chiefly by virtue of the fact that the former keeps careful records of ascertained facts; whereas the latter relies on the general trend of clinical experience which is based only on a record of impressions. Blood cultures afforded the one positive proof in laboratory diagnosis of the enteric group.

II. Mode of entrance of the bacilli:—The enteric fevers might be classified as bacillæmias. The usual view was that the bacillæmia occurred via the Peyer's patches. Besredka, however, views typhoid fever as an intestinal infection only and regards the intact intestinal mucosa as the chief defensive mechanism against bacillæmia and consequent fever. He found that so long as the intestinal mucosa of an experimenting animal was

* A summary of the lecture delivered by F. A. F. Barnardo, Lt. Col. I. M. S., Principal of the Medical, College, Calcutta, at a meeting of the Medical Section of the Asiatic Society of Bengal, for favour of publication in the Antiseptic, sent by Dr. Phanibhusan Mukerji.

protected with a coating of healthy mucin, natural immunity was maintained and that the latter did not depend on the presence of specific antibodies in the blood. The role of healthy bile in cleansing the intestinal mucosa was important. Agglutinins gave no clue to immunity; solid immunity might be produced by oral administration of Besredka vaccines but no agglutinins result in the serum.

III. The mode of infection—as originally suggested by Sir A. E. Wright and supplemented by his own views is as follows:—The ingested bacilli gain entrance into the lymph stream and are conveyed to the spleen where a phagocytic battle ensued causing enlargement of the organ and then gaining victory over the leucocytes in the blood stream, they invade every tissue and organ of the body causing characteristic lesions in the lungs (whence the broncho-pneumonia of the disease), skin (with roseola), meninges, kidneys, intestines, lymphoid and Peyer's patches.

Ultimately they disappear from their unfavourable environment explaining the abatement of bronchitis, headache, rose spots, etc., and find resting place in the lymphoid tissue and Peyer's patches causing proliferation and hyperplasia of the endothelial cells in the lymphatics, capillary vessels and adenoid network.

The endothelial cells, he said, became phagocytic under the influence of symbiosis of the coccal group causing extensive lysis of the surrounding tissues and that the infection of staphylococci is not only responsible for the necrosis, sloughing and ulcers of the hyperplastic areas of the lymph follicles and Peyer's patches but also extension of the destructive process into the muscular and peritoneal coats causing perforation. The cocci invade the vessel walls causing thrombosis and septicæmia.

Clinically with the onset of hæmorrhage, certain valuable premonitory symptoms and signs were to be noted,—viz., (1) a transitory fall in the temperature and (2) a great acceleration in the pulse rate—the clinical picture changing from that of Typhoid to that of a Septicæmia. Associated with these are (3) a marked polyuria, and (4) a sudden rise of blood pressure.

IV. Treatment:—

Fourteen years ago the treatment of Typhoid was a policy of drift and even Osler commented on the uselessness of drugs. To-day the general practitioner still maintained this utterly erroneous and ignorant attitude towards the disease. With such an "expectant attitude" the mortality in true Typhoid is from 18 to 20 per cent. whereas with proper treatment it can be reduced to 4 per cent. or even lower.

Two cardinal principles stand out in the treatment of Typhoid fever, viz:—(*a*) An intelligent anticipation of events and prevention of complications; (*b*) The necessity of giving drugs in really therapeutic doses.

The following were the essential points in rational treatment:—

(1) The temperature must never be allowed to exceed 102·5 F which is the "natural" balanced temperature of a typhoid case. Incessant sponging with hot water should be resorted to. A higher temperature meant a toxaemia due to absorption of toxins or a septicaemia due to streptococci, staphylococci, or bacillus coli, degeneration of the heart and muscle tissues, vitiated secretion of liver, pancreas etc., failure of eleminative function of kidneys and skin with establishment of vicious circles. Vaccine and serum therapy were of little value. The widal reaction was of no clinical importance.

(2) Secondly the state of the intestinal mucosa—the natural line of defence of the body—must receive attention. A daily ene ma is advisable, but soap should not be used, as it will remove much-needed calcium salts and lead to urticaria.

The amount of urine passed is important: it should be free in the early stages. Sudden polyuria late in the disease may herald the onset of haemorrhage.

(3) The judicious administration of calcium salts in order to shorten the coagulation period of the blood and improve the tone of the central nervous system was of the utmost importance. Calcium maintains the normal viscosity of the blood plasma which is essential for the free mobility of the leucocytes which carry on phagocytosis and transportation of food supply from place to place. It also maintains insulation of various axis-cylinders which conduct impulses from the central nervous system to various co-ordinating muscles of the body. Subsultus tendinum was associated with calcium deficiency. Calcium tends to convert mucinogen of the intestinal wall into mucin and to thus protect it. Mist cretæ and cretæ preparata are suitable forms of calcium for administration.

(4) Iron—in the form of Tinct. Ferri perchloride—was a sheet anchor in treatment. Iron keeps up the haemoglobin content of red blood cells. the importance of haemoglobin in maintaining the nutrition, metabolic and biochemical action of the tissues of the organs of the body, cannot be overestimated, especially, the tone of the heart muscle, which improves, and putrefaction in the intestines is reduced as it neutralises the sulphur element of the indol forming bacteria; hence the tympanites disappears. Doses of half a drachm, four times a day, up to 2 drachms, in the 24 hours, could be easily tolerated.

With regard to tympanites it was to be noted that there might be invasion of the peritoneum without actual perforation; and secondary septicaemia is the result of tissue lysis followed by invasion of the blood stream by septic cocci. Iron is the best of intestinal antiseptics and reduces the number of

cocci present. It also neutralises the sulphur element of the intestinal flora responsible for the production of indols and skatols by deaminising amino-acids and thereby reducing the putrefactive scale in the intestines. Again, iron is indicated in septic affection of the hyperplastic areas of lymphoid follicles and Peyer's patches followed in some cases by septicaemia, just as much as it is indicated in puerperal septicaemia, septic sore throat, carbuncles and other septic affections.

(5) With regard to diet, proteins—and especially animal proteins—should be withheld, to diminish the virulence of the activities of the coccal group.

(6) Heart-failure was an always threatening complication and when the pulse reaches over 140 death frequently results. The heart does its utmost to cope with increasing toxæmia and auricle becomes more and more irritable due to increased toxæmia and gradually passes on to condition of flutter and even fibrillation. Cardiac resters of the digitalis group were indicated at the every beginning of the disease and should be given in all cases from the third day onwards. Digitalis protects the ventricles from the auricular impulses by increasing the block at the auriculo-ventricular bundles and when once it has taken charge of the bundle the toxins fail to affect it, whereas if the toxins are allowed to act, no amount of digitalis will be of effect. The doses of digitalis ordinarily prescribed are quite useless. Whatever text books may say there is not the least evidence that digitalis after therapeutic doses cumulates in the system. It should be given early and in full therapeutic doses. Strychnine is contra-indicated on account of its property of increasing the excitability of the reflex arc. Intravenous strophanthin was the best remedy to combat sudden heart failure.

V. The relapses, he said; were due to invasion of coccal organisms. He recommended avoidance of protein diet. He emphasised also the importance of keeping the mouth clean. This is specially important in view of his isolation from blood of a special variety of chain-forming cocci which are exactly similar to those recovered from scrapings of the teeth of the patient themselves.

VI. Lastly, the learned lecturer concluded by saying how reduction of mortality could be effected by hydrotherapy, cardiac resters, intestinal antiseptics and avoidance of protein diet and declared that if it was true that the most serious complication, hæmorrhage, was due to streptococcal septicæmia, then the whole chapter of treatment of typhoid fever must be rewritte .

THE TREATMENT OF DIABETES MELLITUS*

BY

A. C. EVARTS, M. B., C. M.

Diabetes Mellitus is a disease due to disturbed nutrition, characterized by the accumulation of sugar in the blood, and excreted in the urine. In health the carbohydrates are wholly consumed after digestion, and no sugar appears in the urine. But in diabetes, a good deal of sugar is excreted with the urine.

There are two kinds of diabetes, which should be carefully distinguished, owing to their bearing on prognosis and treatment. They are known as the *mild* and the *serious* forms. In the former the amount of sugar in the urine is derived from and is proportionate to the amount of sacharine and starchy matters consumed as food. But in the other more serious form of diabetes, sugar appears in the urine, even when the diet is restricted to albuminates and fats. In this case the sugar is formed at the expense of the proteids of the food and the tissues.

The milder form is called "hepatogenous," and is due to the inhibition of the functional activity of the hepatic cells devoted to the formation of glycogen. To the second or graver form must be referred those cases of *Pancreatic Diabetes*, which many observers have proved by experiments on animals, by extirpation of the gland, that the operation is followed by a severe form of diabetes.

Diabetics of the first class are usually well-nourished and "fat". They rarely suffer from the ravenous hunger (polyphagia) the excessive thirst (polyadipsia), and the extreme polyuria of the second group. The first form is usually seen in persons past middle age; the second form in the young.

Heredity seems to play an important part in the production of the milder form of diabetes. It has also been observed to follow traumatic and other lesions of the nervous system. It has also been traced to mental shock, anxiety, sorrow, bereavement, etc. Social position has a great influence on the production of diabetes. Debility following malaria and other chronic diseases seems also to predispose to diabetes. It is proved by careful statistics that persons doing manual labour are comparatively free from glycosuria, while lawyers, doctors, literary men and those accustomed to a sedentary life are more liable to contract glycosuria and diabetes.

Pancreatic Diabetes often attackes suddenly. The patient can state the month or even the day on which the first symptoms appeared. The wasting which appears early, results in extreme emaciation. The strength

* Specially contributed to the *Antiseptic*.

gradually diminishes. The course of pancreatic diabetes differs from that of the hepatogenous form. It does not last for 10, 20, or 30 years, as the latter does, but runs its course on an average of two years, though death may supervene in a few months. The gravity of the prognosis is therefore very great. As regards *treatment*, the *dietetic* treatment is the most important. In the "fat" diabetics, we are justified in prescribing a more strict alimentary regimen, but in the case of the emaciated subjects of the pancreatic or grave form, we have not only to consider how we may arrest or check the excessive excretion of sugar, but also how we may best control the co-existing grave disturbances of general nutrition. We shall do well to bear in mind the advice given by Dr. Diculafoy, in his "Text Book of Medicine" :—

"I often see diabetics who have been treated or who treat themselves with the greatest severity by the absolute privation of starchy food until there is no longer any trace of sugar in the urine. Many of them waste, while the physician applauds the result of the analysis and the disappearance of the sugar. A diabetic submitted to this extreme regime recently said to me, "I was passing 2½ ounces of sugar, and was prescribed such a severe diet that except for meat without sauce, fish without sauce, eggs, some vegetables and gluten bread, no food was given. The sugar entirely disappeared in four weeks, but I have last 13 lbs. in weight; my appetite has disappeared and I feel terribly weak. Give me back my sugar. I really prefer it and the patient was not wrong."

As regards the *Drug Treatment* of Diabetes, the only medicine that has gained universal acceptance is *Opium*. Diabetic patients tolerate large doses of opiates well.

Next to opium come *alkalies*. The amount of sugar in the urine has been observed to diminish greatly under alkaline treatment. The bicarbonates of soda and potassium have been largely employed. Pottassium Bromide, 15 to 30 grs. daily given in association with alkalies has been credited with the power of causing the sugar to disappear from the urine. The sodium bromide may be combined with a nerve stimulant as the Ammoniated Tincture of Valerian. Valerian itself was a favourite remedy with Trousseau for polyuria. Antipyrin and other allied antipyretics have been advocated by the French Schoolas remedies for polyuria and the glycosuria. Sodium salicylate is warmly advocated by Williams. Lepine thinks that Quinine and Salol should also be kept on the list of anti-diabetic drugs.

In the case of *Pancreatic Diabetes*, sheep's and calf's pancreas have been given raw with good results. Among patent drugs Trypsogen Tablets (Cornrick & Co) are extensively used.

According to Dr. Dieulafoy :—"The drug treatment of Diabetes is based on antipyrin, arsenical preparations and alkaline remedies. Antipyrin is, in such a case, a wonderful remedy. It must not be given in large doses or for long periods."

KALA-AZAR *

By

DR. A. K. SIRCAR, M.B., D.P.H., DISTRICT MEDICAL OFFICER OF HEALTH, FARIDPUR.

(Continued from page 549 of November issue.)

III. *Other symptoms and signs*:—Within a week after the onset the patient complains of :—(1) progressive loss of weight; (2) increasing darkness of the skin as pointed out by others; (2) falling of the hair and a characteristic lustreless appearance of the hair which are often found with bifurcated ends and they become brittle; (4) increases appetite but a poor digestion with sequalae of diarrhoea, bleeding from the nose and from the gums; (5) of persistent and very irritating cough accompanied by shortness of breath and palpitation of heart. He also complains of (6) the progressive enlargement of spleen and in a few cases the enlargement of liver but in others both. In some cases the enlargement of spleen is the first sign noted and in others its presence is not being noted for a month or two after the commencement of the fever. It is very difficult to say how far the disease has advanced as it advances very rapidly in some cases and in others very slowly; so it is never possible to say in which stage the disease is progressing with respect to any given time. Generally within a period of six months all the characteristic signs develop, if it is allowed to advance unchecked. In a typical case of Kala-Azar we find the following physical signs:—

(1) The patient is weak and emaciated.

(2) The hair is dry, lustreless and scarcely having a peculiarly characteristic appearance.

(3) The natural pigmentation of the skin of the forehead, the temples and round the mouth is intensified and this is quite peculiarly characteristic in this disease, which gives the appearance of a white paper lightly shaded with a black pencil.

(4) There is marked visible pulsation of the carotids in the neck.

(5) The rapid visible cardiac pulsation is well observed through their chest wall.

(6) The abdomen is protrubering with the characteristic enlargement of the spleen and occasionally of the liver.

* Specially contributed to the *Antiseptic*.

(7) The superficial veins on the lower part of the chest and the upper part of the abdomen stand out prominently.

(8) The legs are very thin with tight shiny skin stretched over the shines which in some cases pits on pressure.

(9) The feet are generally oedematous :

(10) On examining the abdominal viscera we feel the characteristic enlargement of the spleen. It increases with regurality in most of the cases. It reaches the level of the costal arch at the end of the first month ; palpable one inch below the costal at the end of the second month, 2" at the end of the third, 3" at the end of the fourth and up to the umbilicus at the end of 5 months and so on. In some rapidly progressing cases the spleen may reach the umbilicus within a month upto symphysis within two or three months ; in other cases the enlargement is slow or checked by the intervention of some inflammatory complications such as an abscess, dysentery, broncho-pneumonia or cancrum oris. The peculiarly soft doughy feeling of the Kala-Azar spleen will be found an extremely useful diagnostic point.

(11) The liver:—Enlargement of this organ is almost in all cases present. An enlarged. thinned out soft liver overlapping a large soft spleen with a sharp edge is really a condition which is very characteristic of the disease. In certain cases enlargement of liver takes place rapidly and this prevents the splenic enlargement, but generally we find both of these organs much enlarged in this disease.

(12). Blood changes :—(a). Anaemia is almost always present but profound anaemia is rarely found and this should be considered as a diagonostic point. It is rather of the pernicious than of the chlorotic type.

(b) The coagulative power diminishes and consequently bleeding from the nose and gums occurs in advanced cases. The appearance of purpuric spots is occasionally present.

(c) Blood picture according to Sir Leonard Rogers is as follows :—

(i) The relation between $\frac{\text{W. B. C.}}{\text{R. B. C.}} = \frac{1}{1500}$

(ii) Colour index—Normal.

(iii) Polymorpho-nuclear leucocytes—reduced.

(iv) Eeosinophile-leucocytes—reduced.

(v) Mononuclear Leucocytes—increased.

(vi) Lymphocytes— do.

Erythrocytes :—

It has been clearly pointed out by Drs. Napier and Muir that nucleated red cells are very frequently seen in blood films from Kala-Azar cases. It is also stated that the polichromatic staining red cells and red cells containing nuclear fragments are sometimes found. My experience is exactly the same.

The Leucocytes :—

The leucopenia is the rule and the total count frequently as low as 2,000 per C.M.M. is also considered by many authorities to be almost diagnostic of the disease. But any streptococcus co-existing or existing as complication as dysentery, pneumonia, gingivitis may give rise to leucocytosis. This should be carefully considered in diagnosing the case. The normal proportion of white cells with red cells is 9000 to 5,000,000 or 1 to 555, but in Kala-Azar the proportion is usually more than 1 : 1,000 and consequently $\frac{1 : 1,300}{1 : 5,000}$ was looked upon by Rogers as an absolutely diagnostic point. Others though differ from them admit, that if the accuracy of blood count be relied upon this degree, relative leucopenia should be counted very strongly in favour of a diagonosis of Kala-Azar.

(13) Changes in the circulatory system :—Blood pressure is usually low, the systolic pressure being below 100 M.M. of mercury. As the disease progresses hæmic murmurs of the heart develop as a rule. The cardiac impulse over the precordial area and the carotid pulsation in the neck give evidence of the flabby dilated heart, which are most useful clinical signs. The pathological changes generate a toxin which affects the heart most and causes a rapid pulse in the radial even in the earliest stage. It has been observed that when the patient is under antimony treatment, the fever subsided but the pulse remains rapid for a longer period than in the case of other fevers.

(14) Respiratory system :—

In some cases the irritating cough is usually present without any marked congestion or any physical sign in the lungs to account for it. This occurs without any relation to the stages of the disease. A few rhonchi or rales may be heard scattered over the lungs occasionally. The dry hacking cough often becomes the most distressing symptom and the patient may not have a wink of sleep at night. This may be caused by the irritation of the vagus and probably from the pressure due to the enlargement of either the spleen or the liver.

In the advanced stages, certain amount of congestion of the lungs at their bases may occur as a common complication giving rise to bronchitis, broncho-pneumonia, pneumonia and occasionally pleurisy. Pneumonia

often terminates the disease rarely in recovery but mostly in deaths. Dyspnoea is frequently noticed at the time of death due in part probably to the œdema of the lungs due to low blood pressure and venous engorgement caused by the anæmia.

(15) Digestive system :—(*a*) Gingivitiis and stomatitiis are rather common complications in the advanced stages. Bad fœtar comes out of the mouth while patient speaks to anybody close by. Cancrum Oris is most classical and most fatal complication of the disease. This is more common in children than adults.

(*b*) Cleanliness of the tongue is the most striking feature of Kala-Azar. The appetite is usually good but the digestion is very frequently bad while the opposite is the case in other fevers of long duration. The patient is always hungry but when most tempting food is given to him, he can take very little of it.

(*c*) Diarrhœa and dysentery are very common complications and they may be summed up as follows :—

It is noticed that the number of polymorphonuclear leucocytes diminishes very greatly. Consequently septic processes due to pathogenic bacteria get favourable circumstances, as a result of which we find the following as complications of the disease.

(*a*) *In the mouth* :— (1) Gingivitiis.
(2) Stomatitiis.
(3) Cancrum Oris.

Cancrum Oris very common amongst children.

(*b*) *Inside abdomen* :— (1) Diarrhoea—Common.
(2) Dysentery—Very common.
(3) Cirrhosis of liver—Common
(4) Cirrhosis of spleen.
(5) Cholicystitis causing jaundice.

(*c*) *Lung complications* :— (1) Bronchitis—very common.
(2) Broncho-Pneumonia } Common. They very often end the scene within a very short time.
(3) Pneumonia. }
(4) Asthma and Pthisis common.
(5) Pleurisy—rare.

(*d*) *Bladder*:— (1) Cystitis.
(2) Hoemoglobinuria.

(*e*) *Hyperpyrexia* :—I had two such cases. One boy of 13 years was nearly cured but did not get injections for a few months. Relapse occurred all on a sudden and temperature rose up to 107°. Patient died but it was

observed to retain heat 103° till about ½ hour after death. Another boy had 107° temperature on 3 occasions while he had cancrum Oris but he was cured of the disease under antimony and iodine intravenous treatment.

(*f*) Haemorrhage may occur under the skin, in the region of the spleen, mouth, stomach and rectum. I have seen a case which was under antimony treatment in a very late stage, suddenly get malaria and the patient died of exhaustion within a few days.

A few cases have been noticed in Calcutta hospitals under the treatment of a renowned physician who was very fond of making experiments by spleen puncture to die of internal hæmorrhage. It is common experience that bleeding occurs very commonly in the later stages of the disease through the punctures of the hypodermic needle while injection is just finished, and unless steps to stop it are taken it oozes for considerable time. This is because the calcium content of the blood diminishes and it looses the coagulative power probably due to the generation of some internal toxins. It would be a very sad occurrence in these days, if any physician fails to take precautions against such bleeding which ultimately causes death.

Now it is common experience to see that cases improve and even recover completely without any sort of treatment when some sort of septic complications appear and gradually disappear. There is no doubt that the infection brings some changes in the blood giving rise to leucocytosis which helps in the process of cure. In Bengal the village poor people, who cannot afford to pay for medical treatment when they get enlargement of spleen and liver, create some septic sore with some alkaline ashes and put a small piece of neam wood on the sore. They regularly clean it with water every day. This brings a change in the system, curing the disease in some cases if it be applied in time.

Diagnosis :—(a) *Locality*—First consider whether the patient is coming from any endemic or epidemic locality of Kala-Azar.

(*b*) *Family history* of having other cases of the disease is a strong positive diagnostic point.

(*c*) *Clinically*—Long continued fever with double rise of temperature with good appetite but bad digestion is almost diagonostic point in most cases.

(*d*) Failure of quinine treatment as specific for malaria clears off the doubt for ordinary malarial fever.

(*e*) The characteristic appearance of the patient having pigmentation in the face peculiar for the disease, then dry brownish hair, protubering

abdomen with characteristic enlargement of the spleen and liver with tendency towards the development of œdema of extremities and cancrum Oris is rarely mistaken. The final diagnosis depends on blood examination.

Clinical test :—

(1) Hæmolytic test of Dr. Charu Brata Roy, B.Sc., M.B., Calcutta, which is claimed to be quite reliable, can be done by any busy practitioner to get some conclusion when the case has advanced for a period of at least 6 months.

The technique of the test :—

(i) Take a test tube of small calibre, fill up with 20 or 25 drops distilled water ; (ii) with a capillary pippete drop 2 drops of blood in the distilled water.

(iii) The blood while settling down at the bottom of the test tube becomes turbid instead of clear transparent solution and gradually white floculent precipitate will appear all through the blood which on further keeping forms a marked deposit.

Aldehyde test :—(i) take 2 or 3 C.C. blood of a suspected Kala-Azar case from any vein.

(ii) Keep it in a clean test tube to form clear serum allowing sufficient time for coagulation.

(iii) Take off the clear serum carefully into another clear test tube or a few drops in a watch glass.

(iv) Then mix up with the serum only a drop of 30% formaldehyde solution.

(v) Within a minute or two the whole serum will become viscid and gradually become whitish and opalascent within 3 to 20 minutes. The serum will become absolutely solid and opaque and the tube can be inverted without the serum being spilted off. If the serum was being stained with hœmoglobin, the coagulated serum will have a pink tinge which will be chocolate brown after 24 hours.

Some were of opinion that such reaction might occur in cases of chronic malarial fever cases. But recent works on the line undertaken by Dr. Napier (in 1922) and very recently by Dr. R. B. Lall, M B., B.S., D.P.H., D.T.M. & H., in carrying out research under the Indian Research Fund Association, published in the Indian Medical Gazette of August, 1923, have definitely shown that in pure malarial cases this reaction could not be found positive. Unfortunately we cannot get this reaction in early Kala-Azar cases. Consequently in a case suffering from fever for a considerable period at least, and when no clinical test be positive, as a routine method we must have the blood count done for getting some clue of the diagnosis.

In the case of rural practitioners, it simply becomes impracticable to have the blood microscopically examined, nor can the party afford for such examination. It is better for them to begin the antimony treatment intravenously when quinine has been given a fair trial and typical symptoms and signs gradually appear but one should be very careful about the heart and intestinal mucous membrane getting on dysentery or diarrhœa of a severe nature.

(To be continued).

CASES AND COMMENTS.

A CASE OF SUB-INVOLUTED UTERUS FROM CONSTITUTIONAL CAUSE

By

A. MUKERJEE, M.D., EGERTON ROAD, DELHI.

A married lady, 30 years at age, mother of two children, the 2nd one two years and nine months old, was brought to me by a lady friend of hers, an old patient of mine, for a sad state of womb disease that had baffled all attempts at cure. The uterus was very much enlarged from sub-involution dating from her last pregnancy, and in which the placenta had been adherent; the rectum was packed full of piles that bled often very severely, and, besides this all, patient often had leucorrhœa and profuse monthly periods, vulval and rectal regions deeply pigmented, inguinal and cervical glands like so many marbles.

Her general condition was of great debility, and, moreover, she was very thin; her friends had given her up as a hopeless case. "No hope, I suppose," said her friend to me privately.

It was quite evident that though the case was one of womb enlargement, this enlargement was only an insignificant part of the case.

As I had become a lover of Homoeopathic not because of that tiny blooming phial but because of that wonderful drug's effect, I prescribed Tinct. Bellis Perennis and Sepia 6. This failed to do any great good (during the month of June 1923.)

At the beginning of July things were very bad, and patient had again lost flesh. The diskiness of the body, the evening febrile movement, the emaciation, led me to give Bacillus (c.c.), under which remedy the patient

lost her fever and put on flesh. Then under thuja •30 she lost ground, and I went back to Bacill (c.), and kept her under its influence for a number of months. Thereafter, Fraxinus-Americanus in small material doses brought the womb back to its right size, and to-day patient is plump and well, and has again resumed her vigor and strength, for which she had been so long unfit.

The phthisic element in this case could only be met dynamically by a remedy of high similitude, and although the constitutional element in the case had been really and radically cured by the high potency of the pathological simillimum, still the womb remained enlarged. I continued Fraxinus Americanus tincture two to three minims a dose, such 3 doses during the day—and the cure was completed, the organ (*i.e.* womb) returned to its normal size.

She conceived in March 1923 and delivered a male child on the 29th November 1923.

A CASE OF PROGRESSIVE MYOPIA AND SUSCEPTIBILITY TO ATROPINE

By

JYOTIRMOY BANERJEE, M.B.

Kunjalal Chakrabarty, H M. 19, brother of a myope of Dt. Howrah, came under observation on 18-9-21 for myopia both eyes.

Refraction revealed the following :—

D.V.R.E, c.f. at 1 M. C–4.00 Dsph = 3/3

L.E. do

N.V. B.E. Sn D. O·50 at 2½ " (P. P.) at 10" (P.R.) C. D. V. Glasses clearer.

Worn above glasses for last 7 years. Refraction done again on 20–10–23 revealed the following :—

D.V. R.E. c f at ¼ M C–5·25 Dsph = 3/3

L.E. do

N.V. B.E. Sn. D. O·50 at 2½ " (P.P.) at 8 " (P.R.)

C. D. V. Glasses at 1' B.E.

Homatropine and cocaine hydrochloride lotion was ordered but the pupil dilated three-fourth, then atropine was ordered, but yet pupil did not dilate fully. However retinoscopy showed the following result :—

R. E.		L.E.	
Hor.	5·00	Hor.	5·00
Vert.	5·00	Vert.	5·50

Ophthalmoscopy showed right optic disc somewhat oval and outline hazy. Fundus oculi normal. White flares on nasal side of discs. Myopic cupping was deep and bottom cup was visible with 6·00 Dsph. Left optic disc was less oval horizontally and the appearance was in all respects similar to the right one except that its edge was crenated.

The case had the following peculiarity :—The pupil could not be dilated fully with repeated applications of Homatropine and cocaine lotion and there was susceptibility to atropine. The patient had the following symptoms on applying atropine for 4 days :–difficulty in micturition, constipation, felt heat inside body and so had a desire to take baths frequently, sensation of dryness in throat and giddiness. These symptoms disappered on stopping atropine and reappeared on putting atropine a few days later.

A CASE OF DEXTRO-CARDIA

By

D. BALARAMASWAMY NAIDU, L.M.P., TEKKALI, GANJAM DISTRICT.

Name :—Mutyala Apparao, age 19 years, caste Hindu, occupation domestic servant.

The patient is a poor man doing the duty of a domestic servant. His master called me on 25·12·23 to see him as he was very bad with cough, breathlessness and swellings of the feet.

History of family :—His father lived for about 45 years and was known to be strong and healthy during his life time. He died when he was 2 years old. His mother lived for about 40 years and was a sickly woman through. out, being an asthmatic subject. She died about 4 years ago from some lung affection. He is the only child to his parents.

History of past illness :—History very meagre. He often suffered from some affections of the lung during the past 4 years with catching pain in the chest on both sides. Their exact nature could not be mentioned as he was never examined by any qualified doctor.

Condition on admission :— (1) Fever continuous with chills, duration 11 days (2) cough with mucous expectoration and occasional haemoptysis, (3) Breathlessness and pain in the chest on incessant paroxyms of coughing, (4) swelling of feet and ankles.

General condition :—He is in a very emaciated condition with puffy features. Conjunctiva and tongue are pale. He can walk but with much exertion. He is completely conscious. Number of respirations per minute are 60, Pulse 120, rapid and intermittent.

CIRCULATORY SYSTEM.

Local condition :—There is swelling about legs, ankles and feet. Face puffed. Carotid pulsation is visible.

Heaving pulsation is distinctly seen in (1) right 4th interspace on the right parasternal line (2) right 5th interspace just outside the parasternal li ie.

Palpation :—The same heaving pulsations are felt at the same places as by inspection.

Percussion :—*Left border* in the 4th insterspace ½ inch internal to right lat-sternal line, *upper border*. On the upper border of 3rd rib in right parasternal line. *Right border* ½ inch internal to right mamory line.

Auscultation :—At the apex there is a systolic sharp murmur not conducted towards the Axilla.

2nd sound is slightly accentuated. In the 3rd interspace in lateral sternal line asystolic murmur with accentuation of second sound is heard. All over the cardiac area first sound is sharper, second sound accentuated.

Respiratory system :—Inspection—Respiration about 60 per minute. Sternocleido most acting. Sternum is pushed slightly forwards. Ribs are prominent. Chest deformed slightly at the sides, scapula prominent and winged.

Palpation :—Vocal Fremites slightly increased on the left side.

Percussion :—Tympanic note not impaired.

Auscultation :—Vocal Fremitus and resonance slightly increased on the left side and not marked at the bases. There are many localized areas on the front and back of the chest. Friction rubs not heard when breath is held. These creaking sounds are more marked on the left side. Vesicular breathing is harsh. Fine and medium sized crepitations are heard on the front of the chest below the clavicles. Here and there Rhonchi are also heard.

Digestive system :—Tongue pale and coated. Bowels costive.

Liver :—Situated on the left side. Upper border 5th interspace. Lower border 1½ fingers below the costal arch.

Spleen :—Right side, not felt below the costal margin.

Nervous system :—Speech, vision, hearing, memory, intelligence are normal.

Motor :—Power is normal, no tremors.
Sensory :—No patches of Anaesthesia, no numbness.
Reflexes :—Knee jerk sluggish.
Excretary organs :—Normal.
Skin :—White patches in the back.

TREATMENT.

He was given the following drugs :—Ammonia carbonas; Vinum Ipecac; Tinct Scillae; Potassi Iodid; Tinct Belladonnae; and Tinct. Digitalis.

He is at present free from fever and is moving about without exertion.

A CASE OF ACUTE POISONING BY CALOTROPIS GIGANTEA

By

P. K. KURUP, L.M.P., COIMBATORE.

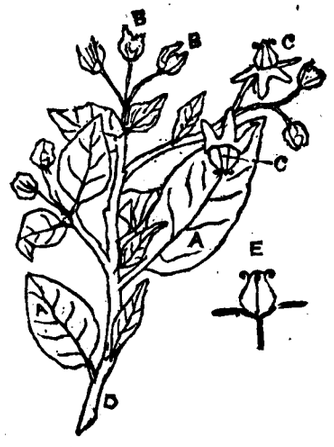
A patient, M. G., aged about 25, male, ryot, was brought to the hospital by the police on 2—6—1923 at 6 p. m. for treatment of suspected poisoning. A bottle containing a greenish white turbid fluid said to be the vomited matter of the patient was also brought to me.

On admission the patient's condition was as follows :—

Countenance dull, depressed and anxious. Lips and tongue dry. Difficulty in breathing. Frequent yawning. Mouth did not give forth any specific odour. Thirst was intense. Pain in the abdomen was a marked symptom. Bowels constipated, but I was told that he had diarrhœa and vomiting soon after taking the said poison. The heart beats were very slow and the pulse 64 p. m. Lungs did not show any special changes except that the respiration was less than normal and irregular. Dyspnœa was present, but not to a marked degree. His mental condition was confused and restless. Pupils reacting, but sluggishly.

The patient was given soon after admission a purgative and warm water to drink. Hot water bottles were applied to the legs, since they were very cold to the touch. A constant watch was kept on him. He was restless in the night also. He had three motions towards the morning. He began to sleep soundly in the morning. Milk and barley water formed his diet the next day. White of two eggs was given the next morning. He felt much better towards the evening and his dyspnœa disappeared and the restlessness vanished. The patient looked very weak. His pulse became 68 p. m. the next day. The patient had slight tremors of the hands on the 3rd day. After six days of stay in the hospital with due treatment he made an uneventful recovery and was discharged cured.

The vomited matter of the patient preserved was sent to the Chemical Examiner in due time, but no poison of any kind could be detected. But from the patient's own words I knew that he had taken the juice of the leaves of calotropis gigantea popularly known in these parts as "Erukku." He further added that he took it to commit suicide, because he had some quarrels with his wife. Whatever may be the cause, the "Erukku" is a very common plant in these parts and it is said that they use it for inducing abortions criminally. I do not know for certain how it is done. The milky juice of the plant is also used for poisoning children especially female children owing to certain customs in certain tribes. It is also used to kill children (babies), the result of illicit intercourse. It is again said that the juice is used as a purgative.



* CALOTROPIS GIGANTEA. (SKETCHED BY ME)

A = LEAF (Natural colour green, but yellow when old).
B = BUD. („ „ pink).
C = FLOWER („ „ pink).
D = STEM. („ „ green).
E = MESIAL Section of a flower.

Synonyms...Madari (Hind)
Akanda (Beng)
Rui (Bombay)
Erukku or Erukkam (Tamil)
Erukku (Mal)

The shrub is found growing wildly in Coimbatore district. The leaves and stalks when incised yield a milky juice.

My idea in publishing this is based on two points. In the first place the rarity of the condition (the shrub being used for suicidal purposes though cases have been recorded in medical books of this shrub being used as abortifacients and for infanticide in certain communities. People from Tiruppur, a place very near, noted for cotton and cattle say that the shrub is used there for cattle poisoning) and secondly the signs and symptoms that are observed in a case of poisoning by this shrub will be of interest to the professional brethren.

ACUTE BRONCHITIS IN CHILDREN (IN A NUTSHELL)

By
NITYANANDA CHATTERJEE, MEDICAL OFFICER IN CHARGE, KING GEORGE'S DOCK DISPENSARY, CALCUTTA.

Sponging = in a warm room
Mag Sulph. ozi to a quart 100 F.
+ 10m. of carbolic acid
= daily for 3 days.

Over the upper thorax and throat apply a compress of cold linen wrung out of this solution and over this apply flannel bandage
Change every 3 to 4 hrs.

Clean the bowel
relieve auto-toxæmia = by = Blue mass and Soda gr. ½-gr. ii. } 6 such E ½ hr.
or
Calomel = gr. 1/6 } 3 such
Podophy = gr. 1/12 } E 1 hr.
followed by a saline laxative
1 hour after.

Repeat on the 3rd day.
Calx Iodata = ⅛ gr. in powder
B. 3 hrs.

For high temp = Aconitine gr. 1/134
Bryonin gr. 1/67
Apomorphine = gr. 1/67
Aqua Berberis = 3i E. 2 hrs. for 4 doses—
then E. 4 hrs.
Saccharine to sweeten.
Cal-Sulphide gr. 1/6 = XII.
E. hour.

USE

Atomiser
Clear post nores and upper resp tract.
By Eucalyptus—mX—upon a tin case—half full of boiling water and inhale by a cone frequently once in 3 minutes.
If case has progressed =
add = Brucine gr. 1/67
or
Strychnine = gr. 1/134 to the aconetine mixt.
Secretion profuse
and dyspnœa present = Atropine gr. 1/500
Strychnine gr. 1/134 E. 4 hrs. for one day.

Secretions viscid
and expectoration scanty = Emetine gr. 1/67

Pain and high temp.
in older children = Codine gr. 1/67
hardcough and constant Acetanelide gr. ½
Caffeine citras gr. 1/6
for 2 doses in place of aconite mixt if necessary. After that the two may alternate.

Some cases seem to be entirely well after 3 days with the exception of an annoying cough which persists for some minutes—results in expectoration of a tenacious phlegm → Helenin gr. ⅛
Emetine gr. 1/67.
Hyocyanum gr. 1/250
E. 3 hrs. will prove specific.
+ Pot Bichrom gr. 1/6
upon tongue several times a day.

Care of the nares = Wash with Lig Antisepticus Campho menthol soln.
Convalescent = Triple arsenate (abbott).
and Nuclein T. I. D.

To prevent
glandular involvement = Cal. Iodine with mercury and nuclein.
In rachitis
or strenuous children = C. I. Lacto phosp gr. 3.
Secretins abundant
expectoration scanty = Lobelin
despite treatment = Medicated steam
Hot Epsom Salt comp. E. hr. or two
to throat and upper thorax.
Extreme œdema
of mucosa = Spray or swab 1 : 5000 Sol. adrenalin.
In racking
nervous cough = Camphor—monobrom
and if ½ codine → quiet sleep.
In threatened Capillary
Bronchitis = Aetuma aus. gr. 1/67.
Where there is Malaria
Quinine and ars gr. 1/6,
4 times a day.

The Antiseptic

MARCH, 1924.

MEDICAL MEN AS MINISTERS.

In those halcyon days when the bureaucratic regime was at its zenith in India, the members of the "Heaven-Born Service" played an all-round and an all-important part in the administration of our country. There was not a single department of Government of which the I. C. S. was not the head—Finance, Commerce, Law, Customs, Education, Medicine, Forests, Agriculture, Industries and a host of others, not excluding Local and Municipal institutions. With the advent of the Minto-Morley Reforms and the gradual, though faltering, devolution of powers to Indians, the newly appointed Indian Executive Councillors were charged with the conduct of affairs relating to Local Boards, Education, Medicine and other sundry matters. In our own Presidency, the lawyers, with one single exception, were successively chosen for those coveted posts, as perhaps they were deemed to approach very nearly the mark of the I. C. S. The next in order of administrative intellect or importance came the P. C.S. man. The new constitutional reforms which vested powers in the hands of people's representatives gave, however, a different turn to the choice, and though the lawyer element still preponderated in the provincial cabinet, it is some relief to find a lay gentleman also introduced in the person occupying the position of the Minister for Local Self-Government department. We have no quarrel with the lawyers, for they are as sacrosanct as the I. C. S. or the P. C. S., nor have we anything personally to say against the choice of the lay Minister now in office. But the rub comes in when the claims of the medical profession are totally ignored, especially, when there is a portfolio which it is quite competent to handle with advantage to the Government and the public alike.

The portfolio of Local Self-Government department has principally to deal with (1) Local Boards and Municipalities and (2) Medicine and Public Health. The varied activities of Local Boards and Municipalities are centered round elementary education, medical relief, such as, the control of hospitals and dispensaries, vaccination, sanitation and child welfare besides roads and buildings. The rates and taxes are collected by the Government agency in the case of Local Boards and by their own revenue agency in the case of Municipalities. Thus, the brunt of the Minister's performances falls within the province of the medical man. It would be, in the fitness of things, therefore, that the Local Self-Government portfolio should be handled by a medical man whose professional knowledge could be brought to bear upon the many important and intricate professional and technical problems awaiting solution.

It may be argued that there is lack of administrative talent among medical men or there is dearth of medical men inside the Council, who enjoy the confidence of the party in power. These are spurious arguments unworthy of notice. We ask, has the lay gentleman now holding the office of the Minister for Local Self Government department ever had any administrative experience? or has he ever exhibited his administrative talents in any of the Local Boards or Municipalities previously? Is he a medical man or is he in any way technically qualified for the post otherwise? Has he not now been branded as a successful Minister despite the want of those qualifications? Is it not therefore a truism that opportunity makes the man? It is certainly the lack of encouragement that is responsible for this poor representation of medical men in the Council. If, however, the Government should recognize their just claims and satisfy their legitimate aspirations when the opportunity arrives, it would certainly be a sort of inducement for more non-official medical men to enter the Councils. We hope that personal or party considerations will not outweigh public interests and that, in future, in forming the Ministry, the Government will not overlook the claims of the medical profession. If, however, the exigencies of service do not admit of such a course, the Government may consider the advisability of appointing a non-official committee of medical men to advise the Minister and help him in the administration of a purely technical Department such as the Local Self-Government and Public Health Departments are.

CURRENT TOPICS.

MEDICINE.

Hiccough.—Dr. E. F. O'Ferrall,(B.M.J.), reports a case of violent hiccough lasting between three and four days in a patient aged fifty-five. The usual remedies, including morphine and inhalation of choloroform, were tried without result. As a last resort a rubber stomach tube was introduced during an exacerbation of the spasm, and, like magic, it stopped instantly. The hiccough recurred once after a fairly long interval and the same remedy stopped it a second time. In other cases Dr. O'Farrell found it unnecessary to pass the tube into the stomach as a few inches into the œsophagus sufficed. No vomiting ensued in any of his cases.

The Influence of Olfactory Perception on Sexual Activity.—EDWARD PODOLSKY, BROOKLYN, N. Y.—The intimate relation between the sense of smell and sexual activity has been the subject of study for sometime. ALTHAUS, in the early part of the last century, definitely pointed out the relation of the olfactory and sexual senses in man. CLOQUET called attention to the sensual pleasure aroused by the odors of flowers, and told how RICHEDIEU lived in an atmosphere laden with the heaviest perfumes, in order to excite his sexual functions. It is said that RUTH sought to attract BOAZ by perfuming herself with the most exotic odors. HILDER BRANDE, in his work on physiology, states: 'Odors of flowers often occasion pleasurable sensual feelings, and when one remembers the passage in the *Song of Solomon*: 'And my hands dropped with myrrh, and my fingers with sweet-smelling myrrh, upon the handles of the lock,' one finds that it did not escape SOLOMON'S notice. In the Orient the pleasant perfumes are esteemed for their relation to the sexual organs, and the women's apartments of the Sultan are redolent with the fragrance of flowers.

KRAFFT-EBING has observed the existence of a great love for perfumery among libertines. LAYCOCK found that in women the love for musk and similar perfumes was related to sexual excitement. BINET reports the case of a young medical student, who while occupied in reading a work on pathology, was suddenly disturbed by a violent erection. On looking up the young man found that a lady heavily redolent with perfume had taken a seat near him. The medical student said that he could attribute the erection to nothing but the unconscious olfactory impression made upon him.

The odor of perspiration has been found to have a marked aphrodisiac effect on both sexes. It might be interesting to cite the case of HENRY III in this connection. At the betrothal feast of the King of Navarre and MARGARET of Valois, he accidentally dried his face with a garment of MARIA of Cleves, which was moist with her perspira-

tion. Although she was the bride of the Prince of Conde, HENRY conceived so great a passion for her that nothing could persuade him from staying. In a similar way, it is related, the passion of HENRY IV for the beautiful GABREIL originated at the instant, when at a ball, he wiped his brow with her handkerchief.

JAGER regards perspiration as important in the production of sexual effects, and as especially seductive. In fact, one learns from PLOSS that attempts to attract a person of the oppsite sex by means of perspiration is an established and effective resort among certain people. ROTH has observed that the natives in the valley of the Pennefather River, in North Queensland, Australia, employ this artifice with great success. When a native desires to arouse the passions of his beloved he covers his body with juice from the root and bark of the je-anjata. This, mingled with the odor of perspiration, very effectively brings about the desired effect. It is also interesting to recall a custom that exists among the natives of the Philippine Islands when they become engaged. When it becomes necessary for the engaged pair to separate, they exchange articles of wearing apparel, by means of which each becomes assured of faithfulness. These objects are carefully perserved, covered with kisses, and smelled.

It is especially interesting to learn that the knowledge of the aphrodisiac effect of perspiration is widespread among certain of the lower strati in society. MOST relates, in this connection, the following bit of information: 'I learned from a sensual yonng peasant that he had excited many a chaste girl sexually, and easily gained his end, by carrying his handkerchief in his axilla for a time, while dancing, and then wiping his partner's perspiring face with it.'

MACKENZIE has made several interesting observations on the physiological relation between the nasal and sexual organs. He found that irritations of the nasal organs, such as violent sneezing, occurred at the time of sexual excitement. Stimulation of the gential tracts, was found to be occasioned by the affection of th nasal organs. Further, it was ascertained that nasal affections in women grow worse during the time of menstruation, and that venereal excesses produce inflammation of the Scneiderian nembrane.

BERNSTEIN relates that nasal catarrh has been benefited in several young couples who had been engaged only after the consummation of marriage.

That there exists an intimate connection between sexual activity and the special senses cannot be doubted; but the extent of their relation should invite further inquiry, for many new and interesting facts may be discovered thereby that will add much to our knowledge of sexual problems.—*Medical Review of Reviews.*

SURGERY.

The Treatment of Haemorrhoids by Injections.—John Dunbar (*Brit. Med. Journ.*, p. 808).—This paper is based on 150 cases treated in the Royal and Western Infirmaries, Glasgow. The treatment consisted in the injection into the pile of 10 per cent. carbolic acid in liquid extract of hamamelis. The cases were not selected; all degrees of piles were treated, from the simple internal piles with no prolapse to those with marked prolapse. The patients were chiefly manual workers engaged in such arduous occupations as mining, engineering, and labouring. Their ages varied from 21 to 70 years. The number of injections needed did not seem to depend on the age of the patient or the duration of the complaint. One patient who had been suffering for one year required seven treatments, another with 15 years' duration needed only five. The number of piles present varied; the greater the number the greater the number of treatments. The size of the piles seemed to have some effect; the larger the pile the fewer the injections. Bleeding usually stopped after the first injection. In only one instance was a second injection required for this symptom, although "bleeding piles" comprised 40 per cent. of the cases. Hæmorrhage after injection through the puncture of the needle was slight. Where inflammation was marked, no injections were given until this was subdued; if only slight, injections were given, and although the pain following was greater than usual, it was never severe, and the piles quickly underwent thrombosis.

Immediately after injection, the piles swelled; the mucous membrane over some of them became blanched; and where external piles were also present the external pile corresponding to the internal one injected also became swollen in many instances. In only 4 cases did the treatment keep the patient from work, the duration of incapacity being 2 days, 3 days, two weeks, and 1 week. In these cases marked prolapse was present, and although the piles were reduced after injection, reduction was not maintained and strangulation occurred. In this class the writer injects only one pile at a time, and inserts a gauze pad into the anus with a large external pad firmly retained in position by a perineal bandage. Strangulation has not occurred in the last 50 cases of this series.

The injections were given weekly, and the average length of treatment was 5 weeks. The thrombosis produced extends along the veins until they perforate the coats of the rectum. In no case has embolism, peritonitis, or pyæmia occurred, as has been described by others.

After the first visit the patients returned regularly, with confidence that they were not going to suffer much pain. All stated that their rectal

and general condition had greatly improved after the first injection, their usual expression being, "they never felt better in their lives." Four had been operated on for piles, and stated that they would not now subject themselves to operative measures on account of the pain associated with them and the long time of incapacity. Cycling after the injection is not recommended, although one man (a furnanceman) immediately after injection cycled 4 miles to work and the same distance home again. The progress of this case was uneventful. In some cases 2 to 3 months after the injections small "tags" were noticed where the piles had been. If these were of any size or caused any discomfort they were removed. One case was rather disappointing, although the patient stated that he felt much better after the treatment. The piles became thrombosed, but the sphincters did not regain their tone, two fingers being easily inserted into the rectum without causing any discomfort. There had been marked prolapse, and this was only slightly improved. The general condition was poor.

Perhaps the most striking case occurred in a man who had suffered for 15 years. He had to wear a support to prevent prolapse of the rectum whilst walking. The mucous membrane was much prolapsed and several piles were present, the anterior one being of the size of a walnut and the left lateral the size of a very large Brazil nut. The latter, after two injections, was completely thrombosed, and the anterior after three injections. Prolapse soon disappeared, the anal orifice became normal, and the sphincters regained tone.

Before this treatment the patient should be as thoroughly examined as if a major operation were to be performed. The writer insists on this, as the only death with which he is acquainted occurred in a case of advanced Bright's disease. Too much carbolic should not be injected—2 to 5 minims of the mixture is sufficient to inject into a pile at one time—and not more than three piles should be treated on any one occasion. If large amounts of carbolic are injected, carboluria may result. Bright's disease, diabetes, pernicious anæmia, advanced cardiac disease, hemiplegia, and epilepsy are contra-indications.

The method is almost painless. Some nervous patients, especially women, complain of pain for some time, but this is rarely severe. No anæsthetic is required. The patient is not incapacitated and his daily routine is not interfered with.

Since completing this series, the writer has tried the effect of injecting 30 per cent. sodium salicylate into piles. The results of the few cases (40) thus treated are as good as those treated with carbolic acid, but the pain after injection is more severe and lasts longer.—*The Medical Review.*

The Therapeutic Value of Vomiting in Intestinal Obstruction.—*Practitioner.* By C. SYMONDS.

The free administration of fluids, principally water, in suspected intestinal obstruction or acute appendicitis is sound practice.

After operation, vomiting should be encouraged, especially in advanced cases, until the rejected material is free from bile.

When hiccough is present and vomiting does not follow the free use of fluids, the stomach should be washed out every four hours in severe cases and two or three times daily in the others.

The injured bowel will maintain obstruction for from two to four days. During this period the best treatment is the encouragement of vomiting.

The reflexes should be allowed to come into operation as soon as possible by omitting the pre-operative dose of morphine, by performing the operation as quickly as possible and under minimum anæsthesia, and by withholding morphine until the rejected material is free from bile.

When free vomiting has occurred, the symptoms of toxæmia are absent and therefore the prospects of recovery after operation are greatly increased.—*Surgery, Gynæcology and Obstetrics.*

Internal Treatment for Carbuncles.—Large doses of dilute sulphuric acid internally seem to have a very beneficial effect on carbuncles, boils, staphylococcic, and certain streptococcic infections. Dr. Reynolds (Lancet) gives the dilute acid B. P., 20 or 30 minims, diluted with two ounces of water, every four hours. Within 24 hours after the commencement of treatment, the infiltrated area becomes circumscribed, then the slough is observed to soften; during the next few days pus is freely discharged, and the whole affected area shrinks and healthy granulation tissue forms, filling up the cavity until the part is healed. The only external application is a dressing of carbolized vaselin (1 in 20).—*Medical Review of Reviews.*

OBSTETRICS AND GYNAECOLOGY.

Prophylaxis of Puerperal Fever by Serotherapy.—At Prof. Beuttner's hospital in Geneva the practice has been adopted for the past year of giving injections of polyvalent antistreptococcal serum directly after any obstetrical operation. The serum was obstained from the Pasteur Institute in Paris, and at first only 1. c. c. was injected. This was followed

an hour later by an injection of 40 c. c., and on the next day by another 40 c. c. A fourth injection was given in suspicious cases on the third day, the total quantity given ranging from 80 to 100 c. c. In most cases there was only a slight local reaction, and only in one case did the injections give rise to a violent febrile reaction with a scarlatiniform rash and pains in the joints, lasting for 4 days.

To ascertain the influence of this prophylactic treatment on the morbidity and mortality of his maternity cases, the writer compared his serum-treated cases with the cases treated in his hospital without serum in 1920. The cases in each period were classified in 4 groups, according as the confinement was perfectly normal, slightly febrile, severely febrile for a considerable period, or terminated fatally. The statistical comparison was definitely in favour of the serum cases. Among the cases not given serum barely half (46·7 per cent.) ran a normal course, whereas 65·8 per cent. of the serum cases did so. There were no fatalities among the serum cases, whereas there were two among the cases not given serum treatment. The writer has compared his results with those obtained by Lequeux at Tarnier's hospital in Paris, where prophylactic injections of a lipo-vaccine have been given in maternity cases. This comparison was definitely in favour of serotherapy.—*The Medical Review.*

THERAPEUTICS.

Treatment of Snake Bite.—P. Ganguli *(Indian Journ. of Med.* p. 70).—In cobra venom the main poison is a non-coagulable protein which paralyses the muscles, especially the respiratory muscles, by acting on the motor end plates. The neurotoxin acts generally within ¼ hour to 4 hours after bite and the symptoms are heralded by paralysis of the legs. The patient loses his senses and becomes comatose. The respiratory failure begins by irregularity of breathing due to involvement of the motor end plates. But the pulse is strong and regular. Death occurs from 20 minutes to 24 hours according to the dose injected and part bitten.

Viper venom is different; it contains thrombase, cytase and anticoagulin. Thrombase causes thrombosis of blood vessels at the site of bite. Cytase dissolves cells. Its main action is on the endothelial cells, causing exudation of fluid around the blood vessels. Besides œdema, the hæmorrhages which occur all round the bite are due to cytase, and hence the latter is also called hæmorrhagin. The anti-coagulin digests fibrin ferment and prevents coagulation of blood. The general symptoms are those of heart failure, which may come within a few hours if the dose is large. Besides

continuous bleeding from the local wounds, there is hæmorrhage all over the body. There is blood in the urine, vomit, stools, etc. Death occurs in 48 to 96 hours after the bite. But if the fang is inserted into a vein, death is instantaneous owing to thrombosis. The local thrombosis cuts off the blood supply at the seat of the bite, producing œdema and gangrene, usually with a septic condition of the wounds.

When a patient is brought in unconscious to hospital there may b great difficulty of diagnosis. Even if there is a history of a bite and if the animal is not seen, we have to rely on the history and local marks. If the snake was seen we have to decide whether it was poisonous. In bites of non-poisonous snakes, the marks are generally numerous and in four rows. Local and general symptoms are generally absent. In cobra bite, the local effect is comparatively slight. The symptoms of muscular paralysis with strong pulse ought to suggest at once colubrine poison. In the viper bite the local symptoms are marked, there is a good deal of swelling, pain and oozing and the general symptoms are those of heart failure and later on, on the second or third day, there are hæmorrhages everywhere.

A ligature should be put, without delay, above the bite, within ten minutes; otherwise a lethal dose may be absorbed. The site of ligature is most important. As there are two bones in the forearms and legs, however tight the ligature it cannot compress the vessels running between the two bones. The ligature to be effective should be put over a part containing one bone; so put the ligature on fingers, toes, upper arm or thigh according to the position of the bite.

The effect of ligature is different in bites of different varieties of snakes. In the viper bites the ligature is curative. Major Acton experimentally saved animals up to ten minimal lethal doses. The local thrombosis fixes the poison locally, so that after a certain time the ligature can be removed. If a ligature is applied after a viperine bite, gangrene cannot be avoided. The ligature should be kept on for at least two hours, until the skin becomes gangrenous.

But, ligature alone is not sufficient for cobra bite. There is no thrombosis, the neuro-toxin of the venom is only locked up in the part below the ligature; as soon as the ligature is removed, the neuro-toxin is again absorbed. But though not curative ligature is important as it gives time to get medical help. The absorption time of minimum fatal dose can simply be delayed, but not indefinitely postponed. We can put 1½ hours as a safe limit, if the ligature is put on properly. Before that, the local remedies must be resorted to. Much has been said about sucking the venom out; but this is not possible, because 5 minutes after a cobra bite the puncture is closed by clot and no

amount of sucking will draw a drop of blood out. Sir Leonard Roger's method is to oxidise the venom by potassium permanganate. He cuts the part bitten with a lancet and puts powdered permanganate into the wound. But this will fail if not done immediately on the spot. For after a certain time the venom will infiltrate the whole area up to the ligature. Acton and Knowles perfer to inject 10 c.c. of 1 per cent. solution of gold chloride round about the venom area. If the bite is in finger, they give 1 c.c. of a 5 per cent. solution.

In some cases, where no medications are available, the patient can be saved by amputation, but this must be carried out before a lethal dose is absorbed, preferably before 10 minutes. The most effective treatment is, however, with anti-venin. The anti-venin, prepared in Kassauli and that of Burroughs, Wellcome and Co. are specific both against viperine and columbrine poisons. In ordinary cases one must give 100 c.c. of anti-venin intravenously after using locally gold chloride. Then take off the ligature and watch the respiration and the eyelids. As soon as the eyelids begin to droop or the breathing becomes irregular, give another 100 c.c. of anti-venin. Intravenous injection is to be preferred, for not only it is the least painful method, but it is the most effective. It is four times more powerful than the subcutaneous method and twice as powerful as the intra-peritoneal. —*The Medical Review.*

Cocaine Anaesthesia with Weak Solutions.—A. Abraham (*Deut. Med. Woch.*, p. 1156). Hitherto it has been customary to use a 10 to 20 per cent. solution of cocaine for endo-nasal and endo-laryngeal operations, and for the latter the 20 per cent. solution is by far the most popular. But it is not safe to use even a 10 per cent. solution in children, and even in adults alarming symptoms of cocaine poisoning have been frequently observed after the use of a 20 per cent. solution. In 1920 C. Hirsch showed that the 10 or 20 per cent. solution can be satisfactorily replaced by a 1 to 3 per cent. solution if potassium sulphate is added to it. For the last 2 years the writer has investigated these claims at the University Ear and Nose Hospital in Cologne. He has found Hirsch's observations both correct and useful, but the 1 and 2 per cent. solutions were too weak. The 3 per cent. solution containing potassium sulphate was perfectly satisfactory. He recommends the following solution:

Coc. mur.		3·0
Suprarenin, hydrochlor. (1 in 1000) ...		5·0
Sol. pot. sulph. (2 per cent.)		25·0
Sol. acid. carbol. (0·5 per cent.)	ad.	100·0

This solution should not be kept for more than a fortnight to a month, but it is quite easy to keep the cocaine and suprarenin in one bottle, and potassium sulphate and carbolic acid solution in another, mixing the necessary quantities from the two bottles from time to time. The writer is not prepared to dispense with such anæsthetics as pure cocaine, alypin, orthoform and anæthesin in his practice but he no longer has any use for 10 or 20 per cent. solutions of cocaine.—*The Medical Review.*

ELECTRO-THERAPEUTICS.

X-rays in the Treatment of Salivary Fistula.—F. W. KAESS (*Zentralbl. f. Chir.*, January 6th. 1923, p. 14) reports two cases of parotid fistula in which healing took place after the parotid gland had been put out of action temporarily by a strong dose of *x*-rays. He was led to make a trial of the method through noticing that patients under *x*-ray treatment for cervical adenitis frequently complained of dryness of the mouth. One case, in which the fistula resulted from a gunshot wound received in 1917, was operated upon on January 23rd, 1920, the fistula being excised and the thermo-cautery applied to the deep communication; on removal of the sutures a week later a brisk flow of saliva reappeared. Thereupon a strong *x*-ray exposure was made, the dose being 120 F. at 24 cm. distance of anode from skin, with 3 mm. of aluminium filtering. After this no saliva came from the wound, and complete healing had taken place by March 2nd, 1920. The second case was that of a man aged 44, suffering from parotid fistula, the result of a gunshot wound, with marked eczema of the surrounding skin. Division of the auriculo-temporal nerve was first tried, and was followed by temporary improvement, then relapse. A dose of 150 F. of *x*-rays was then applied. Two weeks later the fistula had closed, and the eczema disappeared soon after. The author considers that such *x*-rays exposure may of itself cause many such fistulæ to heal and also that the method should be used as an adjunct to any form of operative treatment—*The B. M. J.*, February 3, 1923.

The Tungsten Incandescent Electric Lamp Used as a Therapeutic Agent.—FRANK THOMAS WOODBURY, M.D., Lieut. Colonel, U. S. Army, Retired NEW YORK.

Woodbury's paper confines itself to an exposition of the therapeutic uses of the tungsten electric light as distinguished from the carbon filament lamp which he says 'has exteremely different properties.' As the therapeutic properties, of the tungsten lamp depend upon radiant energy he prefaces

his paper with a table of vibrations in octaves, beginning with the lowest of two per second and passing through mechanical vibration, sound, electricity, heat, light, X-rays and radium rays, up to vibrations in the 62 octave of over 4 quintillion vibrations a second.

He points out that the source of all vibration is the orbital and tangential motion of electrons, atoms and molecules and that as space is everywhere traversed by radiant energy there is no place or point of absolute stillness in the universe.

He points out that except for our own sun, the other sources of radiant energy are of little or no significance and that all life on our planet is absolutely dependant upon the sun for constant supply of radiant energy which medical science lays under contribution in the form of heliotherapy and the spectral colors, chromatotheraphy.

He draws a clear distinction between radiant energy and radio energy which last he says ' is confined in medicine to the showers of helium atom and electrons given off from radio active substances and the cathode shower from the Coolidge tube and again from radioenergy as meant by the users of radio telephony.'

He gives a table of the wave lengths of the middle of each spectral color and says that the tungsten lamps depend upon their physical attributes for their physiological action and therapeutic application. These attributes are: (a) A relative richness in the radiant energy of the lower half of the spectrum extending into the invisible, infrared heat portion and (b) A relative deficiency in the chemical or actinic rays of the upper half of the spectrum with total absence of ultraviolet rays. (c) The conversion of these rays into heat by the resistence of the tissues which depends upon the density of the tissues, the distance from the source of the light (inversely as the square) and inversely as the wave length, and the wattage or candle power. (d) The irritation of the tissues which through a vasomotor response, brings about a hyperæmia.

The effects of the light treatment may be made *general* (by light baths which are of two types, tonic and eliminative) *regional* (by groups of two or more lights focussed on a part) or *local* (by concentration of one light upon a local spot).

The physiological action of conversive heat from radiant energy may be eptomized in the following brief statements:

(a) Cutaneous erythema from hyperæmia, causing free perspiration.

(b) Increased flow of blood into the irradiated tissues bringing food endocrine products, hormones and oxygen.

(c) Result of ' b ', is, cooling of the cells (preventing disintegration from heat) and rejuvenation of cells increasing their vitality and functions also antiseptic action from cellular activity and presence of more leucocyte and anti-body protection.

(b) The increased flow of blood and lymph opens up channels of drainage, carrying off heated blood and lymph, wastes, and products of cellular activity.

(e) Result of 'd' is relief of pressure, swelling and pain, locally and heating of the general blood stream with raising of bodily temperature and an increase of pulmonary dermal and renal excretion.

(f) Local deposits of salts in the tissues are melted away.

(g) The chemical rays render the blood slightly fluorescent and cause the red cells to excrete adrenoxydase.

THE GENERAL LIGHT BATH.

The tonic bath is given for from three to five minutes and the eliminative bath is given for from fifteen to thirty minutes.

The usual precautions are taken as to keeping the head cool and drinking cool water during the bath, watching the patient during the bath and making observations as to pulse, temperature, blood pressure, weight, etc., before and after as desired. The length and frequency of the bath must be controlled by the reaction of the patients and the judgment of the physician. A cleansing bath of water either warm or cold for its reactionary benefit should follow the light bath and then the patient should rest for a while.

The physiological action of light is markedly obtained with this form of treatment and the elimination of drugs, toxins, etc., is to be noted in the perspiration often giving a characteristic odour to the skin and air of the cabinet. The increased oxidation causes reduction in weight which in the adipose can be maintained only by a concomitant reduction in the dietary calories.

The therapeutic indications for light baths are:

(a) Lowered nutrition, altered endocrine balance, acidosis, rickets osteomalacia, etc.

(b) Conditions of suboxidation as obesity, lithiasis, gout, rheumatic joints, diabetes, myositis, etc.

(c) Secondary or essential anæmia.

(d) Nervous conditions due to faulty metabolism or altered function of organs other than the brain as hysteria, poliomyelitic paralysis, diphtheritic paralysis, lead poisoning, tabes toxic insanities and deliriums, neuralgias neuritis, insomnia, psychasthenia and neurasthenia.

(e) Respiratory congestions, inflammation and altered function one asthma, bronchitis, pneumonia (in its beginning stages) and incipient tuberculosis.

(f) Congestions of other organs, varicosities, gangrene and vasocons strictions of toxic or neural origin, threatened apoplexy and right heart embarrassment all of which are featured by delayed blood flow.

(g) Acute renal suppression or uræmia.

(h) Ulcers, wounds and trophic impairments and as an aid to tissue, repair and minimum scarring after incisions or wounds, skin grafting and plastic work.

(i) Osteomyelitis and periostitis.

(k) Toxaemias from faulty eliminational, occupational absorption, drug habits, intestinal stasis, etc.

THE REGIONAL LIGHT TREATMENT.

This is given with a cluster or group of light bulbs for which no special apparatus is necessary other than a method of suspension, as a bed cradle.

The indications for regional light applications are :

(a) Circumscribed areas of stasis, leakage or inflammation as contusions, exudations, inflamed joints.

(b) Pain from pleurisy, lumbago, neuralgias, scars.

(c) Infections as ulcers, boils, carbuncles, peritonitis, pneumonia.

(d) Repair of wounds and reduction of scarring.

This treatment takes from several days to several weeks. The light must always fall upon the bare skin and as near to the skin as can be comfortably borne.

FOCAL LIGHT TREATMENT.

This may be given with an ordinary drop light or desk lamp but the treatment is prolonged in some stubborn cases, for several weeks. It can be used for special applications through specula to interior organs. It is especially efficacious in localized purulent conditions as boils, ulcers, whitlows, infected wounds, mastoiditis, etc., and for lumbago, contusions and sprains.

To the physician in family practice or who has not the expensive equipment of the physio-therapist this paper will indicate a means to most gratifying results which are always within grasp.—*The Medical Review of Reviews.*

A Partial Index of Physio-therapeutic Treatment.—By WILLIAM J. TINDALL, M.D., JERSEY CITY, N. J. In order that the present satisfactory status of physiotherapy, and particularly electrotherapy, may be maintained, it is essential that all engaged in its application should keep certain salient facts prominent before their minds.

1. An accurate diagnosis should always be attempted.

2. Empiricism must result in disappointment, failure and the ultimate disparagement of what proves to be one of the most scientifically progressive branches of medicine.

3. A fairly large proportion of the cases which are sent to the physiotherapist have already shown themselves to be resistant to other forms of treatment. Some of these may respond to physiotherapeutic treatment; others, which may appear to be identical in their clinical features with the former group, will fail to ameliorate under physiotherapy. A therapeutic prognosis should therefore be exceedingly guarded, and speedy cures never promised.

4. Physiotherapeutic treatment should never be prescribed in a case where no improvement can result; and in cases which are incurable, but that are capable of relief, always tender a frank statement to the referring physician and to the patient of the benefit which may be reasonably expected from such treatment.

Under the heading of physiotherapy, I shall refer mainly, at this time to the most important branch,—electrotherapy. The changes which can be induced by electrical agents in the tissues of the human body are far more perfectly understood than was the case a few years ago; although in many instances considerable further investigation is necessary for their more complete elucidation.

Modern and scientific electrotherapy includes:

1. Galvanism. 2. Sinusoidal Currents. 3. High Frequency Currents. 4. Phototherapy. 5. Ultra Violet Therapy. 6. X-Ray. 7. Radium.

Galvanism has a polar effect according to whether the negative or positive pole is used. It is:

a. Excito-motor. b. Excito-sensory. c. Excito-secretory. d. Scleroly tic. Excito-nutritive. f. Sedative. g. Analgesic.

Sinusoidal Currents are rapid or slow. They induce, when slow, a physiologic reactivation of the muscles and are therefore extremely beneficial in atonic musculatures, whether voluntary or involuntary. Rapid sinusoidal currents dispel muscular spasticity and are therefore more valuable when hyperaction exists, rather than hypoaction.

High Frequency Currents include the Oudin, Tesla and D'Arsonva These differ only in their relation of tension (or volts) and amount (or milliamperes), about as follows:

Current	Volts	Amperes
Oudin	Very high	Very low
Tesla	Medium	Medium
D'Arsonval	Very Low	Very high

They are used in fulguration, diathermy, auto-condensation, counter irritation, electro-coagulation.

Phototherapy combines infra-red and light. It is infinitely superior to infra-red, as Sonne has shown:

"Based on a serious of various facts concerning the specific absorption relations of the light-rays (visible heat rays) during radiation to the human skin, the following theory is advanced: The curative effect of the universal light bath is due to the capacity of the luminous rays, during the light bath, to heat a very essential portion of the aggregate blood volume of the organism to a temperature possibly exceeding the highest ever measured fever temperature without causing the body temperature to rise in any appreciable degree.

'According to which the phototherapy will be able to produce the inciting effect of fever upon, for instance, the oxydation and the formation of anti-bodies without producing the usual harmful effects of fever upon the organism."

Phototherapy is no substitute for diathermy. It is useful whenever a superficially induced hyperemia is instrumental in bettering a condition.

Ultra Violet Energy, according to whether it is air-cooled or water-cooled, shows these dominant characteristics:

Ultra Violet Energy (Pacini)

(Mercury Arc)

Air Cooled Lamp:

1. Near Ultra Violet intensity.
2. Biologic (dominantly).
3. Chemically oxidizing.
4. Relatively penetrating.
5. Metabolic synergist.

Water Cooled Lamp:

For Ultra Violet intensity.

Bactericidal (dominantly).
Chemically reducing.
Relatively superficial.
Metabolic depressor.

This elegant energy has won a deservingly high place in physiotherapy mainly through the remarkable labors of Pacini.

INDEX

Abscess. Water cooled ultra violet energy in superficial abscesses. In deep abscess, air cooled ultra violet for systemic uplift.

Acidity, gastric. (Heperchlorhydria.) May be dispelled by the reflex action of Air Colled ultra violet displayed over the epigastrium.

Acne. Air Colled ultra violet systemically and locally. X-Radiation very good. Sometimes high frequency currents help.

Adenitis. Ultra violet practically interchangeable with X-Ray in affording good results, especially in tubercular adenitis. If sinuses have formed, ultra violet is best. Zinc or copper galvanic ionization is sometimes useful in sinuses.

Albuminuria. High frequency current helpful, depending upon underlying pathology; usually symptomatic relief only.

Alopecia, either total or areated. Violent counter irritation promotes regrowth in about 40 per cent of the cases. Best accomplished with intense ultra violet rayings.

Amenorrhea. When a causative factor cannot be found, cases have benefitted much by regional air cooled ultra violet therapy. Diathermy helpful. Negative galvanism applied in the uterus of married women sufferers is good.

Anal fissure. Sometimes, though not frequently, yields to zinc ionization with galvanic current. Water cooled ultra violet seems helpful.

Anaphylaxis. All anaphylactic reactions do well under air cooled ultra violet energy applied systemically, owing to the increased calcium content of the blood thereby produced.

Anemia Chlorotic. Air cooled ultra violet is splendid. Practically immediate and unfailing remedy. Secondary; depending upon pathology that is causative. In children, air cooled ultra violet is very excellent. Also in adults, thought less so than in children. In adults, diathermy passed through multiple epiphyses has done good. When combined with air cooled ultra violet the results are splendid. Pernicious; air cooled ultra violet is palliative.—*The Medical Herald.*

OTOLOGY.

Ionization in Chronic Middle Ear Suppuration.—STEPHEN YOUNG (*The Journal of Laryngology and Otology*, May, 1923) concludes that about half of those middle ear suppurations which fail to respond to conservative measures, will be cured by efficient ionization treatment. He considers that the patient should already have had an efficient course of conservative treatment without effect, that there should be no naso-pharyngeal condition requiring attention, no organized granulations in the tympanic cavity or mastoid antrum, no attic perforation with cholesteatoma nor marginal perforations with mastoid or Eustachian tube infection. He employs Friel's method with a solution of 4 5 grammes of zinc sulphate and sixty cubic centimetres of glycerine in one litre of water. This is diluted at the time of using with an equal quantity of warm water. A vulcanite speculum is used with a special terminal of its own. A fine wire running from it down the inside of the speculum nearly to its tip provides the positive pole, the negative electrode being a broad zinc plate, lint-covered and soaked in saline solution applied to the forearm. The current is very gradually increased until it reaches three to four milliamperes, where it is allowed to remain for eight to ten minutes and then gradually diminished. If one treatment is not enough it may be repeated after a week's interval.

HYDROTHERAPY.

General Principles and Certain Therapeutic Indications.—BY JAMES M. ANDERS, M. D., LL. D., Philadelphia. Hydrotherapy may be defined as the systematic application of water at different temperatures to the surface of the body for therapeutic purposes. It is to Winternitz and Baruch that we owe most, for having superseded the vague and indefinite views of the profession on the subject of hydrotherapy and evolved a useful and scientific method of treatment.

But it is still the case that lack of appreciation of the aims and the field of usefulness of this agent, often leads to failure to attain satisfactory results. The time has arrived when the medical profession should take a more active interest in water as a remedial measure, and should study the rational basis of this method of treating disease.

Baruch very properly insisted that the subject should occupy a more prominent position in the curriculum of medical schools than it has in the past, and that it should be added to the teaching given in Nurses' Training Schools.

The application of water to the surface of the body may produce its effects by (1) its temperature, (2) its volume, (3) mechanically, (4) chemically. Through appropriate gradations of temperature important therapeutic uses of water are obtainable with nicety and precision. It acts upon the sensory peripheral nerve terminations, and under varying degrees of pressure produces equally varying degrees of stimulation or depression. The result depends further upon the suddenness or the mechnical impact of water to the skin and duration of its application. Such facts explain why a shower is attended by a more refreshing action than a mere immersion bath.

In this manner potent therapeutic effects may be produced, digestion and the assimilative processes may be stimulated or depressed, and the vigour of the cardiac systole similarly altered. The action of hydrotherapy, which rests upon the results of observation and physiological experiment, is especially valuable in metabolic disorders. The principle, that water below skin temperature, while at first a depressant, soon becomes a stimulant and is on this account to be perferred to water above the body temperature, which after a brief stimulating action becomes a depressant, should be kept in remembrance.

It has been shown by experimental observations (e.g., on the transparent frog's web) that the calibre of the blood vessels is greatly affected by thermal stimulation. Foster has shown that the reflex vaso-motor function plays its most important part in the case of the smaller vessels of the peripheral circulation. The importance of nervous influence resulting from thermal stimulation of the cutaneous sensory terminals can scarcely be over-rated.

The definitely determined skin areas, which are in relation with every viscus through the blood circulation, should be more generally known and their significance from the standpoint of hydrotherapy fully appreciated. The volume of blood in any internal organ may be lessened by either a local or general application of hot water, or thermotaxis.

The use of cold water is accompained by a degree of shock, which unless too prolonged, is not harmful as a rule, but beneficial and is followed by refreshing reaction. It is trite to mention that cold baths should be invariably accompanied by the use of friction. In feeble subjects, however, even this precaution may fail to bring about reaction and in such instances it is wise to begin with water of higher temperature, reducing it by one or two degrees for each succeeding application.

It is sometimes found that for delicate persons or those having defective reacting power, to use cold locally at first, to be followed by a moderate, daily increase in the area of application, acts as a refreshing

stimulant. In this manner, the desired effect of a general cold water application is gradually obtainable.

"The first thing necessary in a scientific application of hydrotherapy is accuracy in diagnosis. It is absolutely essential to know the conditions of the patient's heart and blood vessels, of his kidneys, the state of his central nervous system, his ability to react to thermic impressions, and lastly, the state of his metabolism, whether it be plus or minus, and to what extent."

The contra-indications should be rigidly observed. For example, if applied in marked atheroma or advanced myocarditis, the results of hydriatic measures would readily prove disastrous.

A minute attention to details is essential. Especially important are temperature, duration and pressure. For example, the duration of an immersion bath at 60° or 65° Fah. should be of a moment's duration, mere plunge, while one of 70° Fah. may be prolonged with appropriate friction, into a bath of ten or fifteen minutes. In like manner a hot both is stimulating, but if prolonged it becomes a marked depressant, while a warm one is a sedative and relaxant, if not of too short duration. The length of the application also depends, upon the form and number of pounds pressure under which the water is delivered. Thus a shower bath or douche with appropriate apparatus may exhibit a range of pressure of from five to thirty or more pounds, and the strength of the reaction will vary accordingly.

Attention must be given to the nature and stage of the complaint, as well as to the physical and mental condition of the patient. It will be found that the physical reaction to cold varies greatly with the individual. The extent to which heat abstraction is carried must, therefore, be carefully adjusted to the body temperature prior to the application of water and to the individual power of reaction, if the desired stimulation is to be obtained. In all cases the object is to bring about a complete reaction.

SYSTEMATIC USES OF COLD.

Cold water is the most effective known means of reducing high temperature, since it does not, if rightly used, cause depression, but is a stimulant to both the nervous system and circulation. The reduction of fever by cold may be accomplished in various ways: tepid sponging, cold sponging wetpacks, cold sprinkling, cold baths and ice-rubbings. As a substitute for cold sponging, Baruch suggests applying water with the hand, either bare or covered by a bath glove, or by means of a linen cloth, which is more effectual, since the former does not produce sufficient friction and thus is attended with feeble reaction. Sponging with tepid water should not be

employed for its antifebrile effect in cases of acute febrile disease with a temperature above 101° Fah. since the ensuing reaction is too feeble.

In practising general ablution for fevers, the application must be repeated at intervals of three hours, if the patient be awake; the temperature of the water should be 85° Fah. at the start, and reduced 5° each treatment until 70° Fah. is reached. The cold wet pack should be reserved for the severe cases which fail to respond to cold hard application. It should be recollected that extreme temperatures are to be avoided in children and in old persons.

The cold immersion bath, which rapidly gained professional favour a couple of decades ago and proved its value by a striking reduction of the death rate of typhoid fever, has been almost wholly abandoned, because it is difficult of application, requiring several attendants, and is needlessly severe. The favourable results put on record from the use of baths in typhoid fever, have, however, served to show the value of cold in the treatment of this and other febrile conditions. Ice-rubbings are especially useful in sunstroke, but they should not be continued after the temperature has dropped several degrees. The temperature is to be held at the normal level by exposure to cool breezes or fanning.

Besides being the best means of reducing body temperature, cold water treatments have other useful therapeutic effects. On account of the fact that it quickens the heart rate and later slows it, while at the same time strengthening the beat cold is an excellent remedy in selected cases of early chronic myocarditis. In such, however, cool baths (temperature 80 degrees) are to be preferred and should be always accompanied by friction to aid prompt reaction. Baths of similar temperature if not prolonged beyond five minutes, are quite beneficial in conditions of subnutrition and neurasthenia, since both the cardiac and general nutrition are thereby improved.

The effect of cold on the blood constitution is considerable, both a varying degree of leucocytosis and increase of erythrocytes occur, and also a rise of the colour index in cases in which a good reaction is obtained. Whilst this increase in the cellular elements of the blood is only temporary, yet it is quite probable, as Winternitz contends, the "gaseous interchange is encouraged here, oxygen being taken up and CO_2 thrown out in the respiration, and nutritive processes being heightened; while, by methodical repetition of the thermic applications which lead to the temporary effect, a permanent one is attained."

Observation has long since convinced me that cold baths stimulate the metabolic processes of the body to a greater degree than is generally believed among clinicians. Strasser's interesting experiments may be referred to. He found that short applications of cold or a cold bath stimulate tissue

changes to high degree, as shown by an increase in the amount of urea, uric acid, ammonia, xanthin bases and the total nitrogen. It has been further demonstrated experimentally that the elimination of the earthy phosphates is increased, thus showing better absorption of food, from which these are derived, under the influence of cold baths.[1]

SYSTEMATIC USES OF HOT BATHS.

A hot bath is a powerful stimulant, if of brief duration, but differs in its action from cold water applications since secondary relaxation with lowered blood pressure soon follows. This dilatation of the surface vessels is accompanied by contraction of those that are central—a compensatory anæmic condition of the internal organs. Thus internal venous congestion with a lowering of the blood pressure is brought about, particularly if the application be prolonged. The use of warm baths of from ten to twenty minutes' duration, as a means of lowering abnormally high tension, is not used by the profession to the extent that they deserve. Certain precautions should be taken, especially at the beginning of the treatment, since the fall of pressure, which is prompt in many cases, may reach a dangerous degree. The fall of blood pressure should be carefully measured and subsequent treatments regulated accordingly. If it were limited to a single measure in the treatment of high tension, my choice would be warm baths.

The diaphorsis induced by hot baths as a measure of relief in acute or subacute inflammation of the kidneys and toxemias, is well known. Equally familiar examples in which these general applications are of signal value are acute and chronic rheumatism, arthritis deformans and the uric acid diathesis. The first effect of hydriatic measures is often to exaggerate the symptoms in these subacute and chronic complaints; this is principally due to the direct stimulating action of the water upon the vaso-motor nervous system, which interferes with a prompt readjustment of the body functions.

They are also useful in chronic catarrhal states of the bronchial and gastro-intestinal tract, as well as in various forms of nephritis and inflammatory condition of the pelvic organs. It is well within the limits of truth to say that hydrotheraphy has been singularly neglected in the past in the management of these and other conditions, in which it may be successfully employed. Every hospital should now be provided with a hydro-therapeutic installation. Unfortunately hydro-therapy, when it is used, is still, as a rule, on a empirical basis. This is to be deplored, since our knowledge of its effects and methods of application are sufficiently advanced to enable the skilled physician to obtain definite results.—*Archives of Medical Hydrology.*

1 Quoted by Kellog, *loc. cit.*, p. 123.

BOOK REVIEWS.

FORTY NOTIFIABLE DISEASES.

BY HIRAM BYRD, B.S., M.D., Director, Department of Hygiene, University of Alabama. 74 pages, World Book Company. Yonkers-on-Hudson, New-York 1922.

This useful book is a simple discussion of the more important communicable diseases, written in a non-technical language. The author has set forth only those salient facts of the subject that the layman can reasonably be expected to assimilate; but at the same time he has included all the facts and ideas that are really important for every citizen to know and has expressed them in such a simple form as to enable every body to master them in his College or even in the High School course. The subject is dealt with in 17 chapters and it contains a fund of information for laymen, especially in India, where so many millions of people die of communicable or preventible diseases. The book is really a boon to the suffering humanity in this country. This book is fit to be prescribed as one of the compulsory subjects, to be taught in every High School. At the end of the book one chapter is devoted to glossary which explains some of the technical terms and also the course and symptoms of some of the important communicable diseases.

LOWSON'S TEXT BOOK OF BOTANY.

(INDIAN EDITION) REVISED AND ADAPTED BY B. SAHNI, M.A., M.Sc., AND M. WILLIS, Third edition, 1922: 640 pages, illustrated (The University Tutorial Press Ltd., Oxford St.)

This excellent text-book of Botany has now come out as a third edition thoroughly revised and enlarged. The chief difference between this and the 2nd edition is the addition in the former of a new and important chapter on Evolution and Genetics—in which is discussed in a very clear and interesting manner the modern conceptions of heredity, inheritance, variation and selection. The rest of the book in no way differs from its predecessors, being divided into 4 parts—the first giving a general idea of the subject of external morphology; phyiology and histology; the 2nd dealing with the Angiosperms; the third dealing with Vascular Gyptogams and the last with the Moss, Algæ and Fungi. A useful appendix containing general advice to students, notes of practical work, and methods to be adopted in descriptive botany form a feature of the book. An index of vernacular names in Hindustani will make the book of special value to medical men more than to anyone else. A series of explanatory and illustrative diagrams make the book as useful as its sister volumes in the tutorial series. It is a book which ought to be read by all students of Botany irrespective of whether they are in Arts Colleges or Medical Colleges.

ESSENTIALS OF CHEMICAL PHYSIOLOGY.

BY W. D. HALLIBURTON, M.D., LL.D., F.R.S., Fellow of the Royal College of Physicians. Professor of Physiology in King's College in London, 1922. 11th

In these days when strenuous efforts are being made to revive the indigenous systems of medicine, throughout India, this book will prove an opportune and welcome publication. The charge is generally levelled against the Hindu medical system that it has no Pharmacopia to boast of and that the therapeautic value of most of the drugs available in India is in the range of doubt and uncertainty. This publication will help to a great extent, to remove that mist. The author has taken immense pains in compiling this work, for which there will be neither sufficient material nor facilities for research. We congratulate him on his successful enterprise.

CLINICAL MEMORANDA FOR GENERAL PRACTITIONERS.

BY ALEX THEODORE BRAND, M.D., C.M., V.D., AND JOHN ROBERT KEITH, M.A., M.D., C.M. Published by Bailliere, Tindall and Cox. 8, Henrietta Street, Covent Garden, London, W.C.1.

This book consists of a series of memoranda of clinical diagnosis which are useful to the physicians in the diagnosis and treatment of many perplexing and atypical cases. Though this book is in no sense a complete text book on clinical medicine, yet it serves the purpose of refreshing young practitioners in correctly diagnosing the diseases and treating the same on modern lines.

The clinical signs such as "External mallelor sign", "Contra Lateral Reflexes of the lower limbs", The Latter "Phenomenon" The Signe Du Son etc. etc. and their elucidation are very clearly dealt with.

The arrangement of the subject matter in the present edition is entirely new, the subject matter being grouped under the various systems—Nervous and Special sense organs, Respiratory, circulatory etc. Under a separate "miscellaneous" chapter the author deals with both surgical and clinical conditions which are met with in every day practice. The chapter on Prosthesis by the subcutaneous injection of paraffin is very interesting.

In the Therapeutical section the authors point out the importance of **Bismuth Paste** as a diagnostic and therapeutical agent in chronic suppuration.

In the chapter "Notes on Drugs" many drugs which are of daily use in practice are dealt with briefly for the guidance of the busy practitioner. A chapter titled "Aphorism" is included in the last in which we find many dont's and do's.

We recommend this to every medical practitioner to brush up his knowledge in his daily practice.

AN INTERPRETATION OF ANCIENT HINDU MEDICINE.

BY MR. CHANDRA CHAKRABERTY. PUBLISHED BY RAMCHANDRA CHAKRABERTY, M.A., 58, Cornwallis Street, Calcutta.

This book deals exhaustively with the Principles and Practice of Ancient Hindu Medicine and affords facilities for a comparative study of its system with the modern medical school of thought, with a view to bring them into closer relationship with each other. This much-abused and woefully reduced Hindu Medical Science had on account of the step-motherly attitude of Government on the one

hand, and for want of scientific researchers and exponents of the system on the other, been left all along in the background, but thanks to the recent renaissance, we are having quite a crop of literature on the subject of Ancient Hindu medicine, for which no little credit is due to the author of this book. We heartily recommend its use to those who are interested in the revival of the Indigenous systems of Medicine in India and to research scholars who may find in it good food for reflection.

THE ROCKFELLER FOUNDATION ANNUAL REPORT 1922.

We have read with interest the annual report of the above Institution for the year 1922, just published. The foundation has done solid and substantial work in the field of Public Health and Medical Education during the past ten years of its existence and according to the report of the President, "the Rockfeller Foundation since its creation in 1913 has had direct relations with perhaps one quarter of all the medical schools of the World." The foundation recognizes that "traditional preconceptions, the vested interests of practitioner professors, unfamiliarity with new ideas and methods and lack of funds are the more obvious obstacles to progress." The leading aim of the Rockfeller Foundation which is declared to be "to further the development of Medical Schools of the University type by diffusing information, training personnel, and in important centres, by making appropriations towards endowment or building or both" is extremely laudable and praiseworthy. We wish the Foundation all success, in its earnest endeavour to promote, not the exclusive prosperity of any one nation, but the well-being of mankind throughout the world."

MERCK'S MANUAL

OF THE MATERIA MEDICA, FIFTH EDITION. A convenient, up-to-date, ready reference pocket book on the Materia Medica intended mainly for physicians' use. The book is of wide scope and on broad lines. It is divided into four parts.

Part I embraces drugs, chemicals and preparations—not confined to "Merck's" alone—and gives their synonyms, solubilities, physiological effects, therapeutic uses, doses, incompatibles, antidotes, and other useful information.

Part II, on therapeutic indications, summarizes the principal means of treatment for each form of disease, giving numerous standard prescription formulas. Interspersed are paragraphs on bedside diagnosis intended to afford a ready means of differentiating between and determining the more important diseases.

Part III classifies the various medicaments according to their physiological action.

Part IV comprises a comprehensive essay on poisoning and its treatment; an exhaustive dose table; a chart showing the diagnostic points of difference between the eruptive fevers; thermometric equivalents; approximate metric equivalents; a comprehensive chapter on urinalysis; a list of remedies which interfere with urinary tests; tables on infant feeding, and much other useful data.

The regular edition is bound in Flexible Linen Cloth (5 shillings).

While intended particularly for distribution in the United States and Canada, a few copies have been set aside for English-speaking physicians and pharmacists in other countries. Merck and Co., New York, P.O. Box 414, City Hall Station.

REVIEWS AND NOTES.

KRISHNAN'S HOSPITAL AND NURSING HOME.

The Annual Report of Rao Bahadur K. Krishnan's Hospital and Nursing Home, Palghat, for the year 1922-23.—We have received a copy of the above report and we are glad to find that this institution started by Dr. Krishnan and ably assisted by his son, Dr. Raghavan, is rapidly increasing in its usefulness and activity. The number of outpatients treated in the hospital during the year under review *viz* 8571 and the number of operations performed *viz* 2003 with a mortality in the latter, of only 4 cases, give ample testimony to the good work done by the worthy founder and his equally worthy son. We wish the institution a long and prosperous career.

THE JOURNAL OF AYURVEDA.

We understand that a Medical monthly in English language dealing only with the Hindu System of Medicine is shortly to be published in Calcutta under the joint editorship of Mahamahopadhyaya Kaviraj Gananath Sen, Swaraswati, M.A., L.M.S., the foremost Ayurvedic practitioner whose name is a household word in India, Vishagbhushan Kaviraj A. C. Bisharad, M.R.A.S. (Lond.), the managing Editor and sole Proprietor of the famous medical monthly, the *Indian Medical Record*, and Dr. Santosh Kumar Mukerjee, M.B., who is now editing the same journal with considerable ability. There has been of late a growing demand for such a publication both amongst medical men and the general public, who are now being convinced of the efficacy of Ayurvedic treatment and we wish the venture all success. The annual subscription is fixed at Rs. 10; size Royal 8vo. 32 pages solid reading matter; but those enrolling before publication will get it at a concession rate of Rs. 5 a year. It will be published from the Indian Medical Record Office, 2, Horokumar Tagore Square, Calcutta.

DRUG REVIEW.

"ALLENBURYS MALTED MILK."

The well-known firm of Messrs. Allen and Hanburys Ltd., London, have sent us a sample of their new product "ALLENBURY'S MALTED MILK." The value of malted milk is very well recognised, even among the laity now a days so much so well-known brands of malted milks are sold considerably in every nook and corner. Messrs. Allen and Hanbury's new preparation under reference is a predigested product containing no sugar, excepting natural milk and malt sugars, Lactose and Maltose. The preparation is therefore very useful to Nursing Mothers, invalids, Dyspeptics and the aged. "Allenburys Malted Milk" is prepared by simply adding boiling water. Those who require it to be a little sweeter may add sugar. We welcome this preparation and we wish it every success which it so very well deserves. We are also requested to announce that the readers of the ANTISEPTIC who wish to try the product can secure a free and real package on writing to the firm's Calcutta Office : Block E, 2nd Floor, Clive Buildings, Calcutta.

BOOKS RECEIVED.

The following books have been received and the courtesy of the publishers in sending them is acknoledged. Reviews will be published from time to time.—[ED. ANTISEPTIC.]

The Manager of the Antiseptic will be pleased to supply the readers any books acknowledged hereunder, at the Publisher's price. When sending their order the readers are requested to send a remittance for the full value of the book. That a remittance in advance should be requested is no reflection on the credit of any reader of the Antiseptic, but is simply a condition necessitated by circumstances.

A Combined Text-Book of Midwifery and Gynæcology. By J. M. Munrokerr, M.D., F.R.F.F. & S.; James Haig Ferguson, M.D., F.R.C.S.; James Young, D.S.O., M.D., F.R.C.S.; James Hendry, M.A., B.Sc., M.B. (1923.) Published by E. S. Levingstone, Edinburgh. Pages 1,006 with 474 illustrations. Price 35sh. Rs. 26-4-0. Postage Re. 1-1-0.

A Treatise on Influenza (with a Special Reference to the Pandeur of 1918) By Rajendra Kumar Sen, Medical Officer, Hurmutly Tea Company Ltd., Assam. With a Foreward by Dr. S. R. Harrison, M.R.C.S (Eng.) L.R.C.P. (Lond.), (1923.) Published by the Author, Narayanganj, Dacca. Pages 150. Price Rs. 3-8-0. Postage 4 annas.

Man's Mental Evolution, Past and Future. (1923) By Harry Campbell, M. D. Published by Bailliere Tindall and Cox, London. Price 3sh. 6d. Rs. 3-7-0.

Practical Organotherapy. (1922) By Henry R. Harrower, M.D., Fourth Edition. Published by Endocrines Ltd., 72, Wigmore Street, London W.T.

How to Nurse Cancer Patients. By Miss E. C. Barton, R.R.C. The Scientific Press Ltd., 28 and 29 Southampton Street, Strand, London W.C.-2. Pages 88. Price Sh. 1-3d. Rs. 1-2-0.

Aids to Physiology. By John Tait, M.D., D.Sc., Late Lecturer in Edinburgh University and R. A. Krause, M.D., D.Sc., Late Lecturer in Hygiene and Physiology College of Hygiene and Dunfermiline and also in Technical College, Edinburgh. Publishers Bailliere Tindall and Cox. Covent Garden, London. Pages VIII+255. Figures 57. Price 3sh. 6d. Rs. 3-1-0.

Aids to Practical Pathology. By F. W. W. Griffin, M.A., M.D., B.C. (Cantab), M.R.C.S. (Eng.), L.R.C.P. (Lond.), Assistant Pathologist, Virol Pathological Research Laboratories and W. F. M. Thompson, Chief Technical Assistant, U. Path, Research, Labs., Publishers Bailliere Tindall and Cox, London. Pages X + 246, Figures 3, size Foolscap 8vo.

Communications, Letters &c. received during Jan. 1924, from Dr. Amar Nathyajneeka, M.C., P.S., Jaipur; Dr. Karkrey, M.B., Nagpur; Dr. Kshethra Mohan Guptha, M.B., M.R.A.C., Mahishdal; Dr. M. Anandam, L.M.P., Payyli; Dr. J. C. Ghosh, Calcutta; Dr. S. R. Kirlosker, Dharwar; Dr. S. Subba Rao, L.M.P., Mylapore, Madras; Dr. Kouchunni Menon, L.M.P., Tripunithura; Ashutosh Roy, Hazirabagh; Dr. A. P. Pillai, Bellary; Dr. Panibhushan Mukerji, Jallay, P. O. Jogiar, Medical Officer in charge King George's Dock Dispensary, Calcutta; Dr. P. Guptha, M.B., Dinapore; Dr. A. K. Sircar, M.B., D.P.H., Faridpur; Dr. P. K. Kurup, L.M.P., Coimbatore.

INDEX TO ADVERTISEMENTS.

REGD. TO M. 439. APRIL, 1924.
Vol. XXI, No. 4.

The Antiseptic

A Monthly Medical Journal

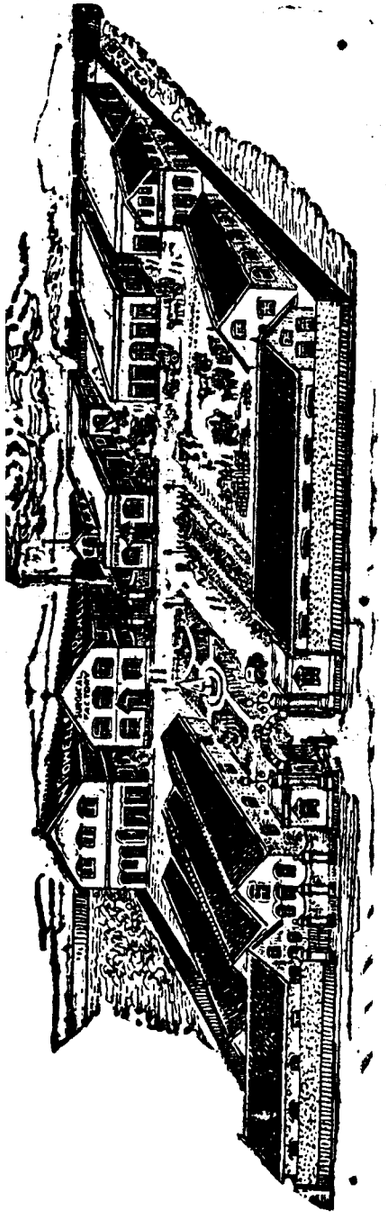
EDITED BY

U. RAMA RAU, M.L.C.

CONTENTS.

Editorial and Publishing Offices: 323, Thambu Chetti St., G.T. Madras.
Subscription Rs. 5, Foreign 10sh. a year. Post paid. Sigle Copy As. 12. In advance.

INDEX TO ADVERTISEMENTS—SEE PAGE XXXVIII



Having now brought our *Factory* and *Laboratories* to the highest pitch of efficiency, and having become the largest Manufacturing concern in Surgical and Drug lines we are desirous of extending our connection all over India to larger degrees. We have made up our charges of the various articles which we can offer you without fear of competition either as regards quality or prices.

We have built up our reputations and owe our success as manufacturers to the absolutely high grade standard of quality in which we turn out our goods, and we feel that this is a better foundation than cheaply made articles at low prices.

N. POWELL & Co., BOMBAY.

Zander Orthopedic, Medico Electric & Radium Institute.

(Incorported with N. Powell & Co.)

We have pleasure in announcing to the medical world that from the 1st of January 1924 our House has been appointed by the Secretary of State for India in Council to treat all cases of deformity and to prepare artifical limbs and Orthopedic appliances for all deformed patients belonging to the Civil and Military Hospitals in India. We have, therefore, been obliged to enlarge our Orthopedic Department in order to cope up with the increasing demand.

Our Institute is provided with full equipment for taking X-Ray Skiagrams for accurate and scientific diagonsis. We have very powerful X-Ray Machines at our place, one for Radioscopic and Radio-therapy. Specialists are in charge of this department.

We request the medical profession, specially from mofussil to visit our Zander Orthopedic and Medico-Electric Institute, when they next visit Bombay and see for themselves how hundreds of cases are being attended to by our medical experts. Every facility will be afforded to them to form an adequate idea as to the real kind of Humanitarian work we are doing with the aid of the most scientific and up-to-date appliances.

The Antiseptic

VOL. XXI No. 4. | APRIL, 1924. | ANNUAL SUBSCRIPTION Rs. 5

ORIGINAL ARTICLES.

*HERNIA

By

P. Mallannah, M.D.,

Chemical Examiner and Bacteriologist, H. E. H. The Nizam's Government, Hyderabad-Deccan.

Hernia is common among adult males in 12 per cent. of cases and in the aged it is as frequent as one in four. This shows that it is a common complaint but on account of fear of operation and anæsthesia people do not submit themselves to operation but wear truss all their life. 60 per cent. of ruptures occur after and 40 per cent. before 35. It is more common in men on account of increased muscular strain. Anything which increases intra-abdominal pressure such as coughing, vomiting or straining to empty rectum or bladder predisposes a person to hernia. Hence bronchitis, emphysema, whooping cough and chronic constipation act as predisposing causes. Even long standing or excessive walking favours hernia. The real cause, however, is the presence of a protrusion of peritoneum as a sac in one of the natural openings in the abdominal wall which is of prenatal origin. This is the experience obtained from the study of a large number of operations performed on hernia and from the experimental studies on dead bodies. The reason for the presence of this protrusion of peritoneum in case of inguinal canal is that during the descent of tests from abdominal cavity into scrotum, a portion of peritoneum is dragged with it. As the presence of a peritoneal sac in an abdominal opening being a common malformation, a portion of a bowel entering in it will act as a wedge and any straining or exertion will naturally drive this wedge, consisting of bowel further and further and thus hernia is produced.

* Specially contributed to the 'Antiseptic'.

Treatment.—In infants in case of umbilical hernia, pad is all that is necessary for its cure. It is a recognised fact, however, that in adults truss does not cure hernia but in the long run weakens muscles and enlarges the ring and thus hernia becomes bigger as age advances. Truss is a nuisance and always troublesome to use. There is no excuse now for men to use truss as there is a simple injection treatment for hernia.

Various treatments advocated so far were as follows:—Application of white oak bark by Heaton; injection of iodine by Pancoast and application of ammonia to surrounding tissues to produce inflammation and adhesions. The object of these was to close the external abdominal ring; hence they failed as they did not attack the real cause of hernia as shown above.

Operation is the only method recognised by the profession for cure of hernia. There are more than a dozen varieties of operations advocated for hernia and there is no standard operation recognised by all. The mortality from operations is about 3 per cent (Coley) and failures 5 per cent. even in the best of hands and there is an occasional danger of death from anæsthesia or from pneumonia as a result of anæsthesia. Hence a simple treatment without risks of any kind should be preferable. As the chief cause of hernia is the presence of a congential preformed peritoneal sac in an abdominal opening, its obliteration higher up is rightly considered to be the radical cure for hernia. In case of injection treatment, the vaccine is injected into this sac at its highest point at the internal abdominal ring which causes inflammation and adhesions resulting in obliteration of the sac. This is the rationale of vaccine treatment and this explains why the treatment is so successful.

It is generally observed that cuts or gaps in the skin heal up as a result of inflammation, even when they are not sutured. This gave me the idea that inflammation may be the chief cause of the cure of hernia by operation, and in order to investigate this, I prepared a vaccine consisting of 100 millions of baccillus pyocyanous per c. c. and injected 1 c. c. of vaccine into the internal abdominal ring through the inguinal canal, after reducing hernia, in a case of inguinal hernia a few years ago, and found to my satisfaction that the hernia was cured.

The man remained cured of hernia for nearly two years till his death from Influenza. During the year 1921, I treated five more cases of inguinal hernia (scrotal) with success, out of which one was a case of double scrotal hernia on both sides.

The injection of vaccine produces a slight rise of temperature varying from 100° to 102° F the same evening. The next morning, the temperature comes to normal and remains normal throughout the treatment; there may be some tenderness over the seat of injection for a day or two,

Technic is as follows:—

After getting the lower part of the abdomen and the scrotum shaved, the skin is painted with tincture of iodine. After reducing the hernia I introduce my left forefinger, having painted with tincture iodine, into the internal abdominal ring after having passed the external abdominal ring and the canal. When I am satisfied that the finger is in the internal abdominal ring, I keep it there straight and not bent and with my right hand I introduce the needle alongside my left forefinger which forms a guide, into the internal abdominal ring, keeping the needle quite parallel to the finger. I then inject the fluid just inside the internal abdominal ring and after withdrawing the needle I withdraw my left forefinger and not till then or one of the assistants can pass the finger for you and you inject the fluid by passing the needle alongside his finger. There are three points which ought not to be forgotten in this technic. 1. The finger introduced must remain straight and not kept bent. 2. The needle should be introduced quite parallel to the finger. 3. The finger should be withdrawn after the needle is removed. A purgative is administered a day before treatment and complete rest is enforced for 10 days. Use of bed-pan and glycerine enema is quite essential during this period.

Since 1921, 3 more cases of hernia treated by other medical men in different parts of India with my vaccine are given below:—

1. J. C. Dutt, Medical Officer, Sepon Hospital, Moran, Assam, treated a case of Inguinal hernia in January 1922 which resulted in complete and permanent cure.

2. B. V. Suriyanarayana, Medical Officer, Kodmur, treated a case of inguinal hernia of 19 years standing in August 1922 which resulted in complete and permanent cure.

3. V. S. Jagannathan, Medical Practitioner, Poona, treated a case of inguinal hernia of 7 years standing in February 1923 which resulted in complete and permanent cure.

The treatment is simple, causes no pain or trouble, is devoid of risk, needs no anaesthesia and can be applied even to the aged.

THE ROLE OF THE GENERAL PRACTITIONR IN MIDWIFERY PRACTICE.

By

MR. K. S. SIVARAMAKRISHNA AYYAR, L.M.P., MADRAS, L.C.P.S., BOMBAY.

My object in reading this paper on the above subject is to bring forward prominently before you some recent advances in the midwifery

* A paper read before the Madras Branch of the All-India Sub-Assistant Surgeons' Association.

work of the present day, and to show that the general practitioner has a legitimate place in midwifery practice. In the first place, I may point out that experts in any branch of our profession are few and far between, more so in the mofussil and it is to the general practitioner that the public have oftentimes to resort to help. Thus the general practitioner cannot exclude midwifery practice in his daily work. Some twenty years ago what is known as antinatal work was not receiving due attention, but at present preventive midwifery has very largely taken the place of curative midwifery. The general practitioner has got a very wide field of work in this direction and has ample opportunities in this new field in examining expectant mothers, looking after them during the period of gestation, and thus prepare them for a safe and normal labour. Formerly the general practitioner was summoned to attend a woman in labour and he tried to prevent all difficulty and danger to mother and child as far in him lay; thus prevention and repair were confined to the time limits of labour. At the present day the general practitioner institutes preventive measures from the very commencement of pregnancy, continues to the full period of gestation and follows up his patients with reparative measures without any time limit solely with the object of restoring the damaged tissues to their original functional efficiency. Thus, formerly, the general practitioner was compelled to confine his whole attention upon the supremely critical hour, at which the child is passing through the bony canal, in the act of birth and his sole endeavour had been to step promptly forward when labour has been delayed and by ingenious manual or instrumental aid corrected whatever is amiss and triumphantly presented to an anxious father and a relieved mother a more or less uninjured baby. And at the end of a fortnight he said farewell to his patient after a cursory examination. By preventive measures founded upon antinatal supervision the general practitioner of the present day will be able to acquire a less dramatic, a less spectacular, but infinitely more comfortable and less exacting victory in labour. By careful follow up of his patients he will be able to return them to the ranks of the general population intact and fit them for whatever future may demand of them. This new outlook entails new responsibilities on the general practitioner, thus providing great possibilities of life saving and disease and disability preventing coma within his scope. The general practitioner should accept this new responsibility and he can no longer stand apart. He should adapt to the new conditions, thus a field of usefulness awaits the general practitioner and he need feel no strangeness. A pregnant woman consults the general practitioner generally during the earlier three months or during the latter three months of pregnancy. Thus an opportunity is presented for a systematic examination. Such an examination trains one to detect any abnormality and when carried out

with precision and care infuses great confidence in the patient. The rapidly growing ovum makes many demands on the maternal organs. It requires a great deal more room for its development and a free blood supply for its nourishment. The parturient canal must be prepared and the woman prepared for the expulsion of the complete child. These are local requirements. There are in addition demands on organs of general metabolism, liver, kidney, ductless glands, nervous system, etc., and unless the proper balance is maintained, either mother or child or both will suffer. To meet these requirements the whole body of the mother undergoes certain physiological changes, and it is of very great importance to study them in detail and try to prevent them from becoming pathological. Examine the pregnant woman when she is presented to you as a whole, find out first her general health, the presence of any organic disease or constitutional condition which is likely to undermine her health and place her at a disadvantageous position at the time of labour. Always follow a routine method. Examine every organ for their functional efficiency. The existence of heart disease, venereal disease, deficiency of renal or hepatic function, anemia, albuminuria, and other toxemias of pregnancy have to be carefully excluded. Obtain the previous obstetrical history. Practise abdominal palpation. Find out the life of the child, height of uterus, condition of pelvis; examine the urine and record the blood pressure. Thus examine the patient as for life insurance, and impress upon the patient that you are anxious to foresee and prevent danger and thus avoid all suffering.

In the earlier months when a woman presents herself to the general practitioner to find out the existence of the pregnancy always, make a P. V. by noting the increased softening of the cervix due to the increased blood supply and the increase in the size of the uterus. It is always possible to give a definite reply and this cannot be detected by an oral examination, nor can it be determined from the radial pulse. In the latter months a pregnant woman may consult the general practitioner to know if everything is going on allright and to find out the expected date of confinement. Thus again, an opportunity is presented to the general practitioner to detect the presence of any anamolous condition and to advise the mother as to her conduct and about the requirements at the time of labour.

Certain danger signals present themselves during pregnancy. Pregnancy itself is not a danger and has no danger signals. A healthy woman carrying a healthy child is not an instance of disease but of health and abundant life. But, certain danger signals present themselves during pregnancy and in a group of expectant mothers it is only one now and another again that shows these danger signals, so test everyone and examine every mother carefully. Pain is a familiar danger signal during the earlier

months. Normal pregnancy is painless. So never disregard pain. Pain with bleeding is bad. Investigate the cause of all pains. Pain with bleeding may be a danger signal of premature interruption of pregnancy. Timely recognition and appropriate treatment may ward off a threatened abortion. Again, colicky pain with red discharge is often overlooked in the earlier months. The woman might have missed one or two periods, does not believe herself to be pregnant, the colic pain and red discharge may be regarded by her as due to the appearance of the monthly periods. But she finds the pain more and more colicky in nature and attended with more bleeding. Elicitation of the history may reveal a period of relative sterility and on careful P. V. one may detect an ectopic gestation. Timely recognition and correct treatment go a great way to safe the life of the patient. Again, during the early months pain may be due to retroverted gravid uterus or again due to retention of urine caused by this condition. Early correction and timely help may ward off an abortion and help pregnancy to go to full term. Pain with bleeding may be due to a vesicular mole. Importance of the recognition of this condition cannot be overlooked though it may be rare and early treatment removes much suffering and the subjection of the uterine scrapings to a microscopical examination may reveal the existence of chorian Carcinoma, a rapidly fatal form of malignant disease which if recognized in time gives the chance of saving the life of the patient by complete extirpation of the uterus.

Another row of danger signals are provided by the toxæmias of pregnancy during the latter months. This may manifest in various forms stch as renal type, cerebral type, gastric type, hepatic type, and uterine type. Such are the clinical types of toxæmia the general practitioner may meet with, in which one system of the body appears to bear the chief brunt of the toxic process. Food deficiency disease sometimes simulates toxæmia. In the renal type with albuminuria followed by anaemia and anasarca the patient exhibits a row of danger signals. Persistent headache, diminution in the total quantity of urine passed, visual disturbances and high blood pressure. These show that the mother is in a perilous condition. Added to this suppression of urine and jaundice are grave in extreme degree, and the patient is in the very brink of convulsion. This means two deaths—a tragic end. Albumen in the urine of a pregnant woman is a distant danger signal and a high blood pressure is a near danger signal of impending eclampsia. Eclampsia is always preventible but not always curable. Encouragement of the elemenatary functions, a regulated diet and the reduction of blood pressure prevent always the occurrence of eclampstic fits. A pregnant woman with albuminuria and a high blood pressure especially in a primipara has to be treated as a case of eclampsia, without waiting for fits to come on to institute treatment. So a routine and repeated examination of urine

especially in a primipara and a careful record of blood pressure cannot be omitted and the general practitioner has to take note of all prewarning signs. Present day treatment of eclampsia is one of prevention which is safer than to treat a patient after repeated fits, as each succeeding fit brings the patient nearer and nearer to death. The present day high rate of maternal fatal mortality in this condition is largely due to the treatment after the onset of fits. Toxæmia of gastric type leading to Hyperaemisis Gravidorum has to be recognised and if not amenable to medical treatment may necessitate the induction of premature labour to save the life of the mother. In the uterine type with pregnancy supervening on chronic kidney disease a group of danger signals are manifested as miscarriage, still-births and premature detachment of placentas leading to a condition of antipartum haemorrhage.

In cases of antipartum haemorrhage women sometimes complain of pain and bleeding, some have painless profuse external bleeding and again in some bleeding may recur, thus undermining her health. All cases of bleeding before the birth of the baby is a very grave danger signal. Proper recognition of the condition is of utmost importance. In all these cases never follow a wait and watch policy of expectancy unless the patient is willing to avail herself of institutional treatment where she may be under constant watchful care and supervision. An apparently mild case may turn out to be of great severity due to further loss of blood. In the above class of cases if the patient presents constitutional symptoms of blood loss, anaemia and the maternal pulse goes over 100 per minute increasing in rapidity and diminishing in volume and if the uterus is quiet—not acting, remember you are dealing with a dangerous case. Hospital authorities rely chiefly on conservative line of treatment which is the best in these cases. Don't allow the patient to get into a collapsed condition to institute treatment. This means dangerous delay and death of the patient. The only chance to save the life of the mother is for the general practitioner to realise the gravity of the situation and act promptly relying chiefly on a conservative plan of treatment. Certain danger signals are detected by the doctors alone as a narrow canal. Measure pelvis of all primipara and all women that have had difficult labour. Common forms of contracted pelvis met with are two, flat and small round pelvis and sometimes a combination of both and a rare form of great deformity which are seldom met with in general practice are the extreme degrees of contracted pelvis. They force themselves on the practitioners' attention and demand their proper line of treatment. All pelvic measurements have to be considered in relation to the size of foetal head. A classification of pelvis according to the etiological or pathological factor is unsatisfactory. A system that suits the anatomist would not aid the obstetrician in his daily practice. All cases

have to be considered in regard to the particular labour comparing the pelvis to the foetal head; hence it is said that the foetal head is the best pelvimeter. Induction of premature labour and Caesarean section at proper time saves both the mother and child and also saves many a midnight craniotomy and many mothers are saved much suffering and sometimes death. So examine every pregnant women from the 34th week of gestation and estimate the relative disproportion by Munrokerr's method as the suitable time for induction of premature labour is not a question of arithmetic. Venereal disease in pregnancy is another danger signal. The malady of parents strikes the infant with a tragic blow. Always test blood and treat properly. Anæmia is another common danger signal in this country and is a fatal complication of pregnancy. During pregnancy the necessity imposed by nature is provided in the total increase in the quantity of blood R. B. C. and hæmoglobin. The amount of fibrin and fibrinogen increases from the sixth month and may be even one third greater than normal. This is a conservative act of nature to prevent dangerous loss of blood during labour. The coagulating power of blood is greatly increased. Total quantity is greatly augmented during the last three months to provide for the fœtus and to compensate for the normal loss of blood during labour. In anæmia the picture is reversed. Such anæmia may be due to a primary toxæmia or to a secondary factor. The quantity and the quality of blood is diminished, there is reduction in the total R. B. C. and hæmoglobin and the coagulating properties of blood are considerably decreased. Anasarca, cardiac dilatation follow in its usual turn. Premature labour and sudden death are the usual events in these cases. Cases of anæmia met with in this town are largely due to hookworm—a preventible condition. In these cases when the hæmoglobin index is reduced to 30% the chances of the patients surviving the shock of labour is little. Bloodloss at the time of labour though small is always a fatal loss in these cases. If infants are not born still they are so under-developed that they rarely survive for more than a few days. Patients that seek admission into the hospital come at a very late stage when dyspnœa, anasarca, extreme debility, and marked pulsation of the jugulars are present with hæmic and basic murmur and cardiac dilatation. The shock of labour seems sufficient to terminate their lives. Timely prevention and appropriate treatment will save many mothers their lives. The above danger signals can be recognised in time by the general practitioner to adopt preventive measures. Thus detection equivalent to correction and ignorance is always an ineffectual defence. So by systematic examination of mother during pregnancy impress upon her that you are anxious to foresee and prevent danger and thus avoid all suffering. Thus a general practitioner is welcome

to day to learn preventive midwifery. This will be a growing and remunerative work. Thus the anti-natal work of the present day removes anxiety and dread from expectant mothers, intelligence and supervision removes nervous apprehension and worry, fuller enquiry infuses greater confidence. A cursory examination and to say "you will be all right" is no good. Detailed examination, and frank and measured judgment are required. Thus satisfactory treatment is provided in complicated cases, much discomfort and suffering at labour are removed, there is a large increase in the number of normal cases. Still births are prevented. Foetal and maternal mortality rate is reduced considerably as also the morbidity. These are some of the distinct gains in the new midwifery of the present day which teaches preventive midwifery. Maternity and child welfare work form the basis of national prosperity. Nations, they say, are gathered in the nurseries and the race marches on the feet of little children. Thus present day new midwifery or preventive midwifery offers limitless opportunities to the general practitioners for noble effort and no work is so far reaching and so essential as that which safeguards the interest of the mother and the child. I trust that the general practitioners would assume this new responsibility created by the new midwifery of the present day and thus help in the onward progress of our race.

---

*DEMENTIA PRECOX

By

P. GUPTA M.B., DINAPORE, PATNA.

Synonym.—Primary Dementia, Precocious Dementia, Schizophremia, Paraphremia.

The term Dementia Precox was first used by Pick of Prague in 1898; but it was mainly to the investigations of Kræplin of Munich that this type of insanity owes its differentiation.

In recent years, the term schizophremia is finding more favour amongst the psychiatrists because of the pessimistic impression of incurability that is conveyed by the word Dementia.

Definition.—Dementia Precox is a form of mental derangement which first commences at puberty, usually in persons who were previously intellectually bright, and consists of a series of states, the common characteristic of which is a peculiar destruction of the internal connection of psychic personality especially in emotion and volition.

Frequency.—Dementia Precox is one of the common types of mental disease for which patients are admitted into institutions. In Europe it forms

(* Read at a meeting of the Patna Medical Association held on 19th December 1923.)

about 12 per cent. of new admissions in a mental institution. In India, this disease was not shown as a separate entity in the returns and reports of Mental Hospitals till recently. So very correct figures about the incidence of this disease is not available. But as far as I could collect, it forms about 10 per cent. of new admissions in Mental Hospitals in India.

Etiology.—The disease usually starts between the ages of 15 and 35, but in rare instances, it may commence earlier or later in life.

Both sexes are equally liable to its attack.

It invariably originates from a neuropathic shock, that is, in a family with a history of nervous or mental disturbance, such as, Neurestheniа, Epilepsy, Insanity, drug habit, etc. Several cases may occur in the same family. Sometimes a brother or a sister of the patient is found to be suffering from some other type of insanity or nervous or mental instability. Cases have come under my observation from the highest strata of society to the half savage aborigins, like Santals, Bhuiya, Bhumij, etc.

Dementia Precox is usually found to occur in a person who in his childhood was reticent and seclusive, hard to influence, sensitive and stubborn. He was accustomed to day dreaming and utterly immature philosophising. He had no natural tendency to be open and to get into contact with his environment. Headaches, freaky appetite, general malaise, hypochondriacal complaints about the heart etc, unaccountable whims, irritability of temper were present.

These symptoms have been described as of pre Dementia Precox character.

One of the important contributory causes of mental breakdown is a severe and prolonged mental strain in a person born with a cortical neuron of deficient durability. This is probably the cause of brilliant persons, such as infant prodigies, who show extraordinary mental power in their early life, losing later all capabilities and brilliancy and passing their life, in obscurity.

Any one who has under him a child showing pre-Dementia Procox characteristics, should try his best to make the child correct those defects. Such a child should on no account be allowed to compete at an examination.

Morbid Anatomy:—Not much is known about morbid anatomy in Dementia Precox.

The brain convolutions are sometimes found irregular.

Swelling of the cell body and nucleus of the brain cells, breaking down normal nuclear chromatin structure, atrophy and fragmentation of the neurofibrils, granular degeneration and irregular clumping of Nissl's granules have been observed microscopically.

Gradual diminution of the spermatogenesis, upto complete atrophy, has been observed, according to the stage of the disease.

Pathology:—The different theories put forward to explain the causation of the disease are:—

(1) It is like neurestheniа, hysteria, etc., a functional disease.

(2) It is due to inherent fundamental germinal defect the nature of which is unknown.

(3) It is due to retrogressive changes in the cortex of the brain.

(4) It is due to retrogressive changes in the sexual and accessory sexual organs

(5) It is due to auto-intoxication with the toxins formed in the spasmodically contracted colon.

(6) It is one of the diseases due to copsostasis and consequent auto-intoxication.

(7) It is due to chronic bacterial infection, probably through the alimentary tract by pneumococcus, anaecopic streptothrix, etc.

(8) It is due to deficiency or disturbance in the endocrinial secretion, such as, deficiency of secretion of thyroid, parathyroid, pituitary etc.

None of the theories, individually, can satisfactorily explain all the signs and symptoms of the disease. There is no doubt that the disease is a retrogression towards infancy of a partly developed brain, and it is probable that both organic defects and mental trauma conjointly cause the disease.

Onset is insiduous. The patient who is approaching or has reached maturity and who had probably carried out his occupation properly and possibly intelligently, begins to show signs of mental failure of a slowly progressive nature. He becomes unable to give sustained attention to his work, shuns society, wanders about aimlessly or passes his time in complete idleness. There is a general alteration in character; for example, a book worm will not touch a book for months together. There is general blending of emotion and feeling; and affection for friends and relatives are diminished and ultimately lost.

As the disease progresses the patient becomes more and more dull. He loses all interest and is not deeply affected by what takes place even in his immediate neighbourhood, though the power of understanding is not lost. Consequently, there is an apparent loss of memory for recent events. He is incapable of prolonged mental or physical exertion. Power of judgment is greatly retarded. Ideation as evidenced in speech and behaviour, is confused and retarded. Hallucinations are common. Delusions are sometimes present. Self-control is weakened so that the

patient may be roused to a state of angry passion and violent act may be done without sufficient provocation. Silly vacant laugh without corresponding joyous humour or uncontrollable fit of weeping without corresponding melancholy may be observed. The patient is frequently dirty and untidy. There is a great loss of sense of shame probably from a general blending of emotion. One of my patients, a well educated female, used to invite me and other males to come inside her bath room while she was taking her bath completely naked. At times she used to sit with her skirts drawn up and exposing her genitals when expecting a visit from a male.

In course of time peculiar manifestations are developed, such as, Mannerism, Stereotypism, Negativism, Mutism, Verbigeration, Echolalia, Echopraxia, etc.

Mannerisms are peculiar, unexplainable actions performed by a patient. Some of the mannerisms, I have seen in my patients, are enumerated below :—

(1) One patient would touch every object he passed by.

(2) Another would stand on one leg in a constrained position for hours together.

(3) A third would raise every bolus of food above his head, then touch his forehead with it and after that put it into his mouth.

(4) Another would clap without any rhyme or reason.

(5) Another would keep stones in his mouth always.

(6) Another would always walk in a straight line and never turn except at a right angle.

Stereotypism is mannerism frequently repeated.

Negativism is spontaneously carrying out an action in a way exactly opposite to what is desired or passively attempted. This may even go so far as to refuse food when offered, consequently forcible feeding.

Mutism is obstinate silence though the vocal mechanism is intact. This is also a manifestation of negativism. I had a patient who spoke after remaining mute for 13 years ?

Verbigeration is the frequent uncontrollable meaningless repetition of the same word, phrase, sentence, or sound.

Echolalia is a meaningless repetition of what is spoken in the hearing of the patient.

Echopraxia is a meaningless repetition of the movement of others.

A patient, especially in the advanced stage of the disease, can be hardly induced to write, but if he does so, the writing has frequent repetitions of words, sentences or ideas.

Attacks of fainting fits resembling epilepsy are sometimes seen. In the early stage of Dementia Precox, such fits are usually thought to be true epilepsy.

From the clinical symptoms the disease may be divided into three types, viz :—

(1) Hebephremia,
(2) Katatonia, and
(3) Dementia Paranoides.

The division is arbitrary and there is no definite line of demarcation between the types.

Hebephremia.—Is marked by a mental degeneration of a progressive nature. The patient is markedly idle and passes his days doing nothing for months. He shuns society. Speech is hesitating and jerky and there may be verbigeration or echolalia. Echoprexia may be present. Hallucinations are frequent and may lead to general restlessness and to obsessional and impulsive acts. Masturbation is practised openly.

Katatonia.—Is so named from its important symptom, muscular rigidity. There are two phases of the disease—stupor and excitement. A patient passes from the one to the other phase, suddenly or with an intervening period of apparent tranquillity. Rarely there is no alteration in the phase.

Katatonic Stupor.—The patient has an expressionless face, is quite apathetic to his surroundings and shows little signs of mentation. He is resistive, negativistic and probably mute. Mannerism, stereotpypism, etc., are present. The patient is dirty, untidy and does not take his food properly. There may be dribbling of saliva constantly. Hallucinations are present and may lead to obsessional acts, even to suicide or homicide. He may be unduly suggestible, allowing his body to be placed in any posture an observer desires, however uncomfortable the posture may be, and will remain so until again brought down to a normal posture. Such a degree of stupor is known as "Catalepsy" or "Flexibilas Cerea." Speech, if present, is scanty and incoherent with verbigeration and echolalia. With all these well marked mental symptoms, consciousness and power of comprehension is not much disturbed and patient is often able, during the period of tranquillity, to give an account of his experience during the stage of stupor.

Katatonic Excitement.—The excitement, unlike that of mania, comes on in bursts and is not continuous. Mannerism, stereotypism, echolalia negativism, etc., are present. The general behaviour becomes extraordinarily

affected. The patient is noisy and automatically performs senseless violent actions. Speech is confused, incoherent and affected. The power of comprehension is not much involved.

In Dementia Paranoides.—In addition to the usual symptoms of Dementia Precox, viz., mannerism, stereotypism etc., are observed delusions which are consistent and persistent for years. These delusions are consistent in their main feature only, but change in form from time to time. The delusion may lead to very peculiar action. One patient who was suffering from the delusion of persecution, gradually developed the idea that his persecutors torment him by 'hurting' the earth, consequently anything that is in contact with the earth would hurt him. From this idea the patient would not lie down and remained standing for days and nights until he fell down from sheer exhaustion.

Diagnosis.—The age, slow and gradual onset, blunting of emotion and feeling, deficiency of attention, change of character, apparent loss of recent memory, deficiency in ideation, mannerism, stereotypism, negativism, verbigeration, etc., are the important diagnostic signs.

Differential Diagnosis :—

Amentia— | Idiosy,
| Imbecility.

The mental weakness is present from birth or from very early in childhood and there had not been much development of mental function at any time of life.

Secondary and Terminal Dementias.—Usually occurs in middle or advanced life and there is a history pointing to the original disease which produced dementia.

Dementia Paralytica.—Like the secondory dementias, occurs in middle or advanced state of life, and there is a history of syphilis together with the characteristic signs such as pupillary changes, tremor, loss of reflexes.

Maniac Depressive Insanity.—Is sudden in onset, and there is an increase of emotion, feeling and memory for recent events.

Confusional Insanity.—Is also of sudden onset and there is a history pointing to the cause that produced the exhaustion of the mental faculties, the commonest cause being in this country excessive use of one or other form of Cannabis Indica.

Paronoia.—Is distinguished from Dementia Paranoides in that in the delusions in the latter, though the primary idea remains fixed for years, the form undergoes change from time to time.

Early cases are very difficult to differentiate from *neurasthenia* or *hysteria*. The guiding line for diagnosis in such cases would be the history of pre-Dementia Precox characters in childhood. A very careful observation should be made for any peculiar sign of Dementia Precox such as mannerism, verbigeration etc.

Prognosis.—The name, Dementia Precox, itself suggests that the disease is incurable. But in recent years cases of recovery have been reported under psycho-analytical treatment.

In some cases, the progress of the disease may stop for a short or long time and in some other cases there may be an intervening period of apparent tranquillity between two acute attacks—the patient appearing to be perfectly sane at the period, but a close observation would show the presence of some mental weakness even at that tranquil stage.

Treatment.—The patient should preferably be sent to a mental institution. If that is not possible, he should be placed under the constant and careful supervision of a trained companion or medical attendant. All bad habits should be corrected and the patient encouraged to occupy his time usefully. Physical health should be improved by nutritious food and tonics. Bowels should be regulated.

Different specific treatments have been advocated from time to time according to the different theories put forward to explain the origin of the disease.

Extracts of sexual glands, pituitary and thyroid have been tried.

Appendicectomy and daily irrigation through the coccum have been suggested. Removal of the colon has also been proposed!

Cases of recovery have been reported by psycho-analytical treatment.

CASES AND COMMENTS.

COMMON MANIFESTATIONS OF YAWS

By

N. K. KURUP, DISTRICT HOSPITAL, TIRUVALLA, TRAVANCORE.

Sir Patrick Manson in his book on Tropical Diseases says "it is difficult to say to what extent yaws exists in India ; some deny its presence there altogether, but recent observations show that it does occur there to a limited extent." But the experience here in Central Travancore is quite different as the various manifestations of this dire disease are very frequently met with. It also occurs in other parts of Travancore more in the North than in the South. Till the advent of Arsenobenzol group of

drugs the success of the treatment was very doubtful and so the people did not care much to undergo treatment in hospitals. But since its introduction in general practice it has become a great boon to the suffering humanity and now people are flocking to the practitioners as the relief is certain. In this part of Travancore about 3% of the population at least will generally have one or other manifestations of yaws. Here it is locally called "Punnoo" and it is more prevalent among the poor classes who are generally untidy. Less commonly it is seen among the middle and rich classes, perhaps the frequency is in proportion to the grade of cleanliness they can afford to keep up. Accidentally children of well-to-do classes contract the disease from other infected school children. As in other countries here also it is found that children are more susceptible to primary infection, though adults are not exempted.

Yaws, like syphilis with which it has so much similarity, has three stages—primary, secondary and tertiary. The primary ulcer of yaws is closely followed by secondary crops of ulcers scattered all over the body. The secondary ulcers cannot be distinguished from the primary ulcer, being identical in character. They usually occur in the circumoral area, anal and vulvar regions more frequently, than elsewhere. In the tertiary stage the following forms such as chronic ulcers, onychia, hand (?) and "foot yaws" (Manson), occur. The last two are the kinds which often come for medical treatment in these localities. In these there are different varieties—the cracks and fissures found on the palms and margins and soles of the feet; the cornifications of the epidermis of the sole called "Ani" in this place; the pit-like appearance of the soles as if eaten by white ants; the painful desquamation of the epidermis of the soles or palms or both. These usually occur a few years after the primary ulcer. In some cases there will not be any definite history of primary infection at all, probably the patient might not have observed it or it might have been mistaken for scabies or similar complaints. In most cases of hand (?) or "foot yaws" the deep fissures and desquamation of the palms of the hand or soles of the feet or both will be the only complaint of the person whose main trouble is that any stretching movement of the affected limb is extremely painful and he is unable to do manual labour. The corn-like projections and the pit-like depressions on the soles, above described are also very painful and the patient is unable to walk barefooted. Besides this, the usual fungating ulcers described in text books may appear on the soles at the time of primary infection. But the above said forms are all quite different from this, and they appear as tertiary manifestations a few years after the primary ulcer. There are other forms of tertiary yaws which may resemble patches of ring worm scattered all over the body with raised

thick popular edges. It also occurs in rare cases as whitish patches here and there over the body. One or more or all these forms may occur in the same individual at the same time or on different occasions.

Treatment.—Can be said in one word 'Neosalvarsan.' It is often observed that comparatively a small dose only is required than in syphilis In primary cases with one injection of ·45 or ·6 grm. the ulcers begin to shrink from 24 to 48 hours after the injection, crusts fall off and ulcers heal in about a week's time. Fissures and other tertiary affections of hands and feet are generally cured by one injection but in persistent cases two or three injections may be required to effect a cure. In doubtful cases 914 can even be given as a trial for diagnostic purposes. For intravenous injection the required dose of Neosalvarsan, diluted in 10 or 20 c.c. of distilled water or pure rain water without any ill effect, (freshly boiled and cooled) is injected into one of the veins at the elbow with a 10 or 30 c. c. hypodermic syringe. A 20 c. c. dilution is preferable as any accidental subcutaneous infiltration which may sometimes occur will be so painful as when a 10 c.c. dilution is used, the former solution being weaker, though equally effective. The technique of the injection is very simple—the syringe and needle is filled with the prepared solution; the vein at the elbow is made prominent by tying a bandage round the upper arm; the selected vein is punctured with the needle and when the blood begins to flow into the syringe—a sure sign that the needle is in the vein—the bandage is untied and the solution is slowly injected into the vein.

In this connection I like to mention about the difficulty experienced by Dr. Krishnamurthy (Vide "Antiseptic" September 1923) who found that there was no rush of blood into the syringe. In his case perhaps it might have been due to the low blood pressure of the person at the time, or to the bandage not being tight enough to completely stop the venous circulation and thus increase the venous blood pressure, or to the piston of the syringe being firmly adherent to the barrel, thereby the piston not giving room for the inflow of blood into the syringe. If there is any such difficulty from whatever cause, it is easy to get over it by gently drawing out the piston a little without moving the needle from its position. If the needle is in the vein the blood will readily flow into the syringe while the piston is being gently drawn out.

Now, coming back to the treatment, we have mercury in the form of grey powder combined with Bismuth, Pot. Iodide and Arsenic given internally are found to have some slow effect. The first named one is more effective in primary and secondary cases. Castellani's mixture is found to be effective in late secondary and tertiary cases.

It consists of Re. Antimon Tartarat gr. i.
Soda Bicarbigr. xv.
Soda Salicylas gr. x.
Pot. Iodide 3i.
Glycerine 3ii.
Aqua ad ozi.

This dose diluted in 3 or 4 times its bulk of water is given thrice daily to adults.

Few cases are given below to illustrate the success of 'Neosalvarsan' in the treatment of yaws and late different manifestations of the disease.

M. C. a Xn female child, 5 years old, with raised, fungating, encrusted, more or less circular ulcers, scattered all over the body, with a history of 4 months duration, was given an intramuscular injection of Neosalvarsan. 15 grm. in the glutial region. The ulcers began to shrink from the 2nd day, crusts fell off and the patient was alright in a week's time.

M. K. P. a Hindu male, aged 45, had fissures on the edge of the feet and corn like thickening of the horny layer of the epidermis of the soles for 10 years. The patient was unable to walk barefooted and was given an intravenous injection of 45 grm. A fortnight after the injection, the margins of the feet began to get normal, the hypertrophied epidermis and the corn like growth gradually disappeared and in a month's time he was cured of his troubles. There was no history of primary ulcer.

M. G., male, 40 years, with cracks and fissures over the palms of both hands only, with 12 years' history and unable to do any manual labour due to the pain, had an injection of Neosalvarsan 45 grms. intravenously. Two weeks afterwards, the hypertrophied skin began to peal off and get softer and in a month's time he was cured of his complaint. In this case also there was no history of primary ulcer.

There was a similar case of an adult male who had fissures on the palm of one hand only and he had no other complaint. He was also cured by one injection of 45 grms. intravenously.

R. K. P. male, 32 years, with chronic extensive ulcers over both legs and with big scars and cicatricial contractions on the forearms and legs for 15 years, had three intravenous injections of 6 grms. of Neosalvarsam at weekly intervals, and a week after the second injection, ulcers became healthier and showed signs of healing and in about 45 days after the first injection, all the ulcers were healed. There was a clear history of primary yaws about 12 years back.

K. N. P. a Hindu male of 24, had worm-eaten like appearance of the soles of the feet looking like small pits or perforations on the epidermis. It

first began on the left and then the other foot became affected. Walking was very painful as any sand or pebble getting into it caused extreme pain. This was his only complaint and he had no history of primary yaws. One dose of 6 grms. Neosalvarsan intravenously cured him completely in about a month's time.

(* Read at a meeting of the Patna Medical Association held on 19th December 1923).

SYSTEM OF MEDICAL EDUCATION IN GERMANY

By

K. M. HIRANANDANI, L.C.P.S., (BOMBAY) L. M. ROTUNDA, DUBLIN.

My object in writing this article is to acquaint the reader with the knowledge of the subject of which he has little or no idea. Furthermore what appeals to my mind is this.—That it is high time that *French* and *German languages should be taught in Indian schools* so that, an average Indian, coming to Europe, either for study or otherwise, will greatly benefit himself if he has the knowledge of the above two languages, in addition to English. Science is progressing, and it is by coming in *actual touch* with various centres of activity, that one learns more, than by either hearing or reading, and this opportunity is afforded to a stranger in the foreign centres of activity, by knowing the language of the land. This advantage should not be lost sight of, when an average *Indian specially*, coming from such a long distance, visits Europe. I do not claim to give extraordinary and best information, but whatever my humble efforts have succeeded in getting, this information I like to put before my professional brothers and sisters, if it could be of any benefit to them. My cordial thanks are due to Dr. Pillger of Erlangen University now the Director of Deep X-Ray Therapy Department at Hume Street Hospital, Dublin, for giving me this information.

1. *Preparation.*—Up to the eighteenth year students have to undergo education in one of the Middle Schools, a general school that prepares for entering any Faculty of the University. There are two main kinds of Middle Schools, *i.e.*, (Preparatory Schools.)

(1) The classical or humanistic ones, where ancient languages and literature are of first importance, and modern natural science and languages are of secondary importance.

(2) The modern realistic schools (Ober-Realistnule, Realgynasium) where modern science (Physics, Chemistry, etc.,) and modern languages, predominate (recently much preferred.)

After nine years study in one of these schools, the student gets the "*Arbitur* Certificate" after passing a stiff examination, this examination

comprises Literature, History, Mathematics, Physics and Chemistry, Geography, modern language and in case of medicine Latin. This examination can be passed also by those who have not studied in one of the German Middle Schools. This corresponds to entrance or preliminary examination for registration.

II. The *Arbitur* or Certificate gives the right to immatriculate in any German University. By the immatriculation, student gets the rights of an academic citizen which is done in a short ceremony (Ceremony consists of meetings).

The University education for medicine is divided into two parts, each 5 semesters (one semester equal to half year.)

(*a*) Preparatory semesters (5) comprising the study of Anatomy, Physiology, Physics, and Chemistry, Zoology, Botany, and some Pathology. After these 5 semesters student passes an examination in all the above subjects (the Physicum). After passing this he enters the (*b*) clinical semesters (5 Semesters). To each University with a Medical Faculty a big University clinic is attached (usually the biggest clinic in the town) under the leadership of expert professors. Each clinic (surgical, medical, gynaecological, ear and throat, eye, skin, venereal) has an auditorium wherein demonstrations are given. Besides the attendance of these clinics the student has to attend lectures in Pathology Pharmacy, Hygiene and Bacteriology, Surgery and Medicine, etc. Surgical, medical, and gynaecological and obstetrical clinics must be visited regularly for at least two semesters, the others at least one semester (surgical or medical clinic is at least 10 hours a week each 2 hours a day).

In the last semester practical work is provided for in the clinics for more advanced students.

After that student passes the State examinations, an examination that comprises all the medical subjects and lasts about two months; it is partly written, oral, and practical.

If student has passed this examination he gets the "*approbation*" or Degree which entitles him, after one *practical year's work* to do practice. The practical year can be done in any official State or Town Hospital. Student is also allowed to change University during the course of his studies after each semester.

Independently from the "approbation" most of the students get a title "Doc-med," after publishing some scientific original work under the auspices of one of the leaders of the University clinic, and, also after passing a special examination. The title "*Doc-med*" *can be used only after obtaining* "*approbation*" or *Degree*.

If student wants to specialise, he now starts to do work for several years (2—3) in one of the special clinics he wants to specialise. There is no examination.

The Universities allow those who have no "Arbitur" that is the foreigners or others to attend lectures as "Hearers" and attend various clinics.

SYMPTOMS AND COMPLICATIONS OF THE DIGESTIVE SYSTEM IN TYPHOID FEVER AND THEIR TREATMENT

By

U. VENKATA RAO, MEDICAL PRACTITIONER "SUDARSANA", MADRAS.

Except in very wild forms of Typhoid Fever, the appetite is gradually lessening during the incubation period and is completely lost at the end of the second week and reappears again during defervescence.

There is a bitter taste in the mouth. The saliva is diminished and much thirst is felt. Restricted diet, fever and diarrhoea may be the causes of this thirst.

During the first few days the tongue is broad and flabby showing marks of teeth at the margin. Soon the tongue becomes narrow, tapering and more or less pointed. "The epithelial covering disappears at the tip and edges, so that the central part, which remains white or yellowish white, is surrounded by a bright red zone placed like an isosceles triangle with its base posteriorly. In other cases, on the contrary, the coating disappears from the centre of the organ, which then projects like a red V into the middle of the white zone." (Jaccond). Later on the redness of the tip and edges becomes more marked and the central coating remains thicker. In very grave cases the tongue becomes dry, retracted, hardened and shrivelled and the movements become difficult and painful.

"The thick coating becomes brown or blackish, crusted and cracked; it is formed by dried epithelial cells and mucus, and coloured by the blood which has oozed from the cracks. The lips become dry, cracked and covered with sordes". The soft palate, uvula, tonsils and pharynx become red and covered with a brown coating.

Various forms of sore throat, tonsillitis, diphtheria, etc., may be found as complications.

Thrush is often present either on the soft palate or back of the pharynx on tonsils or on cheeks and tongue. This may lead to Dysphagia.

Bucco-pharyngeal ulcerations in Typhoid Fever.—"These isolated or multiple ulcerations, apparently due to local infection by the pathogenic

flora of the mouth, may be found in the tongue, lips and cheeks, soft palate, uvula, in the gingivo-labial fold and at the fraenum and in exceptional cases on the posterior pillars."

Dugnet's ulcerations.—These form one of the symptoms of Typhoid Fever. They are fairly often situated symmetrically on the two palatal pillars, where they appear in the form of a whitish or ashy grey patch, slightly oval in shape, running obliquely downwards and outwards, with their long axis parallel to that of the corresponding pillar, and measure six to eight mm. in diameter. On their surface is to be found a little mucus which is easily removed, leaving an almost normal mucous membrane which does not bleed, is not indurated, and is of a yellowish grey or grey pink colour. The ulceration is shallow, its edges are regular and surrounded with a small red area of congestion. There may be ulcers on the edges of the tongue; the mucous membrane around is swollen and bleeds readily. These ulcers persist for a long time on account of the dryness of the mouth and by the local infection. "Louis has described pharyngeal ulcers which appear late (third or fourth week); they are multiple and deep and are situated at the lower part and sides of the pharynx, where they cannot be seen by the unaided eye. Their course is generally insidious, but they may be the starting point of more serious complications, especially retro-tonsillar or retro-pharyngeal abscesses. They may also cause oedema of the glottis."

Gastric symptoms.—One of the important symptoms from the very beginning of Typhoid Fever is pain and tenderness or pressure on the epigastrium. Vomiting may or may not be present; though rare in the adult is frequent in children at the onset. There is always a sense of fulness and tension with nausea and no taste for food. In some cases at the end of the second week uncontrollable vomiting may set in with or without Haematemesis. During convalescence, vomiting may be the result of indigestion.

Intestinal symptoms.—Abdominal pain and tenderness are frequent but not constant. Pressure on the right iliac fossa causes a characteristic pain, sometimes severe enough to provoke a grimace, a cry or a movement of defence on the part of the patient, however, prostrate he may be. This symptom is more or less early one; it may persist until convalescence or reappear at that period as the result of constipation or an error of diet. The pain may be found especially at MacBurney's point."

Meteorism is always present from the beginning. "When the intestine contains only a little gas, the abdomen assumes a special shape. It is distended transversely. The umbilicus is very often seen to project. The consistency is elastic on palpation; the resonance of the abdomen is

exaggerated on percussion. In extreme cases, with an enormous quantity of gas in the intestine, the intestinal distension becomes generalised, the thorax becomes broadened at the base, the respiratory action of the diaphragm is interfered with, and a more or less serious pulmonary stasis ensues."

Gurgling.—In most cases more or less gurgling is found when pressure is made suddenly in the right iliac region. "A good and prudent method of investigating the presence of gurgling is to employ bimanual pulpation using each hand in turn."

Diarrhoea.—"Diarrhoea is the rule in enteric fever and constipation the exception" (Murchisen). The diarrhœa stools are "liquid and of yellow or melon-juice colour. They leave a yellowish stain on the sheets, surrounded by a broad zone of a faint pink colour. Their reaction is alkaline, their odour sometimes fœtid and sometimes musty. On standing they leave a flaky sediment and may contain blood. Their evacuation is not accompanied by colic or tenesmus." Diarrhœa may be present from the beginning or the patient may have constipation during the first few days. After a purgative the stools become liquid. Usually the motions are three or four a day in the first few days. After the 12th day onwards the stools may number 10, 12 or even 20 a day. The too frequent motions add to the gravity of the case owing to the amount of water it removes from the system. The face becomes pale, the features are drawn, skin dry, the peripheral temperature falls, pulse frequent and feeble and collapse may soon ensue. Often the fæces are passed involuntarily resulting in erythema on the buttocks and sacrum. Usually the diarrhœa subsides at the end of the third week—the beginning of convalescence. In some cases obstinate constipation may replace diarrhœa in the convalescent period. There are some rare cases when constipation has persisted throughout the course of the Typhoid Fever.

Intestinal Hæmorrhage.—This is one of the most important symptoms. Sometimes it is slight. Often it is the result of the "opening of an arteriole in an ulcer or erosion of a vessel by seperation of a slough." It generally occurs after the second week. It is rare in children and more frequent in the adults. Diabetes predisposes to hæmorrhage. Sometimes the intestinal hæmorrhage is fulminating and the patient may die before the appearance of blood in the stools. The signs are "a sudden fall of temperature, a syncopal attack, an almost instantaneous decrease in the size of the spleen, a transient rise of the blood-pressure (Teissier) an increase in frequency of the pulse (Trousseau) and a disappearance of dicrotism of the pulse" (Bouchard).

Often the blood in the stools may be very small in quantity and appear in the form of red streaks. "When present in larger quantity it

gives the stools the crimson appearance of normal blood; or, if it has been sometime in the intestine, its colour changes to that of sepia, pitch or tar." If the hæmorrhage is much or repeated the patient becomes pale, feels giddy with ringing in the ears and has a tendency to syncope. The temperature falls temporarily and then rises perhaps higher. Late hæmorrhages often end fatally.

Intestinal Perforation.—This may occur both in mild and severe cases and often in relapses. It is more frequent in men and rare in children. It occurs at the end of the second week or during the third week or later. Sometimes it may be due to the attempts made by the patients to raise themselves during defæcation. Perforation is specially found near the ileo-cœcal valve, the appendix and large intestine as far as the rectum. Profuse diarrhœa with blood often is a premonitory sign. Meteorism should be interpreted with much reserve, for perforations have been seen to occur in collapsed intestines, and, on the other hand, very pronounced abdominal distension has been seen when there was no perforation (Cassact and Duperic)." The onset is sudden and unexpected. The patient feels violent spontaneous pain and may cry out or become unconscious. "Without any obvious cause he feels a tearing or stabbing sensation in the lower part of the belly on the right hand side, which may radiate along the spermatic cord to the testicle and rectum and then become generalised." There is muscular contraction first at the part over the right rectus muscle and then all over the abdomen "which may assume a board like hardness and show a scaphoid retraction. The patient usually has a severe attack of shivering; his face is drawn, his voice lost, the nose pinched, his eyes sunken and surrounded by dark rings and the extremeties cold." The pulse becomes frequent small and feeble or slow. There may be nausea, bilious vomiting which may be green and horraccous. Hiccough, painful micturition, suppressed stools and inspiration of the costal type are some other symptoms noted. "On auscultation a peculiar sound is heard due to the passage of gas into the abdominal cavity" (Hevas Chaff.)

"We ought to think of perforation of the intestine when a pain occurs without any definite reason in a typhoid patient in the third week, whether it be a stabbing pain or a dull pain and whether situated at the umbilicus or in the right iliac fossa." (Faisaus and Flaudin.) One should also bear in mind that perforation may be insidious and develop without any symptom, "the advent of perforation may likewise be latent in consequence of the patient being delirious or unconscious; the prostration being accounted for by the severity of the fever, and the ordinary symptoms of peritonitis being absent." (Murchison.)

Spleen.—Enlargement of spleen is almost always present, beginning about the third day, it increases till the end of the second week. It is an acute enlargement of infective origin. It is firm and hard in the beginning, but later it becomes soft and different. In exceptional cases, it may end in rupture.

TREATMENT.

Diarrhœa.—If there are only two or three loose motions no measures need be taken to check. A little lime water added to milk and feeding the patient at longer intervals will check the diarrhœa. If the motions are large and too frequent, lemonade with lactic acid, salicylate or subnitrate of Bismuth, dermatol, charcoal with chalk powder may be given. In many cases restricting the diet to albumen water and whey checks the severe diarrhœa.

Constipation.—No purgative and not even laxatives are to be given after the first week. Enemata with plain boiled water warm or cold with oil or glycerine is to be given daily, calomel in very small doses may be given during the first week only. Often glycerine suppositories or glycerine injection by means of a rectal syringe once or twice a day is sufficient especially to young children and delicate patients. It relieves pain and meteorism and promotes evacuation of the bowels.

Meteorism.—Hot turpentine stupes on the abdomen and careful attention to diet are sufficient. Often milk may be the cause.

Vomiting.—Iced drinks, lemonade, soda with milk, cold compresses or ice bag on the epigastrium, stopping of alcoholic beverages often check vomiting. In severe cases Ether sprays, inhalation of oxygen and menthol may be necessary. Sometimes vomiting is a symptom of suprarenal insufficiency and adrenalin treatment does good.

Intestinal Haemorrhage.—Absolute rest in bed in dorsal decubitus. Raise the foot of the bed. Place ice bag on the abdomen. Give iced drinks in very small quantities—suck ice. "Every twenty-four hours the patient should be given 3-4 grammes of calcium chloride with or without large hot enemata" (Mathein). If the haemorrhage is much or recurs stop all food by mouth. An injection of normal saline 600 to 1800 c.c. should be given at 102 or 104°F. Gelatinised serum may be injected. In cases of faintness due to severe haemorrhage place the head as low as possible, inject ergotin at once followed by injection of Horse serum or normal saline. Keep the patient warm with hot water bottles. Sometimes injections of camphorated oil and ether promotes warmth. The bowels should be kept at rest for three days by a starch enema with Tinct opii or by an enema of Dover's powder and tannin.

Intestinal Perforation.—"Every undoubted perforation of the intestine demands surgical intervention." (Michause). This should be done as early as possible. While awaiting the surgeon's arrival keep the patient absolutely still in bed and stop all fluids. An intramuscular injection of nucleinate of soda may be given. In cases of syncope injections of ether, camphorated oil or caffeine should be given. Only surgical intervention alone can save the patient.

TWO FATAL CASES OF ACUTE ASTHMA IN CHILDREN.

By

J. de B. GRIFFITH, M. D., MEDICAL OFFICER OF HEALTH, SOMERVILLE, VICTORIA.

On May 29, 1921, I was called to attend a girl, three years old, suffering from respiratory distress. She was a fine, handsome child, but was evidently in great distress and appeared to suffer "air hunger". On close examination the characteristic sounds of asthmatic breathing were quite evident. I ordered her removal to the private hospital opposite my house, where a hot bath was given. This gave some relief, but loud and distressful breathing continued. The child could not lie down nor sleep. I then got some asthma powders (Himrod's), which have been of great benefit to adult patients. The fumes of this were inhaled but with only slight relief. I administered a mixture of ipecacuanha and ammonia, but without relief. I then gave 0.005 gramme of morphine under the skin and procured relief, but the child died the same evening, apparently suffocated.

Her elder brother, aged five years, also appeared very ill, but went about; his breathing was loud and embarrassed. He was put to bed and hot fomentations applied. I also gave him Himrod's asthma powders to inhale, but without apparent benefit. I administered some brandy and water and went through the various approved treatments of asthma. All the remedies were without avail and he died within two days. There was no heart disease nor lung consolidation. On these points I reassured myself.

These children came from the Mallee, I think, Hopetown. At this place they had suffered from wheezing, but the climate is warm and dry, so much so that the mother of the children could not endure the summer heat. It was chiefly on her account that the transfer from the Mallee to the cool climate of Pearcedale was determined on. I may say the change took place in a very wet and cold period of the year and this has accentuated the original trouble. I ask any of your readers or yourself for a suggestion as to causation or remedy.

too that this new dyarchic machinery, is unfortunately fitted up with the old bureaucratic parts and consequently finds itself unable to move freely and where it moves, moves only at tortoise-speed. But the time is not far off when the old-parts will wear out and the whole machinery will be renewed and renovated and rendered fit for effective service. We need not, however, wait till then. We wish some spade-work done now and with that end in view we propose to give a brief outline of the many pressing and desirable reforms in the Medical Department, for the earnest and serious consideration of Government.

The first line of reform should be in the direction of improving the medical educational system in this Presidency. As observed by Major Pandalai, in his recent lecture at a meeting of the South Indian Medical Union, Government required Dressers, Hospital Assistants (now called Sub-Asstt. Surgeons) and later Asstt. Surgeons, Lady Apothecaries, Sanitary Inspectors, Compounders and others to assist the I. M. S. Offices in Government Service and trained a number of men and women for the purpose. There was no attempt whatever at the formation of a body of independent medical men. It may be true that the medical graduates turned out of our colleges are in many respects inferior to the graduates of other countries. The reason is not far to seek. The controlling authority in medical education is the Principal of the College who is the Chief Medical Officer as well. He happens to have a potent voice in the University and he and his colleagues in the profession who occupy the unique position of teacher-examiners take care to see generally that no more is taught than what is actually required for passing the examination and helping the services in their professional duties. The controlling authority should be shifted to the University, where there ought to be adequate non-official medical representation to counter-balance the evil effects of the official medical representatives. Again, the standard of the general practitioner should be raised. If we desire to hold our own and maintain our self-respect in the face of other countries, the only way is to raise the standard of the mass of our profession. The policy of flooding the country with poorly trained men so that we may soon be able to say that we too have an adequate number of medical men in proportion to our population and ignoring the quality of the men so turned out is altogether wrong. We want Western medical science, but we want men who understand

it properly. It is no profit to the country to possess thousands of imperfectly trained men but it is more profitable to have well qualified men, even though in smaller numbers. This is a point of great importance.

The next item of reform should be directed towards the Indianization of the Services and the employment of larger number of Honorary Physicians and Surgeons to work in State Hospitals. This would not only result in economy of expenditure but would also afford facilities for wider study and acquisition of knowledge for the non-official medical men. The administration of hospitals and dispensaries should be left to Committees of medical and non-medical men and not entirely in the hands of an official medical man.

The training of Indian women for the nursing profession is a great desideratum. The Missionary Hospitals are the only ones in the Presidency that have attempted to train Indian nurses in a sincere and sympathetic spirit and in their institutions the scheme has been a complete success. But the Government is still proceeding half-heartedly with the problem and no settled policy of providing a steadily increasing number of fully trained Indian nurses of a quality not inferior to that of the European and Anglo-Indian Nurses, appears to have been laid down. The provision of a number of mid-wives trained for one year in the Maternity and other Hospitals will not meet the needs of the public. What is required is a scheme for a nursing school for turning out certified nurses after a training of three or more years as is done in other countries. The scheme now being carried out in the General Hospital is absolutely inadequate, and at the present rate of progress we should be getting only one or two qualified nurses a year.

Lastly, comes the reform of the present Medical Council. This Council has a nominated majority of officials who domineer over a vast body of non-official medical men. This is entirely wrong in principle. We claim the democratic principle of proportionate representation in our profession and the right to elect those who are to govern our conduct. The Act should be so amended as to give this principle of election to the Medical Council.

The Ministry had been in existence for full three years. All the while, their minds had been engrossed with party politics, with squabbles for power, with the distribution of loaves and fishes of

office so that they could hardly find time for reconstruction work. We do not accuse them for their failure in the past. But, if the same old lethargy should still continue, the Ministry should be prepared to shoulder the full share of responsibility. We wait for a declaration of the future policy of the Hon. the Minister in charge of Medicine and Public Health with regard to his administration of these two departments.

CURRENT TOPICS.

MEDICINE.

The Effect of Parathyroid after Insulin (B. M. J. 17—11—23). By W. D. FORREST.

Five cases of diabetes mellitus were administered insulin (15 to 20 units) first without and then with parathyroid by the mouth (4 to 12 1-10 grain tablets), and blood sugar estimated hourly. When parathyroid was administered with insulin the fall in blood sugar was markedly more rapid in onset, more intense and lasted longer than with insulin alone. The report of Winter and Smith (Jour. of Physiol. LVIII No. 1, Page 10) that when insulin and parathyroid are administered simultaneously to rabbits, hypoglycaemic collapse sets in a much shorter time and with $\frac{1}{3}$ to $\frac{1}{4}$ of the usual convulsive insulin dose is thus corroborated. Parathyroid alone does not seem to affect the blood sugar concentration. *S. R.*

The Aetiology of Chorea. (Amer. Jour. Dis. Child. Sept. 1923) Rosenow.

Rosenow has isolated a non-capsulate diplo-streptococcus of regular size and medium length chains from the blood of a fatal case of chorea, tonsils, blood, synovial fluid of acute cases of rheumatism and chorea. Intravenous, intracerebal or intradental injections in dogs and rabbits gave rise to meningeal, neuro-parenchymatous, joint, heart and muscle leisons and symptoms resembling those of rheumatism and chorea in man. The organism was recovered from those experimental leisons. Aerobic culture destroyed the specific power of the organism to produce such leisons. Control experiments with organisms derived from cases of encephalitis, epidemic hiccough, poliomyelitis, from ulcer of stomach and from normal throats rarely produced such localized leisons, and the symptoms never resembled those following injection of the chorea organism which Rosenow holds to be the etiological agent in rheumatism and chorea.

Erythredema Polyneuritis or Pink Disease (Quar Jour. Med. Oct. 1923.) By Paterson and Greenfield.

Post mortem two cases showed chronic inflammatory signs in the spinal cord, nerve roots and the peripheral nerves, the sensory nerves being more affected than the motor. Five cases are described. The disease appears during or after influenza epidemics and affects rich as well as poor, the age of incidence being $3\frac{1}{2}$ months to 4 years, and is not apparently due to food deficiency, or poisoning or to B. influenza infection. The symptoms are a preliminary febrile coryza and mild bronchitis followed by extreme mental misery and irritability, insomnia, obstinate anorexia causing loss of weight with development of diffuse erythematous rash most marked on hands, feet, cheek, nose and forehead. The rash appears oedematous but does not pit on pressure. There is marked perspiration with mouse like ordor and falling out of hair. There is marked muscular hypotonia with loss of tendon reflexes and anaesthia in extremities. Unless the patient dies of anorexial asthenia or complication, complete recovery takes place in 3 to 9 months, the prognosis being good. Treatment is symptomatic. *S. R.*

Pyknolepsy (B.M. J. 17th Nov. 1923). By W. J. ADIC.—Pyknolepsy is a word introduced by Sehrvder to designate mild frequently repeated (even up to a hundred daily in spite of treatment) epileptic-like attacks in children. These attacks consist of an inhibition of the higher psychical centres lasting 5 to 10 seconds involving temporary cessation of speech and volitional movement without loss of automatic movement, without complete loss of consciousness and never with any convulsive movements. Though the attacks may recur every day for many years and show no amenability to prolonged treatment with bromides luminal and other drugs, the prognosis is invariably good as recovery takes place spontaneously as a rule, and mental deterioration and psychical defects never follow as in epilepsy. The onset is usually sudden, sometimes explosive and is between 4 to 10 years, the duration from 7 weeks to 10 years and the termination as a rule also equally sudden. The frequency and character of the attacks are monotonous. Such symptoms as clonic movements however slight, vaso-motor disturbance, involuntary micturition, falls, of mental disturbance and confusion, lassitude, palpitation after the attack are indicative not of pyknolepsy but of true epilepsy. *S. R.*

The Relationship of Rat and Human Leprosy, Par. Med. 27—10—23.

Marchoux has found the Paris drain rats heavily infected with a bacillus closely resembling the human leprosy bacillus and producing in rats the same

organic and histological leisons as those found in human leprosy. This rat disease was communicable from rat to rat by contact. He also inoculated rats with human leprosy bacilli from a human leprosy case and produced in them a disease indistinguishable from true rat leprosy. He believes that the human and rat lepra bacilli are types of the same organism having the same relation to one another as the human and bovine tubercle bacilli and that inoculation of the rat leprosy bacilli in man would produce a disease similar to the natural disease in man.

Congenital Morphine Addiction. W. H. Wilcox. B. M. J. page 1016 Vol. 3 and 83.

Another, a morphine addict for years, took 4 to 6 grains of morphia daily during pregnancy. The child at birth seemed normal, but on the second day developed alarming symptoms of cardaic failure, cyanosis, vomiting, diarrhoea and sweating for which symptoms the usual treatment for shock was tried without success. When however 3 minim doses of Tinct Camphor Co., at one and half hour intervals was given orally, the symptoms cleared up like magic with three doses. The same symptoms of collapse recurred on the third and fourth day and were relieved by the same treatment. After the fourth day the mother was able to suckle the child when he then developed no further symptoms of morphine privation. *S. R.*

The Abortion of Migrane by Calcium Lactate A Douglas Bigland B.M.J. 15th December 1923.

The author has found that Calcium Lactate has the power of aborting migranous headache if administered with half an hour of the migranous ocular aura (general dimming of vision, scotomata, coloured dazzling spectra, hemianopsia etc.,) being felt. If given half an hour after the ocular aura's commencement, the treatment may fail. The calcium lactate must be reliable and fresh and the dose should be at least thirty grains. Regular daily oral administration of calcium lactate has also a prophylactic action in migrane.

Gingival Vaccine Treatment for Pyorrhoea Alveolaris. Fielden Briggs B. M. J. 23-2-24.

The author warmly advocates Goldenburg's vaccine treatment for pyorrhoea which itself is based upon Besredka's view as to the specific value of bacterial immunization by the same route as that of the normal infection. The bacteria found in the pyorrhoeal discharge are isolated and cultured. Equal proportions of each organism are added together to make a

mixture. One-half of the mixture is treated with 10% solution Na OH for 24 hours at 37° and then exactly neutralized with Hcl; ¼ of the mixture is killed by heating to 60° to 70° C; the bacteria in the remaining fourth are killed by formol. These three portions are added together and are standardized to 0·5% carbolic acid till 1 c.c. contains 20,000 million bacteria. The unit dose of the vaccine is 0·05 c.c. and is given just under the mucous membrane of the gum and not deeper. The course of treatment is 12 injections, the 2nd given 4 days after the first and the remaining at 2 days intervals. The commencing dose is one unit dose which is increased at each injection by another unit dose to the maximum of 6 unit doses. Larger injections than 2 unit doses are not injected in one spot, but are subdivided and injected into several sites. If a reaction takes place, the injections are suspended till the reaction clears up when the same dose is reinjected. Coincident with this treatment, the teeth should be thoroughly scaled, stumps and useless teeth removed, a mouth wash (1 dram Na Cl, water 8 oz.) and a simple tooth powder (precipitated or camphorated chalk) used. This course of treatmet is followed by marked local and general improvement, the discharge clearing up, the teeth becoming firmer and gums tighter and langour, headache and dyspeptic symptoms ceasing.—*S.R.*

Treatment of Paralytic Ileus by Physostigmine and Pituitrin Combined. B. M. J. 5—1—24. Kerr Cross.

Freshly excised human appendices were suspended at 37°C in baths of Locke's solution and the peristaltic contractions recorded. If either pituitrin or physostigmine were added alone to the bath, hardly any increase in peristalsis took place. If physostigmine was added after pituitrin or pituitrin after physostigmine, very marked increase in peristalsis took place. With regard to intestinal peristalsis physostigmine and pituitrin are markedly synenergetic, the combination exciting strong peristalsis. Physostigmine acts by stimulating the parasympathetic intestinal nerve endings, pituitrin, by its direct action on the intestinal muscle. The author reports 13 cases of acute post-operative paralytic intestinal ileus and gastric atonic dilation with intractable vomiting in which the combination of these drugs hypodermically gave rapid relief after all other measures (enemas, gastric lavage, strychnine, physostigmine, pituitrin alone) failed. The dose is pituitrin ½ c.c. and physostigmine 1/100 to 1/50 grain.—*S.R.*

Combined Vaccine-Peptone Treatment of Bronchial Asthma. Veitch B. M. J. 3288.

The combination of vaccine and peptone is more effective than vaccine or peptone alone. When both peptone and vaccine are given

simultaneously the curative effect is better than when they are given one after another. Veitch gave injections weekly starting from 0·125 gram peptone + 117·5 million mixed cattarhal organism, increasing gradually the dosage. The full course of treatment was 24 injections.—*S.R.*

Combination of Carbon Tetrachloride and Oil of Chenopodium more effective in Helminthiasis.

Grandsoult finds that a combination of carbon tetrachloride and oleum chenopodium (adult single dose 40 and 15 minims respectively) is more effective in expulsion of hookworms than plain carbon tetrachloride [B.M.J.]

Treatment of Sprue by Para-Thyroid. By Harold Scott, Lancet 20-10-23 and B.M.J. 19-12-23.

Observing a case of sprue with carpo-pedal spasms the author concluded that sprue is either associated with or due to parathyroid-calcium deficiency. Treating this case with parathyroid was followed by complete cure in six weeks, the patient gradually returning to normal diet. Subsequently nine more cases were treated with similar good results. Examination of serum calcium content in these cases showed that in acute cases of sprue the free calcium ion concentration was diminished below and the organically combined calcium increased above normal. The normal figures for healthy individuals is free calcium ion 10·7 milligrams and combined calcium 0·00 mg. per 100 cc of blood serum. In acute sprue the figures were free calcium ion 6·00 to 8·00 mg and combined calcium 2·00 to 4·00 mg per 100 cc serum. On parathyroid theraphy these figures returned to normal. The dose of parathyroid was 1/10 grain from a reliable maker twice a day. The diet should be at first milk, gradually returning to normal diet as the case improves. Calcium Lactate may also be given with advantage, and the treatment may be completely discontinued some time after return to normal diet. One case of coeliac disease was also treated on the same lines with cure.—*S.R.*

Treatment of Scorpion Sting in Arabia.—Dr. C. Stanley G. Mylrea, O.B.E., M.D., publishes a note in the Journal of Medical Missions in India on the treatment of scorpion stings and the stings of venomous fishes in Arabia. He says that though the existing methods of ligature, incision and the use of potassium permanganate crystals will hold their own for sometime to come, he has found Colonel Duke's method of using cocaine, effective in his practice. He writes, "Here, in Kuweit, Arabia the method we have been using for the past ten years is patterned on Colonel

Duke's idea, with the difference that novocaine has been substituted for the dangerous cocaine. The treatment is simplicity itself, and has never failed to relieve the patient within a very few minutes. One to three grains of novocaine together, with from five to fifteen minims of adrenalin solution, are injected round the site of the sting. The dose will, of course, vary with the age of the patient. The result, the immediate result, is that the entire painful area is anæsthetized. This anæsthesia will last for at least two hours, by which time the local effect of the venom will have worn off, and there will be no recurrence of pain. I have seen children pretty badly shocked from scorpion sting, but I am convinced that most of this shock is from pain and fright and not from the toxicity of the venom. The almost instantaneous relief from pain which the injection of the novocaine and adrenalin brings about puts the patient at complete rest, and there is a moral rally which must mean everything in combating whatever toxin may be circulating in the system.

SURGERY.

Modification of Whitehead's Operation for Piles. Gent. and Clin. 3-11-23 A Dzealoszynski.

After excision of the pile-bearing mucous membrane, the cut margin of the anal skin and the corresponding margin of the rectal mucous membrane are carefully and accurately sutured together. Healing then takes place by first intention usually without bleeding and sequelae as cicatricial stenosis, incontinence, prolapse etc. do not follow. This modified operation is the best for those cases in which the greater part of submucous veins are varicose. *S. R.*

Infitration Anaesthesia with Cocaine. E. Watson William, B. M. J. 1—12—23.

The author has made both an extensive study into published literature on infiltration anaesthesia, and as experimented on animals. The lethal dose of cocaine for man on intravenous injection is 1½grain (1·5 mg per kilo). For infilteration anaesthesia in dilute solution (1%) combined with adrenalin (1 in 1,00,000) however, the old maximum dose of 3 grains of cocaine for an adult is safe. Stronger solution is more toxic than weak solution; the more rapid the absorption the greater is the toxicity. Infitration of vascular, acutely inflamed and other tissues where absorption is rapid requires greater caution. Alkalies increased the anaesthetic action of cocaine on mucous surfaces only without in any way increasing or decreasing its toxicity, but alkalies must be added after boiling as boiling with alkali decomposes cocaine. Plain boiling does not decompose cocaine. On subcutaneous injection of 5% solution of various local anaesthetics, the ratio of lethal toxicities in animals were as follows,

	Mouse	Rat	Guinea pig.
Cocaine	1	1	1
Novocaine	1/8	1/8	1/11
Stovain	1/9	1/5	1/3
Alypin	3/4	1	1/3
Atoxodyne	1/10	—	1/12
Butyn	2	1 3/4	3/4.

Caution is required in using butyn which is not so safe an anaesthetic as has been represented.

Drainage of Thoracic Duct in Peritonitis. (Surg. Gynae Obst. XXXVI, 1923) By W. R. Costain.

If the thoracic duct in the neck is cut and drained in dogs within 24 hours of ligature of the appendix, fatal septic peritonitis can be averted, complete recovery taking place in a week, the gangrenous appendix and pus being completely absorbed spontaneously and adequate compensatory lymphatic collateral circulation being also established. This treatment was tried in a case of diffuse pneumococcal peritonitis in a 9 year girl with recovery. These experiments prove that absorption of toxins causing pathological effects takes place mainly through the lymphatics. *S. R.*

THERAPEUTICS.

The Therapeutic use of Oxygen. Practitioner. Vol. CXII, No. 1, J. W. Burns.

The intranasal method of administering oxygen in pneumonia and other anoxemic conditions is recommended in preference to the funnel method, as it ensures better inhalation and consumption of the gas and is more economical. An ordinary urethral rubber catheter is lubricated with novocaine ointment and passed into the posterior nares, the outer end of the catheter being connected with the gas cylinder.

The Etiology and Treatment of Puritus Ani. Lancet c. c. V. No. 5222, by Porter F.

If in cases of Puritus ani the papillae of morgagni at the ano-rectal junction are destroyed by electrocautery instantaneous and lasting relief from puritus is obtained. After some time the papillae may recur and give rise again to puritus, but cauterization again relieves. The papillae of Morgagni are present in 40% of people at the ano-rectal junction and vary from 1 to 6 in number. They are normally small white glistening papillae pyramidal or triangular in shape with apices directed upwards and inwards towards the lumen of the canal. When hypertrophied they resemble the pointed end of lead-pencil and may be shotty to feel. Branched fibrous papillae may also be found at the ano-rectal junction and should also be removed in cases of puritus. *S. R.*

Magnesium Sulphate Injections for Hypnosis. A. J. M. Sc. CLXV. 431. Weston and Howard. Over 1000 injections of 2 cc. of 50% solution of pure recrystalized $Mg._2 SO4$ in distilled water were given hypodermically or intramuscularly for hypnotic effects. Given aseptically the injection does not cause local pain or necrosis. In 82% of cases the sedative effect was prompt, the patient becoming quiet in 15 to 30 minutes and sleeping from 5 to 7 hours. In 6% of cases it was neccessary to repeat the dose before hypnosis took place. In 10% of cases no effect was obtained though 3 or 4 doses were injected at short intervals. In doses usually necessary to produce hypnosis the salt is harmless, and this method of sedation is an excellent substitute for injections of morphine and hyoscine. *S. R.*

Quinine-Urea Injections in Acute Lumbago. B. M. J. No. 3281. H. S. Soutar.

In acute lumbago a careful examination of the lumbar region is made, a small focus characterized by extreme tenderness on deep pressure and marked externally by slight local swelling and oedema that pits on pressure will be found. This focus is the source of the patient's symptoms. Hypodermic injection of normal saline into this focus gives temporary relief from pain lasting only a few hours. Injection of 5 c.c. of 1% solution Quinine and Urea Hydrochloride into this painful focus gives complete and lasting relief from pain within 10 minutes allowing the patient to move about freely in a few hours, though he may still feel a sensation of stiffness in the back and general malaise. The author recommends the extension of this treatment to similar cases of torticollis and pleurodynia in which a similar localized painful focus is found. *S. R.*

Auto-pyo-therphy. Deut. Med. Ulod. 31st August 1023. Makai.

Makai describes his new method of treating suppurative infections which he calls Auto-pyo-theraphy. Pus from any suppurative leison (tubercular, streptococcal, staphylococcal, coli form. B. fusiform etc.) is aspirated, and 1 to 10 cc injected subcutaneously, every fifth day. These injections were never followed by any general reaction. In closed cold tubercular abscess the hypodermic injection gave at first no local reaction, but on later injections areas of inflammatory infiltration developed which resembled microscopically tubercular inflammation but contained no tubercle bacilli and resolved spontaneously. Simultaneously the aspirate from the cold abscess became more serous in character and the abscess

either dwindled down or disappeared completely. In other suppurative conditions due to other organisms such as lymphatic buboes, empyema, mastitis, mastoiditis, osteomyelitis, abscess lung etc., there was never any signs of the injections of pus causing spreading infection, cellulitis or septicaemia from the site of injection. In 30% of cases there was no reaction at the site; in another 30% the inflammatory reaction that developed resolved spontaneously; in 40% of cases the inflammatory reaction at the injected site progressed to localized abscess formation which either healed spontaneously or on aspiration or incision and drainage. (Abst. from Lancet, 19th Sept. 1923.)

Malanosis B. M. J. 17—11—23, W. G. Spencer. Melanin the pigment found in the epithelial cells of the rete mucousa, hair cells, pigment cells of the retina and choriod, melanotic tumours etc., in man is a substance chemically allied closely to adrenalin and has a similar pharmocological action as adrenalin causing on intravenous injection a rise in blood pressure. It is also the pigment found in other vertebrates and invertebrates. In pigment-forming cells the immediate precursor of melanin is a colourless substance called melanogen which by oxidation at blood heat is converted into melanin. The actinic rays effect this oxidation which may also be effected in presence of oxygen by action of tyrosine, adrenalin and dihydroxy phenylalanine. The last substance discovered by Bruno Block and called by him "dopa" for short, is a very powerful reagent in this respect and is used to detect presence of melanogen. Melanogen is absent in albinoes and in patches of leucodermic skin. Normally melanogen is formed only in cells of epiblastic origin, melanin granules found in mesoblastic cells being substance first elaborated in adjacent melanogenic epiblastic cells and then ingested by neighbouring mesoblastic cells. In malignant melanotic tumours, the malignant mesoblastic cells may form melanogen and melanin. In Addison's disease, increased pigmentation is explained by the theory that both melanin and adrenalin are formed from the same mother substances. When adrenalin is not formed, the excess of these precursors become available for conversion into melanin thus causing greater pigmentation. The normal function of melanin is absorption of the actinic rays which would otherwise cause toxic physico-chemical effects.

OBSTETRICS AND GYNAECOLOGY.

The Haemolytic Anaemia of Pregnancy. V. C. Rowlands, J. A. M. A. 2—2—24.

Hofbaner has shown that the action of a haemolysin derived from the syncytium of the embryonic chorion is the cause of increased maternal haemolysis and resulting anaemia in early pregnancy. The foetus obtains

iron required for its blood formation through this haemolysis. In the latter half of pregnancy the maternal system produces an anti-haemolysin which neutralizes the syncytial haemolysin and allows the maternal blood to return to normal. If however, there is failure on the part of the maternal system to produce this anti-haemolysin, the physiologic haemolysis and anaemia of early pregnancy continues to increase till the anaemia produced resembles clinically and haemotologically the ordinary form of pernicious anaemia. Unlike true pernicious anaemia, if once cured the anaemia of haemolytic anaemia of pregnancy does not recur until at least the next pregnancy, though the mortality may be high. The onset of the disease is insidious and its occurrence is apt to be overlooked till a grave condition is reached. Labour is apt to be premature, relatively short, painless and with minimum haemorrhage. The child is often still-born, but if born alive does not share the maternal disease. The treatment is repeated transfusion of blood. In bad cases premature labour should be induced, Minot's dictum being that the haemoglobin percentage should not be allowed to drop below 50%. At the time of delivery collapse should be anticipated by preparation for immediate transfusion. Arsenical treatment, removal of foci of chronic infection (septic teeth, tonsil etc.,) is also indicated. Recurrence of anaemia in future pregnancy should be watched for. *S. R.*

ELECTRO-THERAPEUTICS.

The Therapeutic mode of action of X rays in cancer. Theraphy Maison and Sturm (J. Exp. Med. V. 5, 1923) experimenting with spontaneous and epithelioma in mice found that tumour inoculated into an area of skin previously radiated failed to grow. If the tumour was inoculated in original situ and then removed and inoculated into an unradiated area of skin of the same animal, normal successful growth took place in the unradiated area. They conclude that the beneficial effect of X-ray in cancer is due not to effects on the tumor cells but on the surrounding tissues. Sufficient exposure of tumour to X-ray does kill the tumour cells directly, but this direct lethal dose is seldom within the limit of the safe human therapeutic dose. (E. B.M.J. 29—12—23.)

X-Ray as a Supplement in the Treatment of Impaired Hearing. J. J. RICHARDSON, M.D., F.A.C.S., OTO-LARYNGOLOGIST, WASHINGTON, D. C. There can be no doubt that any measure conducive to alleviating the distressing symptom of impaired hearing should be carefully and critically studied by reason of the great good that such a method can impart to those afflicted.

It will be needless to review all of the causes for impaired hearing in the adult; but it is essential to point out that impaired hearing is most often a rather different entity from deafness. The difference is not only one of degree, but it involves also a rather special pathology, some phases of which have not received the thought demanded by their ubiquity and importance.

The subject can be more clearly understood if it is approached from three angles. In the first place, impaired hearing results from certain incorrigible anatomic changes that involve the various structures comprising the hearing passages. It is against these changes that our usual orthodox otologic measures are principally directed. These are amply described in the many excellent books dealing with otology and need not be repeated at this time. It is essential to point out that no individual showing impaired hearing should be permitted any form of treatment, however new, without previously directing all possible attention to an attempt to correct these anatomic changes as fully as our present skill and knowledge will permit.

A proper estimate of the hearing capacity should be arrived at through the use of acoumeters, tuning forks, but more particularly through the standardized voice, both whispered and spoken, of the otologic examiner. I have elsewhere discussed at length the imperative necessity for using the rather uncertain index afforded by the spoken and whispered voice.(1)

Having determined as accurately and practically as possible the extent of impaired hearing, the examiner should then investigate the anatomic integrity of the sound conducting and sound perceiving apparatus.

At the conclusion of this inquiry the first stage in the treatment consists in directing the established measures against such corrigible deviations as may be present. Depending upon the underlying cause for the impairment, the clinical restoration of hearing under these measures alone has not been, in my experience, as uniformly certain and definitely appreciable as clinical requirements would desire.

In many cases I have found the reason for the failure to reside principally in certain growths, not necessarily extensive, invading the nasopharyngeal passage and particularly the fossa of Rosenmuller. The growth is lymphadenoid in structure and is conducive to impaired hearing through two changes; first, a deficiency in the normally adequate ventilation of the tympanopharyngeal passage; then, an attack upon the integrity of the return blood supply as the result of the newly deposited tissue, and with this vascular change a stasis of the blood supply to the middle ear which impairs the functional integrity of the parts. I have been struck with the inconceivably small amount of tissue that may become deposited in this

region and thereby profoundly alter the hearing function. A mechanical attempt to remove this tissue, as by the use of the finger, or a curette, is only seldom successful, inasmuch as the exact localization of the lymphadenoid growth cannot accurately be determined.

When this condition exists, and it will be found much more frequently than is ordinarily supposed, I have devised the use of a sclerolytic X Ray dose which has for its object the dissolution of the lymphadenoid tissue and the consequent release of the material that by encroachment has altered the ventilation and the blood supply of the passages. The sclerolytic X-Ray dose has for its factors the following values:

Milliamperes ——————5
Kilovolts——————80
Tube skin distance——————15 inches
Filter, aluminum——————1 millimeter
Time.....9 minutes

In applying this dose, the patient may rest upon the X-Ray table, ventrally, the head inclined to the right. Adequate leaded-leather protection is placed over the patient so as to cover all but the head. Over the head a square of lead foil is placed which carries an ovoid opening about ¼ to ¾ inches in its diameters. The opening is placed over the external meatus, which is thus exposed. Following the exposure just mentioned, the head is turned to the left and the other ear is similarly treated.

No immediate improvement in the hearing sensibility is registered after this treatment; but as the hyperplastic tissues reduce, the hearing is increased. Exposures are repeated not oftener than every two weeks, and may be given for six or eight sittings.

As quickly as the thickened tissues are resolved by the sclerolytic X-Ray dose, the patient notices a greater registration of spoken voices; and this subjective improvement may be confirmed by an increased response to the various acoumeter and tuning fork measures.

I believe this action to be instrumental in the great good shown by many patients, who, having received the usual otologic treatment without improvement, show, following the X-Ray a much increased acuity in the hearing. This supplement alone is worthy of the most serious consideration as it has been responsible in my practice for much benefit that I have heretofore been unable to enjoy in the restoration of hearing.

In those cases where the impaired hearing has existed for some time, the hearing sensorium on the affected side is dulled even beyond the high threshold to which pathology brings it. This is simply an expression of a physiological law of compensation which is found everywhere in the body

whenever one organ of a symmetrical pair shows a functional derangement. It is easily explained. The hearing perception, transmission, and registration is thrown to the unaffected side. As a consequence, there is an increased acuity of the sensorium on that side with a contemporary loss of acuity on the side holding the impairment. This condition obtains to varying degrees regardless of the pristine pathology underlying the impaired hearing; and it may be easily corrected by furnishing any satisfactory form of neural stimulation. To accomplish this again as I have elsewhere discussed (1), I make use of a neural stimulating X-Ray dose. The procedure that has afforded me the most gratifying result for this effect includes the following:

Stabilized milliamperes.....8
Kilovolts.....50
Tube skin distance.....24 inches
Filter equivalent of 1 millimeter aluminium.
Time.....12 seconds

This is distributed over the entire head by directing the energy through four portals of entry. Only for the purpose of convenience, the central target may be taken as the sella turcica; and with this as the guiding landmark, the portals of entry become

(a) on the left, behind the mastoid, the central ray passing in the direction of a line joining the mastoid tip and the sella turcica:

(b) from above, the central ray passing into the skull in the direction of a line joining the anterior fontanel and the sella turcica:

(c) on the right, behind the mastoid, as for the left side (see a):

(d) from behind, the central ray passing along the line joining the occipital protuberance with the sella turcica.

Through some mechanism that must yet be discovered, this stimulative dose accomplishes two important charges. First, and nearly always, it quickly relieves the "tinnitus aurium." This is, of course, highly desirable and most pleasing to the patient. Then, the hearing sensorium threshold is lowered, usually after a few exposures, so that the patient noticeably registers and understands more conversation.

Following my experience in over 600 cases, my treatment of impaired hearing has assumed three steps:

(1) Usual otologic procedure:
(2) Sclerolytic X-Ray dose:
(3) Stimulative X-Ray dose.

I still consider the X-Ray applications as purely adjuvant to the otologic measures, and it is my opinion that the entire treatment more properly belongs to the ear, nose and throat specialist. On the basis of this rather vast experience, I may record the following observations:

(a) I cannot discover that the original pathology plays any obviously determining role with respect to the efficiency of the treatment.

(b) Improvement, when it occurs, is either astonishingly immediate, or is for some time latent, becoming apparent only after several treatments.

(c) Improvement is at times followed by relapse, which has not in my experience ever reached the low level of the original deafness. The gain is apparently a progressive series of steps.

(d) Improvement is most usually manifested in an increased power to interpret the conversation voice: next for music in its various orchestral forms; lastly for metallic sounds, such as ringing of church bells, telephone bells, and similar previously undetected sounds. Occasionally a patient will show increased acuity for everything except the voice, a situation quickly recognized by the tuning fork and acoumeter tests.

(e) The most striking subjective betterment is the very general disappearance of the tinnitus aurium. This is most pleasing to the patient as it is the first symptom, and a most distressing one, which is dispelled. There are cases, however, in which the tinnitus is not materially decreased, and in an exceptionally few instances there are complaints of increased head noices.

(f) My present records show improvement, varying from slight degree to a complete cure, in not less than 60 per cent. of the cases treated, which must be regarded as a gratifying result.

(g) The treatment is entirely free from any harm to the patient.

On the basis of these findings I have come to regard the treatment of impaired hearing as being infinitely more successful than the therapeutic results obtained previous to the introduction of the sclerolytic and neural stimulating X-Ray doses. I am unreservedly of the belief that the entire treatment demands the constant supervision of the skilled otologist and, therefore, properly belongs to the ear, nose and throat specialist. A rather amusing experience illustrates the solidity of this contention. An X-Rayist furnished a sclerolytic and neural stimulating X-Ray dose in a case of impaired hearing. The patient did not observe any benefit. On the basis of this experience the X-Rayist condemned the treatment. At a latter date the patient was referred to my office where preliminary examination quickly revealed an extensive cerumen impaction. Upon the removal of this impaction, and without further treatment, the hearing was restored.

It must be obvious that under competently supervised examination and treatment, and by supplementing the usual methods with the sclerolytic and neural stimulating X-Ray dose the entity of impaired hearing is more efficiently treated to the great satisfaction of the sufferer. The sociologic uplift and economic good that the restoration of impaired hearing can

accomplish is so patent as to require no comment further than to say that by the method just outlined I have appreciably shared in the pleasure of witnessing much of this good in many patients.

References

(1) Richardson, J. J.—X Ray as an advance in the treatment of impaired hearing. (Read before the American Society of Electro-Therapeutics, Atlantic City. N. J., September 20, 1923.)

(2) Webster, J. M. D.—X-Ray treatment of two cases of Oto-sclerosis, Lancet, 1921 ii, 647-649.

(3) Barwell, M.—X-Ray treatment of Oto-sclerosis. Lancet, 1921 ii, 728.

(4) Wemster, J. H. D.—X-Ray treatment of Oto-sclerosis. Archiv, Radio, and Electro Ther. 1921-1922 xxvi 69-75.

(5) McCulloch, M. D.—Ultra X-Rays and Labyrinthine deafness, Lancet. 1913 vii 353.

(6) McCulloch, M. D.—The discovery of the radium, masothorium cure of chronic cases of deafness of the hopeless kind. Lancet, 1913 ii 1093.—*The Medical Herald.*

CORRESPONDENCE.

MUSING.

To THE EDITOR OF THE ANTISEPTIC.

SIR,

Mr. Gandhi has undergone an operation. It is good, that he has learnt, that besides prayers to the Almighty, there is something else to alleviate the sufferings of human beings and that is surgeon's knife.

What is good?

"What is the real good?" I asked in musing mood.
"Order," said the law court.
"Knowledge" said the school.
"Truth," said the wise man.
"Pleasure," said the fool.
"Love," said the maiden.
"Beauty," said the sage.
"Freedom," said the dreamer.
"Home," said the page.
"Fame," said the soldier.
"Equity," said the seer.
Spake my heart full sadly,
"The answer is not here."
Then within my bosom, softly this I heard,
"Each heart holds the secret 'kindness' is the word."

(FROM AN ENGLISH NEWSPAPER.)

D. BARADWAJA.

RAT BITE DISEASE.

To THE EDITOR OF THE ANTISEPTIC.

SIR,

In February issue of *Antiseptic* Dr. Mitra, M.B., in an article on Rat Bite Disease has stated that 'there being no specific treatment for the disease' he had recourse to symptomatic treatment. It has been observed by many that Neo-salvarsan and sodium cacodylate have the marvellous effect on the disease and these two drugs are extensively used as specifics. My own experience with these drugs in several cases has prompted me to inform the readers of the *Antiseptic* that these are the only drugs at our disposal which may safely be used with advantage. Dr. Nakasave, Physician of Tokyo Hospital, spoke very highly of salvarsan. Doctors Powell and Bana of Bombay found 'very remarkable and rapid improvement following injection of salvarsan and sodium cacodylate.' Cacodylate is preferable in that it is cheaper, preferred by both doctor and patient for its simplicity and painlessness in injection. Recently, I have used sodium cacodylate (ampules from Messrs. Parke Davis & Co.,) in a rat bite fever case and the result was astonishing. This patient, a Hindu male, aged 40, had been under the treatment of various physicians for over 2½ months. They tried Quinine, Sodii Salicylas, antimoy etc., but without any effect. He had an ulcer following rat bite on his left forefinger. The whole fore-arm was swollen and oedematous and had fever from the 7th day after the rat bit him. The fever continued ranging from 100—103° for about 2½ months. Duration of fever each time was about a week and the duration of complete remission each time was 2 or 3 days. When I was asked to see the case his condition was extremely bad. He was emaciated to a skeleton, looked very ill and suffered from loss of appetite and sleep. The patient and his relatives were against injection and I had thus no alternative but to give heroic doses of arsenic along with stimulants for a week with the result that the fever came down to 99 in the morning and 100° F in the evening. After a week, I managed to give an injection of sodium cacodylate 3 grains subcutaneously. Since then the patient had no fever and did well. Two further injections were given to him later on.

The result of the injection of the two particular drugs up to the present have been so encouraging that this note is written in the hope that others will submit the treatment to an extensive trial.

Yours, etc.,

S. C. SEN.

BOOK REVIEWS.

STANDARD METHODS OF MILK ANALYSIS.

Published by The American Public Health Association 370 Seventh Avenue, New York City, 1923, 40 Pages.

This useful book deals with bacteriological and chemical methods of milk analysis in its details such as Microscopic Colony Count, Microscopic Counts of Bacteria, the reductase test, sediment test, directions for sampling, detection of added water, preservative coloring matters etc., etc.

The methods described in this little book are approved by the American Public Health Association and the Association of Official Agricultural Chemists. That itself is a guarantee to their usefulness. We recommend the book to all analysts who are engaged in milk analysis, etc.

A TREATISE ON INFLUENZA.

By Dr. Rajendra Kumar Sen. With a foreword by Dr. S. R. Harrison, M.R.C.S. Published by the author and the Medical Officer Hurmutty Tea Co., Ltd., Assam 1923. Pages 150 Rs. 3-8-0.

This book is written with special reference to the pandemic of 1918. The subject is thoroughly discussed in all its aspects. Useful hints as to diagnosis, symptoms, prophylaxis and treatment are given. We recommend the book to our readers.

HOW TO NURSE CANCER PATIENTS.

By Miss. E. C. Barton, R. R. C., Late Matron of Chelsea Infirmary. The Scientific Press Ltd., London. Price 1/3 nett 88 pages.

This useful small book has been written by one who has given many years to the service of those who are sick with chronic and incurable diseases and as such her writing must carry real weight and prove of great assistance to those called upon to nurse patients afflicted with cancer. Written in an easy style it makes an intersting and instructive reading.

DRUG REVIEWS.

INSULIN.

It is generally known amongst those who have had to deal with the subject that there are two great difficulties in the economical manufacture of Insulin for therapeutic purposes.

The first lies in the fact that the pancreas contains, besides Insulin, various substances of unknown composition which decompose this active principle directly the gland is removed from the body and which can continue their action during the process of manufacture.

The second difficulty is that of purifying the Insulin, thus obtaining a product most suitable for injection.

The efforts of a great number of scientific and technical workers on the staff of Burroughs Wellcome & Co., have been directed to the solution of the many problems involved with the result that great improvement has been effected in the yield and the standard of purity of 'Wellcome' Brand Insulin, already exceptionally high, has been still further raised.

There have been no dramatic discoveries, but a series of improvements in the process has taken place, each step contributing its share to greater economy in preparation and purity of the product.

Owing to the greatly improved methods of manufacture which Burroughs Wellcome & Co., have devised they are now in a position to announce a further considerable reduction in price. When Insulin was introduced its cost limited its use, but now the circle of users will be considerably widened and patients of all classes will be enabled to enjoy its benefits.

When first issued the cost of a phial of Insulin containing 100 units (approximately 10 doses) was 25—subsequently it was found possible to reduce this price to 17/6, and later increased demand together with improved methods of production made it possible further to reduce the price to 12/6d. Burroughs Wellcome & Co., have now taken the initiative in a still further reduction, and the 100 units phial of 'Wellcome' Brand Insulin will be sold in London at 6/8 (that is 8d. per dose of 10 units) on and from March 1st 1924. Hospitals will be supplied at a still lower rate.

"POULTISOL."

(Messrs. Pilfren Chemical Works, 182, Ripon Road, Bombay 8, ½ lb. tin price Rs. 1-4-0 Madras Stockists Sri Krishnan Bros., P. O. Box 166 Madras.) Poultisol is an antiphlogistic for external use in the treatment of Pneumonia, Pleurisy, Bronchitis, Tonsillitis, Mumps, Orchitis, Synovitis, Mastitis Sprains, Buboes, Black eye, inflamed glands etc. and in all inflammatory conditions. Scientific and convenient forms of such substitutes for poultices are very much in favour with the modern physician. It is evidenced by the fact that a considerable quantity of foreign made antiphlogistic products are sold annually. Messrs. Pilfren's "Poultisol" in our opinion, compares favourably with any of the foreign preparations and so we welcome it and wish it every success.

SPUTUM TREATMENT OF WHOOPING-COUGH.

Prof. R. Kraus * of Vienna, who was formerly in charge of the Serum Institute at Butantan, Sao Paulo, Describes his method of treatment of whooping-cough, which has been employed in more than a thousand cases in hospital and private practice in the Argentine, Uruguay, and Brazil. The method consists in the subcutaneous injection of "antitoxin", which is a preparation of the sputum of whooping-cough patients obtained during the first few days of the paroxysmal stage. The sputum is not employed until it has been found to be free from tubercle bacilli and other organisms by aerobic and anaerobic tests and by animal inoculation. The results of treatment were that the injections were followed by disappearance of vomiting, diminution in the number of the attacks, and a change in their character, the cough first becoming catarrhal and then ceasing altogether. Early treatment gives the best results. No bad effects were observed apart from transient local tenderness and infiltration and a rise of temperature which fell to normal in 24 hours. The dosage ranged from 1-5 c.c m., but as a general rule it was best to begun with 2 c. c.m. and to repeat the injections every two or three days. An improvement was often seen after one or two injections, while in other cases three or four injections had to be given before any change was noticed, and some did not react at all. In the last group of cases successful results were obtained by inoculation of the patient's own sputum. The nature of the active agent in the preparation has not yet been determined, but the treatment is probably a form of protein therapy combined with some specific agent, as treatment of pertussis with the sputum of healthy persons or asthmatics had no effect.

* Wiener Medizinische Wochenschrift, No. 24th, 1923.

BOOKS RECEIVED.

The following books have been received and the courtesy of the publishers in sending them is acknoledged. Reviews will be published from time to time.—[ED. ANTISEPTIC.]

Infant feeding and Hygiene 1923. By Ramachandra Chakraberty. Publisher Ramachandra Chakraberty, M.A., 58, Carnwallis Street, Calcutta.

A comparative Hindu Materia Medica 1923. By Chakraberty Chandra. Publisher Ramachanda Chakraberty Price 5s. (Rs. 4-6-0) 8, Cornwallis Street, Calcutta.

An Interpretation of Ancient Hindu Medicine. By the above author and publishers.

The Rofkeceller Foundation Annual Report for 1922. Published by Rockefeller Foundation 61, Broadway, New York, Pages xiii, + 451.

Man's Mental Evolution, Past and Future. (1923) By Heary Campbell, M. D. pages 74, price 3sh 6d. Rs 3-1-0. Bailliere Tindall & Cox, 8, Henrietta Street, Covent Garden, W. C. 2.

The Anatomy and Physiology of the Male Body. By Hubert, E. J. Biss, M.A., M.D., Cantab., D.P.H., Third Edition pages 27 with 7 plates Price 6sh. Rs. 5-4-0. Bailliere Tindall & Cox, 8, Henrietta Street, Covent Garden, London.

The Elements of public health Administration. By George Sparr Luckett, A.B., M.D., Director of Public Health, State of New Mexico, and Herald Farns worth Gray, B.S., M.S., Gr. P. H. Pages 460 Rs. 12. 3 Dollars Blackistone's Son & Co., 1012, Walnut Street, Philadelphia.

The Mother craft Manual. (1924) By MABEL LIDDIARD State Registered Nurse Matron, Mother Craft Training Society. Introduction by J. S. Fairbairn, M.A.,B.M. Bch, F.R.C.P., F.R.C.S. Pages 174, with 36 illustrations price 3sh 6d. Rs. 3-1-0 Postage 0-8-0. J. & A. Churchill 7, Great Marlborough Street, London.

The old Doctor. (1923) By Frank G. layton, M.R.C.S., L.R.C.P. Pages 170 Price 4sh 6d. Rs. 3-15-0 Postage 0-10-0 Cornish Brothers Ltd, 39, New Street, Birmingham.

An Introduction to Nature cure. (1923) By James C. Thompson Nature cure physician with chapter on Diet by Mrs. J. R. Thompson Pages 136 price 5sh. Rs. 4-6-0 Postage 0-8-0. Messrs C. W. Daniel Company Graham House Tudor St., London E. C. 4.

The Ambulatory Treatment of Fractures and diseased joints. (1923) By Carel A. Hoeffteke with an introduction by Frank Romer, M.R.C.S., L.R.C.P. Pages 373 Price 17sh 6d. Rs. 15-5-0 Postage 0-12-0 Wm. Heinemann Medical Books, Ltd., London.

Practical Dietetics. (1923) with Reference to Diet in Health and Disease. By Alida Frances Pattee, Graduate Department of Household Arts, State Normal School Framingham, 14th Edition. Pages 687 A. F. Pattee, Publisher, Mount, Veruon, New York.

Teacher's Dietetic Guide. Containing State Board Requirements in Dietetics and State Board Examination Questions. Given Gratis with each copy of Patte's Practical Dietetics (not sold seperately). Pages 142 A. F. Pattee, Publisher, Mount Vernon, N. Y.

Maruthuvasastram or A Mannual of Midwifery (1923) **for the use of Midwives and the Tamil knowing public.** By K. M. Radhakrishnan L.M.S., M. R. A. S. Medical Practitioner Tinnevelly, with illustrations and Charts. Pages 182 Rs. 2-8-0 Postage 0-6-0.

TRIPATHI'S "REFERENCE BOOK"

For The Young Medical Practitioner.

(Six parts in one volume, Cloth-bound, over 700 pages)

Sanctioned for the use of the Medical Institutions under the Government of Bengal, and in the Provinces of Bihar and Orissa, Burma, and leading Native States of India, Central Provinces and Berar.

THE BURMA MEDICAL TIMES:—The name of Dr. Manishanker H. Tripathi, Senior Grade Sub-Assistant Surgeon, Jamnagar, Kathiawar, is almost becoming a household name among busy Medical Practitioners and Senior Medical students as a result of his laborious undertaking and tiresome task in successfully bringing out a Reference Book for the Young Medical Practitioner which has already passed three editions in a very short time. It signifies the popularity and usefulness of the book under review.

THE INDIAN MEDICAL GAZETTE :—This book is quite up to the standard of similar books intended as brief Vade Mecum helps to the Student and young Practitioner.

THE INDIAN MEDICAL RECORD:—We find nothing but praise for the book that Dr. Manishanker has designed and so laboriously compiled for the use of students and beginners in practice. The subject-matter is very carefully and correctly arranged. The informations contained are reliable and helpful.

THE INDIAN MEDICAL JOURNAL:—We heartily congratulate Mr. Tripathi for presenting this book to the profession for ready daily reference. He has spared no pains to collect the information for the book. We hope it will meet with the approval of the Medical Profession

THE ANTISEPTIC:—The book is specially useful to students preparing for their Final Examination and we heartily commend the book.

THE PRACTICAL MEDICINE:—We congratulate Dr. Tripathi for presenting to the Medical Practitioners in India, a useful handy work for daily reference. It must have cost the writer, a great deal of earnest labour and thought to collect all the information from many sources to make it a good book for ready reference.

LT. COL. SIR J.R. ROBERTS. K. T. C. I. E., I. M. S. (Surgeon to H. E. the Viceroy) It is a most excellent and useful publication, and I am sure, will become very popular. * * * You deserve great credit for having compiled such a good "Vade Mecum."

THE HON'BLE COL. W. H. B. ROBINSON, C. B., I. M. S.—I recommend the book for use of out-lying dispensaries if Dispensary Funds can afford it.

COL. C. MACTAGGART, C. I. E. I. M. S.:—I have no doubt that it will prove useful to Medical Practitioners of the class you mention, and to Medical Students.

COL. F. J. DRURY. I.M.S.:—It appears to the undersigned to be a very useful book for reference and is likely to prove valuable to both Practitioners and Students.

COL. P. C. H. STRICKLAND, I. M. S.—Likely to serve Sub-Assistant Surgeons at out-lying Dispensaries as a ready reference for diagnosis and treatment.

LT-COL. W. J. BUCHANAN. C. I. E., I. M. S.:—It is a wonderful compilation of information on many subjects, and will no doubt be found useful to junior men.

LT-COL. J. P. MAYNARD, I. M. S. (for Surg-Genl. with the Government of Bengal):—The book seems a good and useful one and is likely to serve Sub-Assistant Surgeons at out-lying dispensaries as a ready reference for diagnosis and treatment.

LT-COL. A. STREET, I. M. S.:—The Reference Book for young Medical Practitioners is a most successful attempt on the part of Sub-Assistant Surgeon, Tripathi to extract from eighteen large Medical works, the most essential facts contained in them.

LT-COL. R. J. MACNAMARA, I. M. S.:—Your Reference Book is a most useful work and contains a very large amount of varied information in a very limited space.

LT-COL. E. A. R. NEWMAN, I. M. S.:—It is a wonderful compendium of information in a handy form and should prove most useful to busy practitioners.

MAJOR A. HOOTON. I. M. S.:—You have certainly accumulated a large amount of valuable information and I hope it will be a success.

DR. J. H. WALSH (Agency Surgeon, Rathiawar) Mr. M. H. Tripathi has shown great industry in collecting and arranging a great amount of useful information in his book and it will, I have no doubt be a useful book of ready reference and have a great success.

To be had from **Manishanker H. Tripathi,**
Senior Grade Sub-Assistant Surgeon, Jamnagar, Kathiawar.

A Useful
Carminative & Antacid

Relieves flatulent pain in infancy.

Woodward's Gripe Water consists of a solution of bicarbonate of soda combined with carminative oils, and a slight percentage of alcohol for the purpose of preservation. It neutralises acidity. disperses flatus and soothes the gums during the teething process. It is highly palatable, entirely free from narcotics and provides precisely the simple, efficacious palliative that can be safely placed in the hands of mothers and nurses for administration to infants from the day of birth onwards.

FREE FROM OPIATES

Obtainable at all Chemists and Bazaars.

WOODWARD'S "Gripe Water"

KEEPS BABY WELL

MEDICAL CATECHISM

BY

K. M. HIRANANDANI

C.M.S. & L.C.P.S. (BOMBAY).

Senior Tuitor Medical School Hyderabad, Sind.

Major General W. E. jennings M.D.I.M.S. Surgeon General with the Government of Bombay writes—It should prove useful for students ro refresh their memories before examinations and also as a handy book of reference when they start work.

Indian Medical Record.—This manual is intended for the use of students preparing for examinations. We have carefully gone through the contents and are of opinion that a close study will enable the students of medicine to muster their complicated subject very easily and will assist greatly in passing their examinations successfully. Written in questions and answers form, nothing important is left out of the subject matter, which needs any the least attention.

Price Rs. 1 8 only.

DR. K. M. HIRANANDANI C.M.C. & L.C.P.S. (BOMBAY,)

Kauro Jamadar Road,

HYDERABAD, SIND.

(Please circulate among your friends and oblige, and when ordering write address legibly)

Established 1906

The most widely circulated Medical Journal in India, Burma, and the far East.

THE

Indian Medical Journal.

A RECORD OF

Medicine, Surgery, Public Health, and of general Medical intelligence, Indian & European.

EDITED BY

G. D. KHANDEKAR M.C.P. & S. (Bom.)

Published monthly at Indore C.I. by the All India Sub-Assistant Surgeons' Association.

Contents :—Original Communications, Clinical Notes, Editorial Articles, Medical News, Current Medical Literature, Reviews and Notices of Books Correspondence & etc.

Annual Subscription :—
New members Rs. 6,
Old „ Rs. 4.
Students half rates.

Communications to :—
G. D. Khandekar,
M. C. P. & S. Bombay.
Editor,
THE INDIAN MEDICAL JOURNAL,
The King Edward Hospital, Indore C.I.

INDEX TO ADVERTISEMENTS.

IODEX

ANTISEPTIC · PENETRATIVE · RESOLVENT · NON-IRRITANT

(UNG. IODI M&J)

Iodex is a non-staining, non-irritating preparation of therapeutically active iodine of great penetrative power. It increases gland secretion, stimulates mucous surfaces, and rapidly reduces inflammation—all without pain or irritation. It can be freely and frequently applied even where old-style preparations of iodine are entirely inadmissible.

Iodex is also indicated in rheumatoid arthritis, sciatica, gout, enlarged glands, goitre, tuberculous joints, synovitis, neuritis hæmorrhoids, ovaritis, orchitis, hydrocele, parasitic skin diseases and inflammatory conditions generally.

THE IDEAL FORM OF IODINE FOR EXTERNAL USE.

MENLEY & JAMES, LTD., 64, HATTON GARDEN, LONDON, ENGLAND.

THE PASTEUR INSTITUTE IMPROVEMENT OF THE OFFICIAL FRENCH PROPHYLACTIC

For the prevention of special localized infection. Indicated in chafing, excoriations and other irritations, after unsanitary and parasitic exposure.

CALOMEX

COLLAPSIBLE BOUGIES.

Menley & James, Ltd. 64, Hatton Garden, London, Eng.,

A NEW PREPARATION OF

Trade Mark **Thiocol** Brand

GUAIACOL DERIVATIVE

for COUGHS COLDS CHEST COMPLAINTS TUBERCULOSIS CONSUMPTION

Prescribe

"Sweet in flavour, delightful as a rich wine, it brings relief and comfort to suffering humanity."

The HOFFMANN-LA ROCHE CHEMICAL WORKS Ltd.

Sole Agents for India,

THE INDO-AMERICAN DRUG CO.

P.O. Box 171 BOMBAY | P.O. Box 2139 CALCUTTA | P.O. Box 226 MADRAS

PRINTED AT THE SWADESAMITRAN BRANCH PRESS &
PUBLISHED BY THE PROPRIETOR, U. RAMA RAO, M. L. C., MADRAS.