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EDITED BY
Rao Saheb. U. RAMA RAU
AND
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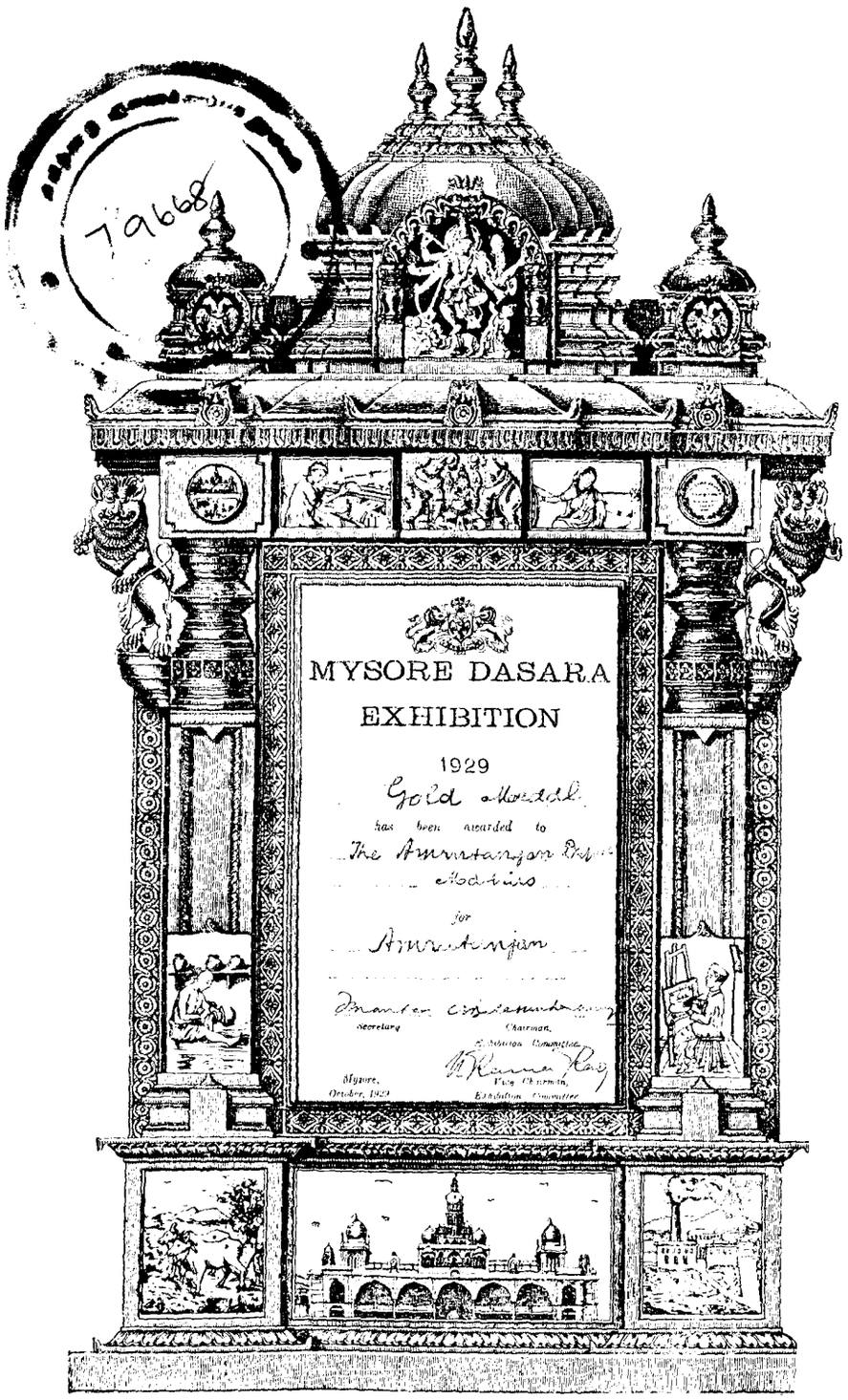

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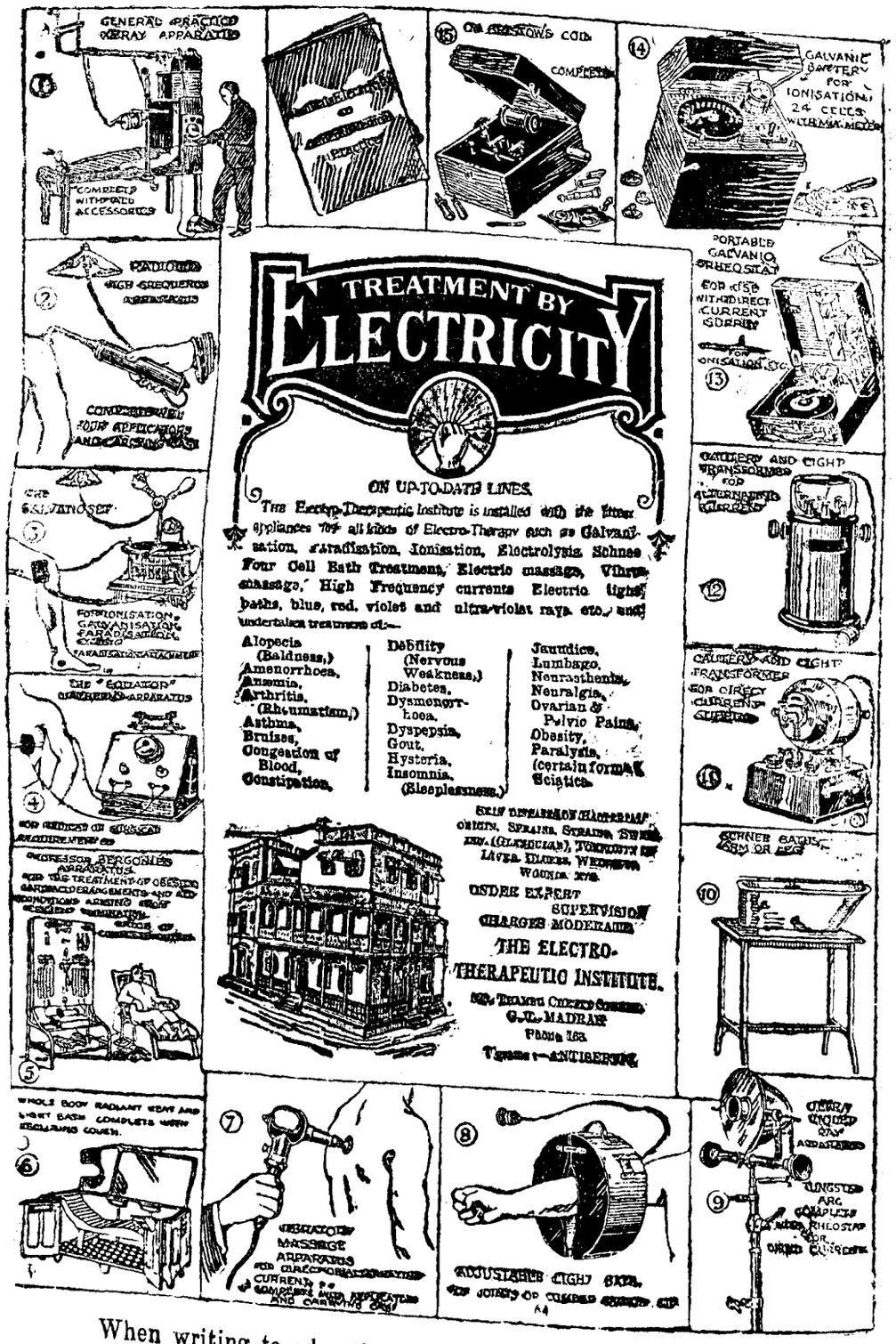

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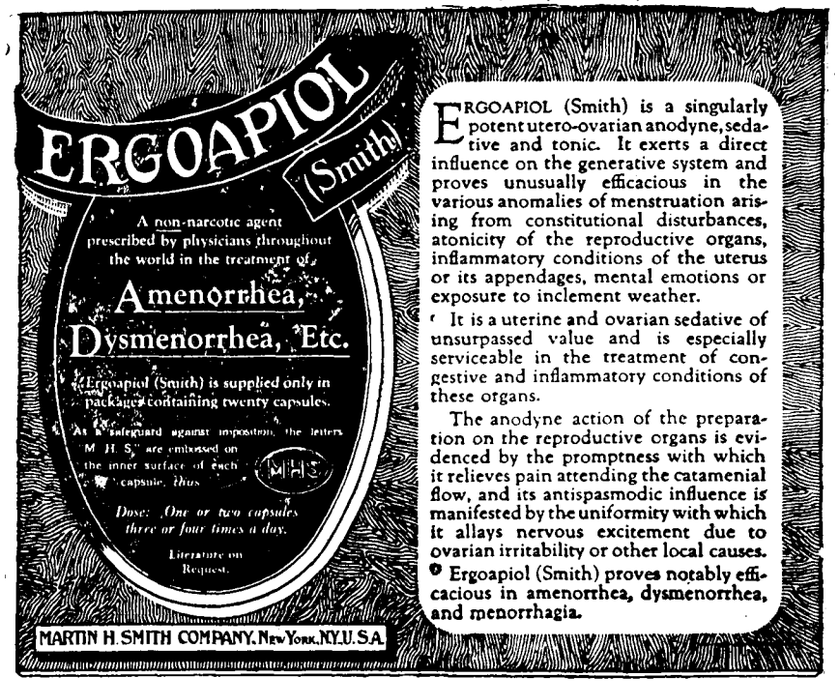

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Original articles

HÆMOPTYSIS IN SYPHILIS OF THE LUNG*

BY

DR. EKENDRANATH GHOSH, M. Sc., M. D.

Hæmoptysis or spitting of blood is so common in tuberculosis of the lung as an early sign that its appearance in a person at once arouses the suspicion of the physician and of the patient and his relatives as the indication of that serious affection of the lung which is dreaded so much. There is a good deal of truth in such a suspicion. Over and over again it has been seen that a patient appears before the physician with hæmoptysis which has been continuing for the last two or three days and is still present; it is copious in the beginning and gradually lessens down, with or without treatment, to a mere streak coming out mixed with the sputum. The chest is examined carefully and nothing is found on the chest. The physician treats the sign and, after it has disappeared, dismisses the patient with assurance that there is nothing to be feared and the blood is perhaps coming from the nose or throat, particularly if they are found congested. If the

*Specially contributed to the Antiseptic.

patient can afford, a skiagram of the chest is taken perhaps with negative finding or showing some enlargement of the bronchia, glands. Perhaps a few crepitations may be found at one of the apices of the lungs, but they soon disappear. The patient goes away, remains well for sometime (several months or one or more years) and comes back with the same sign. At this time or perhaps at a third or latest at a fourth attack, although the hæmoptysis stops in a few days, the temperature begins to rise in the afternoon which is often missed unless a two-hourly reading is taken. Sooner or later distinct changes appear in the lungs usually at one of the apices. The signs are quite distinct, tubercle bacilli are found in the sputum and the disease is confirmed. Such is the usual history of hæmoptysis one very often finds in medical practice.

It is customary and it should be so that the physician after he has checked the spitting up of blood as soon as he can, searches for the cause. Various conditions of the respiratory tract are thought of, searched for and eliminated. The question of kidney disease, cardiovascular affections and vicarious menstruation in the case of a female are not lost sight of. We have such an overwhelming number of affections enumerated in various text-books of diagnosis giving rise to hæmoptysis, that it is really a matter of great difficulty on the part of the physician to arrive at a definite conclusion. Very often, however, some clinical signs and symptoms are available which lead to the actual cause of hæmoptysis. At other times the physician is at a loss, being unable to find out the cause of hæmoptysis, as nothing else but this sign is present. On enquiring into the history carefully he comes to know that the patient had a similar attack twice or thrice before the present occasion and that they had not in any way affected his health. Naturally the question of early pulmonary tuberculosis arises, but no signs or symptoms are available. The usual clinical methods, if resorted to, will give negative results. Such cases should make one think of the syphilitic lesion of the lungs, evidently a gummatous condition. If the hæmoptysis was due to an early stage of pulmonary lesion due to tuberculosis we should expect definite lesions of the lungs and tubercle bacilli in the sputum. On the other hand, in the absence of definite signs in the lungs, the Wassermann test is found to be positive.

Although cases of hæmoptysis from pulmonary syphilis is extremely rare, it is seen now and then and is perhaps on increase from the very undeniable fact that cases of venereal disease with various sorts of complications are becoming more and more common. Being of rare occurrence, the condition is usually overlooked by the physicians.

Four such cases of pulmonary syphilis came under my observation during the last ten years. Dr. G. C. Mitra, the Assistant, Serologist to the Government of Bengal, referred to several such cases which were sent to him for Wassermann Reaction.

The general history of these four cases runs somewhat like this: The patient comes with hæmoptysis begun two or three days ago and still continuing. The first efforts were to check the spitting of blood. When the history is enquired into, the patient complains of similar attacks before, of which they were cured perfectly. In two of my cases I had to deal with the second and in the other two with the third attack. On careful examination of the lungs nothing was found. The subjects of those four cases were elderly and above forty. They were quite healthy in outward appearance and the chest was well-formed. In one only the inguinal and the posterior chain of cervical gland were affected—they were enlarged and shotty. No other outward manifestation was made out in them. The first case which came to my observation admitted to have had hard chancre and its treatment with mercury and iodide. This gave the clue not only to the diagnosis of the actual condition in that particular case, but also to the three subsequent cases I happened to meet. To confirm my opinion, I got his blood examined for Wassermann Reaction. The test was positive to my expectation. The test was also positive in two other cases. I did not think it necessary to have the test made in my fourth case. In the three cases the blood was examined, the test showed 30 to 40 per cent reaction.

Antisyphilitic treatment was then undertaken. The first case received salvarsan, just in vogue at the time and the other two cases Neo-salvarsan intravenously. A course of three to six was resorted to, as the patients in a free out-door, being usually poor, do not and cannot stick to any sort of expensive treatment. The last case received Bismuthiodol intramuscularly. Administration of mercury and iodide was also continued for some months by the mouth.

As a rule such patients are lost sight of, and often final and lasting effects of treatment cannot be followed in them. Fortunately I had the opportunity of meeting two of them after six years. They were quite healthy and had had no attack of hæmoptysis since then. The first patient was still stouter and both of them were glad to state that they were much better in general health after their treatment.

The number of cases are so very scanty, that a general conclusion from them is out of the question. But the following facts, I think, require our careful attention: The good general health,

their age above forty and no lung lesion or any other affection to be taken as the cause of hæmoptysis, which was copious in all of them; lastly, the history of three attacks recurring one after another without deteriorating the health in the interval and not leading to any appreciable lesion of the lungs.

What I like to emphasise is that cases of hæmoptysis in otherwise healthy looking persons appearing as the second or third attack and without any lung lesion so far as can be determined by the present day methods should always lead the physician to think of pulmonary syphilis next to tuberculosis. Tuberculosis should, of course, be carefully eliminated before we can administer iodides to the patient.

LEPROSY—A MEMOIR*. PART III.

(Continued from page 91.)

BY

DR. G. RAGHUNATHA RAU, D.T.M.

Medical Officer, Leper Asylum Cuttack, (Late Malaria Medical Officer, E.B.Ry, Bengal.)

OTHER DISEASES SIMULATING LEPROSY

(1) *Syphilis.*—Is one of the diseases that simulate leprosy most closely. This is because the corium is primarily involved in both the diseases. Depigmentation and Erythema are the two commonest signs found in both the diseases. Diagnosis depends upon the presence or otherwise of any of the two cardinal signs of leprosy. But it should be borne in mind that both syphilis and leprosy may co-exist in the same patient. Syphilitic lesions of the scalp may resemble leprotic lesions but leprosy does not involve the scalp.

(2) *Tuberculosis* of the lung may have to be distinguished from leprosy of the lung. In some cases both these diseases may co-exist. Generally microscopical examination of the sputum (stained smear) will reveal the presence of acid fast bacilli and if they are numerous and cigar bundle like leprosy of the lung, they should be diagnosed; on the other hand if a few bacilli are found and if they are all slightly curved and beaded in appearance, tubercle of the lung may be diagnosed. But when leprosy of the lung has been diagnosed in a particular case the question whether there is a co-existing tubercular infection also cannot be settled by microscopical examination alone as the organisms of both

*Specially contributed to the Silver Jubilee issue (April '29) of the Antiseptic.

diseases are acid fast culture of the washed sputum on glycerinated Donsett's Egg medium or animal inoculation of the same into a guinea pig are the final tests. If in the former case, growth is found after 10 to 15 days and the organisms are acid fast, tuberculosis should be diagnosed and in the latter case, if the guinea-pig dies of acute miliary tuberculosis after inoculation, then Tuberculosis may be diagnosed. But when these two tests are negative, tuberculosis can be positively excluded.

Photo No. 1.

Note the leucodermic patches all over the body. They were anesthetic. This patient passed for a leucodermic man, for a long time and leprosy was not diagnosed in this case. The development of perforating ulcers, raised the suspicion of leprosy.

(iii) *Raynaud's disease.*—Is sometimes mistaken for Leprosy—A2 cases. In Leprosy anæthesia may be found in other areas whereas in Raynaud's disease anæsthesia is confined to the gangerenous area only.

(iv) *Diabetes.*—Perforating ulcers and gangrenous digits are found in this disease in later stages as well as in A2 cases of leprosy. The presence of other signs of diabetes or leprosy will settle the diagnosis.

(v) *Molluscum fibrosum.* The fibromatous nodules of B3 cases of leprosy. But a clip from a nodule shows no AF bacilli.

(vi) *Syringomyelia.*—At the outset it should be mentioned that this disease is rather rare. Wasting of the small muscles of the hand and sensory symptoms are common to both diseases. But the loss of superficial touch sensation is not present in syringomyelia or is not the first symptom.

(vii) *As a sequel to diphtheritic neuritis.*—superficial glove anæsthesia simulating that of A2 stage of leprosy may be found. The history and the absence of thickened nerve trunks will settle the diagnosis.

Photo No. 2:

All the three are B 3 cases (skin-type-most advanced.) From the left No. 1 is a Mahomedan; note the small sized nodules all over the face and the ears. No. 2 is a Xian; note the typical lion's face appearance—this is due to all round deep infiltration of the corium with leprous granuloma. No. 3 is a Hindu; note the commencing absorption of nodules and the flattened nose due to the absorption of nasal bones. He is coming to A 2 stage.

Special diagnostic test.—In any case when there is doubt, a test with large doses of Pot. Iodide may be tried. For example assume that there is just a faint depigmented patch in a case and no other sign, give 30 grs. doses of Pot. Iodide once a day for 3 days and then examine the lesion. If it is swollen and red and shows signs of reaction—then it must be a case of leprosy. Scrape the nasal mucous membrane and examine the scrapings for AF bacilli. Pot. Iodide lights up into activity any latent focus of leprosy—as it is a powerful leproma or leprous granuloma—breaking agent. In Pot. Iodide we have a valuable diagnostic test and also a valuable adjuvant to hydnocarpus treatment, if used properly, as will be seen later.

TREATMENT OF LEPROSY.

Having regard to the nature of the disease, the treatment of leprosy should be discussed, not only from the individual standpoint but from that of the community as well. Let us first see what we can do to the individual leper:—

Before describing the treatment of leprosy, it is well to bear in mind, the following fundamental facts concerning leprosy:—

(i) Leprosy is a self-healing disease, chiefly of skin and nerves.

(ii) Fewer bacilli in nerve type; abundant bacilli in skin type.

(iii) Resistance determines the number of bacilli.

(iv) Skin and nerve types mutually exclusive.

The modern treatment of leprosy resolves itself into:—(1) General hygienic (ii) Treatment of predisposing causes (iii) Use of special anti-leprosy remedies and (iv) Surgical treatment when indicated. The use of special anti-leprosy remedies will be taken up first:—Considerations of space deter me from entering into a detailed description of the several older forms of treatment, as well as those that are still under trial. Just a mere passing reference to them will be made:— The ancient Hindu physicians used pills made from the powdered seeds of hydnocarpus Wightiana—(நீரடிமுத்து Tamil; மரவெட்டி Malayalam,) and Chaulmoogra (Taraktogenous Kurzii) orally and the oils of these seeds externally. Besides they also used orally, the salts of heavy metals like copper, lead, tin and mercury. The success or otherwise of these methods of treatment could not be guessed now, at this distance of time. Repetition of the same methods now, will enable us to judge their efficacy. But from the fact that the same Chaulmoogra and Hydnocarpus oils and the salts of heavy metals still hold the field even in this century, we have to conclude that the ancient Hindu physicians have discovered a rational and an appropriate remedy for leprosy long before the advent of scientific medicine. With the advent of the Western medical sciences into this country and the methods of injections, Western physicians began to use the oils, not by oral methods but by injections. The evolution of these methods will be briefly outlined:—Among the early advocates of the injection method, we find Dr. Heisser introducing his own preparation for intra-muscular injection. To diminish pain and discomfort and

to secure quicker absorption he mixed the oil with resorcin and camphor. His formula was :—

Chaulmoogra oil	...	60cc.
Camphorated oil	...	60cc.
Resorcin	...	4 grams.

The injections were given at weekly intervals in ascending doses beginning from 1cc up to 10cc or the point of maximum tolerance.

Next in the field we find Sir Leonard-Rogers with his Sodium Hydnocarpate—a sodium salt of the most active unsaturated fatty acids of the Hydnocarpus oil. A 3% solution in distilled water with 0·5% of Carbolic acid (as a preservative) was used intravenously. Remarkable benefit was found from this treatment. He also introduced Sodium salts of the fatty acids of other oils besides the Hydnocarpus,--Sodium Gynocardate, from (Gynocordia odorata), Sodium morrhuate—from codliver oil, Sodium soyate from Soya beans and Sodium salts of the fatty acids of Sardine oil etc. etc. Another advance was made when Dr. Dean and his colleagues in the Hawaiian Islands introduced their Ethyl-Esters of the fatty acids of chaulmoogra, which, in combination with a certain small amount of Iodine, they used intramuscularly. Next Dr. E. Muir, in India prepared Ethyl-Esters of the fatty acids of Hydnocarpus Wightiana and combined them with camphor, creosote, and olive oil, to ensure stability, sterility, retention of potency and ease of administration. The preparation commercially designated—E. C. C. O.—has the following formula :—Ethyl Esters of the fatty acids of Hydnocarpus Wightiana—1cc. pure creosote—1cc, camphor—1 grm, and olive oil—2½cc. The camphor is first dissolved in the creosote and added along with the Ethyl Esters, to the olive oil, which has previously been heated in a water-bath, up to 96° for half an hour and cooled. For details regarding methods of preparation of the Esters, reference should be made to treatises published by Dr. E. Muir or Sir Leonard Rogers. This E. C. C. O, was found to be an advance on the older preparations. Further experience led to the adoption of pure cold-drawn Hydnocarpus oil combined with 4% of double distilled creosote. This is the preparation that is widely used in this country and is known commercially as Hydnocreol. On the industrial side Messrs. B. W. & Co., have also introduced several preparations :—Moogrol, Avenyl, and Alepol etc. etc. The last mentioned Alepol is under trial. Recently Pot. Iodide has been introduced by Dr. E. Muir, as an accessory to Hydnocarpus treatment and as a diagnostic aid. Having briefly outlined the evolution of the present day methods, let me first detail the most commonly used method of treatment, (viz) Hydnocreol.

Hydnocreol in doses of 2 to 10cc. by subcutaneous infiltration, or by intra-muscular injections or both, supplemented by the external application of counter-irritants and oral administration of Pot. Iodide is the commonest method of treatment.

In the subcutaneous infiltration method the required quantity of the oil is injected, just beneath skin of the extensor surfaces of the limbs in different areas. It is carried out as follows :—

The needle having been introduced beneath the skin, a few drops of the oil are injected at one spot, and it is slowly withdrawn to a certain extent. Keeping the point of the needle still underneath the skin, it is reintroduced at a different angle and a few drops are injected at a second spot; again the needle is partially withdrawn and reintroduced at a different angle and a few more drops injected and so on. The chief advantage of this method is

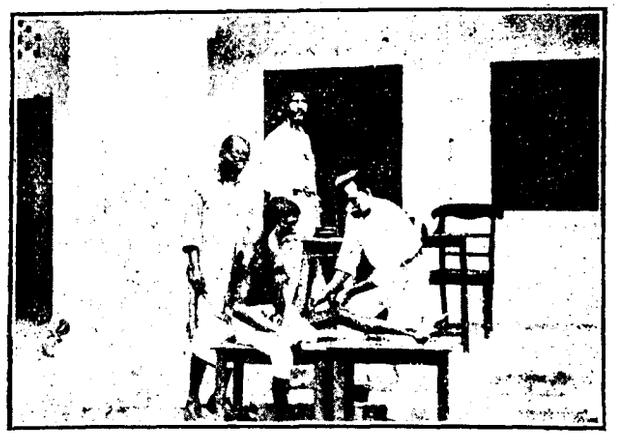

Photo No. 3.

Illustrates the method of Injection by subcutaneous Infiltration. The outer surface of the left thigh is chosen. The needle is just being withdrawn and reintroduced at a fresh angle.

that, with a single prick in the skin, large quantities of the oil can be infiltrated into a large area of the subcutaneous tissues and hence a larger surface for absorption is available than in the ordinary subcutaneous method (single spot method). The injections should be made slowly and the needle should be within the subcutaneous tissues and not deeper still. The areas suitable for this infiltration method, are :—the outer aspects (Extensor surfaces) of the thighs and arms. The usual aseptic precautions regarding the sterilisation of the needles, syringes and the skin of the patient should be strictly observed. The barrel of the syringe may be sterilised by drawing in, boiling cocoanut oil, ground-nut oil or crude chaulmoogra or Hydnocarpus oils. But if this pro-

cedure results in breakage of the syringe, a special sterilising fluid used by me, may be used. It consists of:—

℞

Lysol m 30 Aether (Sulphuric) ʒii Spts. Rectified ad ℥i.	} This keeps indefinitely and has no corroding action either on the metal or on the glass parts of the syringe.

The needle also should be sterilised by boiling in oil and before use should be cleared of all the remnants of the boiled oil from inside the hollow of the needle. For this purpose, I use the same sterilising fluid:—Sterilised hot needles are dropped into the sterilising fluid and after fitting the needles to the barrel of a previously sterilised syringe, some sterilising fluid is drawn in and forced out. This is repeated several times, to ensure that no particles of the boiled oil remain inside the hollow of the needle. A few strokes of the piston evaporates the droplets of sterilising fluid that may be present inside the needle and barrel. (Water is not enough for sterilising—as Tetanus spores are not destroyed by boiling water. A higher temperature than 100°c is required for absolute sterility).

The injections should be given, only twice a week and not oftener. After each injection the temperature should be watched and the occurrence of any reaction (as evidenced by the rise of temperature and other signs) should be noted. If a mild reaction is produced—say the temperature rises through only half a degree, the same dose should be given next time. But if there is no reaction, the next dose should be increased by 0·5cc. To enable us to have a close watch on the temperature, it is necessary that the temperature should be taken at least four times a day. Otherwise, the occurrence of mild reactions may pass unnoticed. It is by the production of a series of mild reactions that we hope to cure the disease. These reactions to be beneficial must be not only mild but also properly controlled by remedies which raise the natural resistance. If severe reactions occur the natural resistance may be lowered and the treatment will only increase the disease. In our treatment, we imitate the natural process of cure. By destroying a few organisms, and breaking down the granulomatous tissue, we set free a certain amount of antigens and simultaneously we raise the natural resistance of the body by suitable treatment and diet etc. This results in the production of a certain amount of immunity which deals with further quantities of antigen liberated by successive reactions. This is the mechanism of cure, as is understood at present. The natural resistance of the body is the most important factor in the treatment, in as much as it determines the success or failure of our

treatment. For raising the natural resistance, first of all, a search should be made, of the causes that lower it and they should be dealt with.

(ii) *Treatment of the predisposing causes.*—As has previously been pointed out these predisposing causes might be either temporary like typhoid, pneumonia, influenza, or other diseases of a short duration; or chronic like malaria (repeated attacks and relapses) kala azar, syphilis, hookworm, malnutrition and other chronic debilitating diseases. The mere presence of lepra bacillus is not enough for the disease to develop. As in other bacterial diseases, there must be a predisposing cause which lowers the vitality and thus enables the M-leprae to become active and multiply and cause the symptoms of the disease to appear. The M-leprae seem to possess remarkable tenacity and vitality as they lie in wait for a long time—say for 20 and even 30 years. Some cases are on record in which the disease has developed 20 or 30 years after the exposure to infection. Hence the difficulty of finding out the average incubation period in leprosy. In some cases the disease may develop within a year or two of the exposure to infection. It all depends upon the natural resistance. The bacilli remain dormant in the system until the natural resistance is lowered and then they manifest themselves. Nevertheless a study of a large number of cases has shown that the average incubation period may be placed at 2 to 3 years after the exposure to infection.

If the predisposing cause is of a temporary nature—a tonic treatment with iron, arsenic and strychinine is enough. But if it is chronic in nature, like malaria or syphilis or hookworm (the commonest causes in this country) appropriate treatment for these conditions should be given first before anti-leprosy remedies are administered. If these predisposing causes are not first dealt with, special anti-leprosy treatment will only worsen the disease. If malaria has been the predisposing cause, a prolonged tonic treatment is necessary. If syphilis has been the predisposing cause, anti-syphilitic remedies should be given; but here, a word of caution is necessary. The use of organic arsenicals and mercurials in cases of syphilis + leprosy, usually tends to aggravate the leprotic lesions. Fortunately for such cases, we have a combined leprosy+syphilis treatment now. This has been rendered possible by the introduction by Messrs. B. W. & Co., of a heavy molecular preparation of mercury, called Avenyl Hg. 33, which is perfectly miscible with Hydnocreol and does not cause any local pain or trouble when injected. It is used in the strength of 1 gram. in 100cc of the oil. After every 15 or 20 injections of Avenyl+Hydnocreol, the blood should be tested either by the

Wassermann's or Kahn's method. Kahn's test is found to be more reliable, (so far as syphilitic lepers are concerned) easier to do, less expensive and more adapted to the mofussil conditions in this country than Wassermann, which requires an expensive laboratory etc. If the blood gives a positive test, a further course of injections of Avenyl mixed oil is given and so on, until the blood becomes negative and remains negative for at least 4 months. Usually it takes from 6 months to a year, in an ordinary case of syphilis leprosy for the blood to become negative.

Action of Hydnocarpus oil.—The active unsaturated fatty acids of the oil break up the waxy coats of the M-leprae and they are then exposed to the phylactic powers of the body. Lepra bacilli tend to form bundles; this is because they have a coating of a peculiarly sticky substance called Gloea. It is this substance that protects the bacilli, from the defensive powers of the body. Besides this, the formation of Granuloma, is another defensive mechanism for the bacilli. The fatty acids of the Hydnocarpus oil seem to break up these granulomata, dissolve the Gloea and scatter the bacilli which are destroyed by the phylactic powers of the body. Under treatment, the bundles of bacilli are seen to be broken up first. Then they become granular or beaded in appearance. Later still, they become coccoid and diphtheroid; ultimately they are absorbed. The coccoid and diphtheroid forms are the degenerative forms and they may exhibit some peculiarities of staining i. e. instead of taking the red stain, they may take on the blue stain.

Hydnocreol may also be used intramuscularly, but never intravenously, as the oil is not miscible with the blood. If used intravenously, death by pulmonary embolism is sure to occur. To use the oil intramuscularly, the patient should have good-sized or rather well developed gluteal muscles. The deltoid regions of the arms are unsuitable. The patient is made to sit firmly on a stool, as in this posture, he is literally sitting on his sciatic nerve. The needle is plunged deep into the gluteal muscles, at right angles to the skin-surface. A few drops are injected, and if no pain is produced, it is certain that the needle has not penetrated either the periosteum or a small nerve or a vein. Then, the whole quantity of the oil is injected and the part massaged well.

Sometimes, it happens that the needle enters a deep seated vein and when the first few drops are injected, the patient suddenly complains of cough and a sensation of tightness in his chest. If this happens, the syringe should be immediately withdrawn, and reinserted at a different site. For stopping the unpleasant symptoms mentioned above, I have found the inhalation of ammonium carbonate to be highly satisfactory. These symptoms are possibly

produced by the oil drops, acting as emboli in the small capillaries of the lung, as the oil is not miscible with the blood. Ammonium carbonate—as it is a respiratory stimulant and as it increases the number of respirations—seems to aid the lung in its endeavours to churn up the oil, break it, emulsify it and render it miscible. The heart also seems to be affected by the oil as the patients complain of pain in the praecordium and the heart rate increases. Hence the oil should never be used intravenously.

The chief dangers of intramuscular method are :—(i) injuring the sciatic nerve or any other smaller nerve trunk or fibre; (ii) injuring a vein; the former could be avoided by adopting the sitting posture and the latter, by caution in injecting.

The Ethyl Esters E.C.C.O. may also be used in the same dos[illegible] as Hydnocreol, either by the subcutaneous infiltration method o[illegible] by the intramuscular method. Intravenous injections of E.C.C.O. used to be commonly done before; but the production of severe cough and serious lung symptoms has led to its discontinuance.

Sodium hydnocarpate is the only preparation that could be used intravenously. It is used as a 1%. solution, to begin with and later on, as 2% and 3% solutions in normal saline to which 0·5% or 0·25% of carbolic acid is added as a preservative. To prevent the formation of embolus and local phlebitis etc, Sodi citras (chemically pure) may be added in the strength of 0·5%. But in spite of Sodi citras, local troubles—occlusion of the vines etc.—will occur if the following technique is not strictly followed as sodium Hydnocarpate is an irritant. Dose 2 to 6 cc.

Technique. A vein at the bend of the elbow is selected and is rendered prominent by a rubber band applied tightly above the elbow. After sterilising the skin (with a pledget of cottonwool soaked in absolute alcohol and rubbed over the skin), the needle is introduced and an equal quantity of blood as the solution to be injected, is drawn in. Suppose 4 cc of the solution is to be injected then 4 cc of the blood should be withdrawn inside a 10 cc syringe (previously sterilised) containing 4cc of the solution (sterilised); the two should be well mixed viz the blood and the Sod. hydnocarpate solution by rotating the barrel of the syringe through an angle of 180°, keeping the needle inside the lumen of the vein. Then, when the solution and the blood have been thoroughly mixed, the mixture is slowly injected, taking 20 seconds per cc. A certain amount of reeling of the head may be experienced by the patient, while the injection is done. But it usually passes off after a few minutes. If the solution and the blood are not properly mixed, Phlebitis may occur, as the result of the irritant action of sodium Hydnocarpate. The vein becomes hardened and in some cases the vein may become actually fibrosed.

But if the technique outlined above is followed, no such trouble need be apprehended.

Counter irritation.—This is also necessary, to deal effectively with the organisms in the skin. Several methods have been in vogue. Vigorous rubbing of crude chaulmoogra oil or hydnocarpus oil on the skin, followed by a hot bath has been recommended—not because appreciable quantities of the oil are absorbed through the skin but because of its counter irritant effects. In addition to this, external application of some counter irritant to the lesions is necessary; after prolonged trials, trichloracetic acid (Burgoyne's or E. Merck's) has been selected as the ideal, counter irritant for painting over leprous lesions. It is used in 3 dilutions:—1 in 1, 1 in 3 and 1 in 5, of distilled water. The first mentioned dilution, for painting on hard nodules (except on the face) of B3 cases; the second dilution for all kinds of lesions on the limbs and trunk (except face) e.g., Erythematous patches, depigmented patches, anaesthetic patches etc. etc. and the last dilution for painting on the lesions of face. The appropriate dilution is painted on the lesion until just a faint whitish appearance results. This faint whitish appearance, later on, gives rise to a blackening of the skin and after 3 or 4 days, the Epidermis peels off. Painting should be done once in 10 days and not oftener. If painting is overdone or too frequently done—ulcers will form. In anæsthetic patches—as the anæsthesia disappears—the patient complains of severe burning when the acid is painted, which becomes progressively severer with each painting. This is a good sign,—it means the return of sensation to the anæsthetic patch. Except acrotsic lesions (Glove-stocking anæsthesia) perforating ulcers and deformities—all other active lesions may be painted on. Depigmented patches assume their normal pigment color as time passes. When an excessive reaction has been caused by the injections, it is better to raise the natural resistance of the patient by giving him an intravenous injection of 2 c c of a 1.% solution of Pot. Antimony—tartrate. Small doses of Antimony like the other heavy metals lessen the severity of the reactions, bring down the temperature and raise the natural resistance.

A word about Alepol may not be out of place here. This is used in the same way as Sodium Hydnocarpate—1% or 2% solution; in the same dosage; intramuscularly or intravenously, or even subcutaneously. It is said to be less irritant than Sod. Hydnocarpate. It is the Sodium salt of the less irritating fatty acids of the Hydnocarpus oil. Consequently Phlebitis and other local troubles of the vein do not occur when this preparation is used intravenously. This seems to be an advance on the Sod-Hydnocarpate.

Pot-Iodide in Leprosy.—Pot. Iodide was used in leprosy long ago, but the production of unpleasant reactions led to its disuse. Dr. Muir has now not only revived its use but has laid down definite rules for treatment with it and has brought out convincing evidence to prove that this is the most powerful leproma-breaking, or rather, granuloma-breaking remedy that we possess. As it is a very powerful leproma breaker, it should be used very cautiously. The following are briefly the rules that should be followed, when using Pot. Iodide:—

(1) In A1 cases begin with 10 grs. once a day or in susceptible patients—with 5 grs. once a day and increase the dose gradually until 30 grs. a day could be taken, without reaction or symptoms of Iodism beyond 30 grs.—Iodism does not usually occur.

(2) Then give it twice a week. See that mild reactions are produced (Temperature rising by ½ to 1 degree only). When there is no reaction, increase the dosage, say from 30 to 45 or 60 grs. according to the physical build of the patient.

(3) After reaching 60 grs, the successive doses will be—90 grs. 120 grs. 150 grs. 180 grs. 210 grs. & 240 grs. After each dose of K. I. the temperature should be carefully watched. The aim in treatment should be to produce mild reactions which will pass off in 48 hrs. and to get over them; but not to produce very violent reactions which may increase the disease.

(4) When large doses are taken—distressing needle pains may be complained of—specially in nerve cases. For this—Ephedrine sulphate 0.1 grm is the best remedy—given orally. When reactions last for more than 48 hrs.—Pot. Antim Tartrate -0·01 grm. intravenously, should be used to control the reactions. In A2 cases—Pot Iodide may cause severe pains in the bones of the extremeties and nerve pains also. Antimony is the best remedy for bone pains and Ephedrine for the nerve pains.

(5) In B (skin) cases, Pot. Iodide should be used very cautiously,—specially in B3 cases; as the powerful leproma-breaking action of K.I. may result in the formation of bacillary emboli which may occlude the minute capillaries of the eye and blindness may result. To avoid such catastrophies, begin with 1 gr. a day and gradually increase the dose up to 30 grs, keeping a close watch on the temperature. If severe reaction occurs—use Antimony or reduce the dose and then gradually increase it again. When 30 grs, could be taken without reaction (this may take about 2

months in a B3 case) then give it only twice a week. The maximum dose in any case, should be 240 grs. If the patient can take 240 grs twice a week, without reaction for a period of at least four months, he can be declared symptom-free. He should have had no reactions—not even mild reactions during the four months period, —observation. But it is advisable that he should continue to take K. I. once a week, for a further period of 6 months. The possibility of a return of the disease—diminishes with time. Pot. Iodide may be used in combination with Hydnocarpus preparations or even alone in A 1 cases of short duration. But this alone will never cure the disease, unless the predisposing causes are dealt with.

To gauge the amount of reaction produced when using Pot. Iodide, Dr. E. Muir, recommends, (besides the temperature) the performance of sedimentation test. This test depends upon the principle that inflamed and degenerated cells and broken down products of the tissues viz broken down granulomata, are heavier and so sink to the bottom; the rate of sedimentation being the criterion of the severity or otherwise of the reaction in a particular case, when blood is allowed to sediment in a narrow calibered pippette or tube, obviously the rate or depth of sedimentation will vary with the calibre of the pippette and hence it is advisable to use pippete of uniform calibre and depth. Special pippete of 1 cc. capacity-graduated in hundredths of 1 cc. are supplied by Messrs Nadia Chemical Works of Calcutta. In a 5 cc. record syringe. 0·3 cc of a 5 % solution of sodium citrate in normal saline is taken and 1. 2 cc of blood is withdrawn from a vein and the two mixed together by shaking the barrel of the syringe and the contents transferred to a clean test tube (Aseptic precautions are not necessary except when withdrawing the blood from the vein, Chemical cleanliness of the reagents is enough). A rubber tube with the barrel and piston of an all glass (20cc. capacity) syringe attached at one end, is fitted on to the special pipette (Graduated pipette) and the special pipette is introduced into the test tube containing the blood—citrated saline mixture and the mixture is drawn into the pipette by the suction action of the piston inside the barrel of the syringe attached at the other end of the rubber tube. As soon as the blood mixture reaches the zero mark (top) in the pippette, the rubber tubing is disconnected from the pipette and the blood allowed to stand into the pipette by keeping it vertically in a rack over a bit of Plasticine or over special rubber stoppers pitted in the centre to accommodate the tapering point of the pipette. Readings are taken 2 hrs. after filling the pipette and after 3 hrs., and the average of the two readings is reckoned as the sedimentation rate. The non-reacting or normal sedimentation index in the different types and stages of leprosy is given below for comparison: —(in hundredths of 1;cc).

B^3 — 40 to 60 *	Any number in excess of these figures, means a reaction. When there is a marked reaction, it is the signal for stopping K. I. for some time or to continue it in reduced doses. Antimony will bring down the sedimentation rate to normal.
B^2 — 30 to 50 ,,	
B1 — 20 to 40 ,,	
A1 — 10 to 25 ,,	
A2 — 10 to 25.,,	
*(Hundredths of a cc.)	

The sedimentation test is more valuable than the temperature as it gives us an idea of the amount of breaking-down of the leprous tissues that takes place.

General hygienic treatment.—This is even more important than special treatment. The diet should be nutritious, well proportioned and neither in excess nor in defect—either in quantity or in quality. A wheat diet with fresh milk, vegetables and fruits is the ideal diet. Wheat and fish may be taken but they should be fresh. Salted fish known as கருவாடு in Tamil and Sukuva in Oriya, should particularly be avoided. Salted and preserved provisions should all be shunned. The presence of other diseases should receive attention, Cleanliness of person and clothing should receive special attention. The better and more hygienic, the environments, the quicker will be the rate of recovery.

Physical Exercise plays a very prominent part in the treatment. To undergo the full course of injections necessary for a cure, the patient should have hard and well developed muscles. Otherwise the injected oil will not be absorbed. Hence the importance of Physical Exercise. Besides, the natural resistance also increases with exercise. Leprosy in the A2 stages causes deformities and the muscular tissue is absorbed. If the muscles are well toned up by continuous exercise no such deformities will occur. Gardening or walking 2 to 4 miles a day, Swedish drill etc. etc. combined with football and other outdoor open air games are recommended. Indian indoor exercises like dandals, club-swinging, Suryanamaskar etc. etc., are also good. In a word, Physical Exercise should be regarded as a "*sinequanon*" for a leper under treatment. Without good exercise, Hydnocreol cannot effect any improvement. Skin and bowel sanitation should receive special attention. Constipated patients feel the nerve pains of leprosy more acutely than others. Proper exercise and plenty of fluids, fruits and vegetables in the dietary may cure the constipation. If necessary, some mild laxatives may be used for sometime *e.g.* liquid petroleum or Olgar P. D. & Co., or Molevac P. D. & Co., or Pill Alophen P. D. & Co., may be used to secure a good evacuation every day, until the bowels begin to

sympathy should first be gained, if any good is to result from treatment centres. It is the force of public opinion that practically stamped out leprosy from England. Isolation cannot do what public educated opinion can do. As an instance of the failure of isolation alone as a means of stamping out leprosy from a country, the famous leper island colony of Cullion may be mentioned. Millions of dollars were spent in creating a model colony with all the modern social amenities of life, for the lepers in these islands by the United States' Government. But the result was not proportional to the energy and wealth spent. As isolation interferes with the legal rights of a citizen and as it means a practical death to the individual, it is resisted to the very last. Nobody likes to be separated from his near and dear relatives, his home and his familiar surroundings; and a leper is no exception to the general rule. The unjustified social ostracism to which the lepers are subjected, in this country, compels them to hide their disease as long as they can and when the disease has advanced (by which time they might have infected several others) and when it could no longer be hidden from the public eye, then only treatment is sought for. But, treatment at this stage can do very little. It is in the early infective and curable stage that the special treatment should be undertaken. In a word effective treatment of the early cases is the only possible measure of prophylaxis. Isolation of B 3 cases outside their native villages may also be tried. Nearness to their native village may induce them to voluntarily agree to be isolated, provided effective treatment is vouchsafed to them. Infective parents should see that they do not have close contact with their offsprings. It is better to isolate a newly born infant from an infectious mother, as thereby infection of the infant with the disease may be avoided. At home, B types of cases, should be instructed to disinfect their nasal secretions, sputum (if any) and their spittings also if ulcers are present in the mouth. Employers of labour should be instructed as to what types of cases are infective and should be advised, not to deprive a non-infectious leper of his job, as thereby the deprived individual becomes broken-hearted, economically worse, and could not materially benefit by treatment under such conditions and lastly the spread of leprosy could not be checked by such cruel means. Further, it will lead to the hiding of the disease by the affected individual as already mentioned, which will positively help to spread the disease. Early non-infectious cases (A types) should be allowed to continue in their normal occupations, and to undergo treatment. As far as possible, lepers should be made to feel that they are in their familiar environments and that they are sympathetically considered by the public.

Mental depression in a leper will effectively counteract all the best endeavours of the doctor. Hence the importance of mental factor in the treatment of leprosy cannot be over estimated. The patients under treatment should be advised to keep themselves cheerful, not to worry themselves about their condition and to help the doctor in his endeavours to cure them, by taking vigorous exercise and by keeping themselves clean and following the advice of the doctor strictly.

Doctors and nurses who have to deal with lepers should observe the 5 points of prophylaxis, mentioned before, keep themselves in good health and should avoid contact with infectious lepers, their nasal secretions and the articles in their possession. In attending to the wounds of lepers rubber gloves should be used always.

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(4) *Six Technical Lectures on Leprosy*—by Dr E Muir.
(5) Leprosy-Notes Nos. 1 and 2 issued by The British Empire Leprosy Relief Association.

List of illustrations not published.

1. A leaf of Hydnocarpus wightiana (natural Size)—colour.
2. A ripe fruit of Hydnocarpus wightiana (small size fruit) colour.
3. (A type) Depigmented patch in nerve leprosy (No. M. Leprae).
4. Erythematous patches (M. Leprae Present) and depigmented patch (No. M. Leprae).
5. Showing the thickened nerve trunks of great auricular, peroneal and ulnar nerves.
6. Microscopic appearance of M. Leprae a skin smear taken from a case of B3 type.
7. Depigmented patches in nerve leprosy.
8. A Leucodermic patch showing the complete loss of pigment.
9. Microscopic appearance of a skin smear from a treated B3 case of leprosy.
10. Diagramatic representation of a section of nudule in a B3 type case.
11. Nodules in B3 type case of leprosy macroscopic appearance on the face.

12. "Xeroderma" or "winter disease" of "fish skin disease" early stage.
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15. do late stage showing the nodules.
16. Contracture of the medial two fingers in A2 type of leprosy.
17. Deformed thumb and index fingers. Showing the acute flexion of the terminal phalanx.
18. Acute flexion of the medial four fingers in a A2 case of leprosy.
19. Perforating ulcer of the hand (A2 type early case).
20. Perforating ulcer of the foot showing the inverted cone appearance.
21. Diagramatic representation of skin in different types of lesions.

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*A FEW OBSERVATIONS ON THE TREATMENT OF SYPHILIS.

BY

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It appears to be a fact that one of the most common diseases in Madras is syphilis. It would be for their own benefit if the lay public knew a little about this disease. I am sure that the majority are quite unaware of the fact that many of the diseases they complain of to medical men are part and parcel of this kind of venereal disease either apparent or latent in them. There are many cases brought to the notice of the practitioner which are really the latent symptoms of syphilis, but without external manifestations. For example, in many cases of cardiac syphilis which have been real puzzles to efficient medical men and where death has in the end closed the scene, the postmortem findings in these cases have shown them to be real cases of cardiac syphilis, such as aneurysm of the left ventricle, which nearly always follows cardiac infarction, resulting from atheroma and thromboses of the coronary arteries. 1 The present idea among the lay classes of men is that if they get a few injections from a medical practitioner, they are cured of this fatal poison which they have in their system due to syphilis.

1. Reference B. M. J. P. P. 95 20th July 1929.

* Specially contributed to the *Antiseptic*.

You will be rather surprised to know that many a patient goes to a medical man and requests him to give him an injection of 606 (though the original 606 is rarely used now-a-days) as the name of this drug is so very familiar even to the lay public. They believe that a few injections are quite enough for a complete cure of of syphilis. To speak in earnest, we medical men, scarcely get an early case of syphilis. The patient tries to cure the same by the juice of some leaves and plants, which an old granny of his might have casually mentioned to him. Without taking any antiseptic precautions, he applies all this rubbish to the sore till it becomes septic or till phagedena occurs or a bubo develops. This forms one type.

Another type is that in which a phagedena occurs, the place shows signs of cellulitis or gangrene of the penis with acute pain and constitutional symptoms.

The third type of cases found is in the secondary stage of the disease. The patient never cares for the typical ulcer, somehow gets it healed by some external application or it heals of itself. A month later his whole body is covered with rashes and then only does he approach a medical man.

There is another set of people who never care even for these symptoms and without paying any heed to their constitutional troubles. carry on their daily routine of life till the third stage of this disease comes with its complications.

Now let us see why people are not very particular about getting an early treatment. Syphilis does not reduce the efficiency of an individual very much as many other diseases do, till it comes to its tertiary stage. A case of chancre comes—the patient has only a few days' constitutional troubles, and a secondary stage comes. A few days' fever is all that the patient suffers from. Only when the tertiary stage comes with its manifestations is the efficiency of the individual affected. Even this occurs only in some particular complications. This is the first and foremost reason which prevents a lay man from seeking medical advice early.

Second but not less important, stands shyness. Particularly in cases of venereal disease of all people, he comes in contact with, the husband fights most shy of his wife and vice versa. The opposite party being kept in ignorance of the dangerous fact the disease has every facility to spread and increase. It is all the worse because it affects not only the parent, but the issue also.

A third reason is ignorance of the layman as far as the seriousness of the disease is concerned.

Coming to treatment, the chief consideration is the time and convenience of the patient to get medical aid. The majority of patients are from the working class. They do not find it conveni-

ent to attend to hospital, as they have to attend to firms, workshops, offices etc., between 8 and 10 a. m. (the hospital hours). So they generally take resort to a private practitioner. The man may be getting only a small wage or salary. Under the circumstances, he might have to shell out half of that or sometimes even the whole of his wage to pay the practitioner. I need not bring to your notice that the cost of drugs for this particular treatment is rather high and the practitioner's share only adds to it. Thus the poor patient cannot afford to meet the cost of a full course of treatment and so enters into a contract for a few injections. These are one set of patients we get for syphilitic treatment.

Another set of patients are those who may be prepared to spend the amount necessary for a complete course, but are quite unprepared to undergo the ordeals of treatment, and if you tell them that they require a prolonged treatment they consider you a useless man and go to another practitioner. They are under the impression that it can be cured within a week or two. In such cases, how can a medical man tackle a case of syphilis? Thus I am afraid whether there is even a single syphilitic individual who gets the real beneficial treatment for the same.

Undoubtedly it is a fact that the earlier a case is brought to the notice of a medical man the better are the benefits that the patient derives. Primary cases of syphilis are more easily cured than the secondary and the secondary better cured than the tertiary. I say "better cured" because I have little faith in completely curing a case of secondary syphilis. Once the spirochaetes have entered the general circulation, it is difficult to get rid of them. But a medical man has better hopes of "curing" a secondary stage than a tertiary one, when it begins to show its external manifestations as gumma, rheumatism etc. When once it has affected the central nervous system, the hopes for a cure are practically nil. As our knowledge stands at present, it is better that both the patient and the doctor pray to God for a cure.

Standard of treatment.—I do not think any definite standard has yet been reached concerning cure of syphilitic cases. In general one may say that a high standard should in every case, be attained (as suggested by David Lees). In every case whether primary or secondary the patient must be under the observation of the medical man for not less than three years. The more advanced the case, the longer must he be under a medical man's observation. A case after a month's treatment may show wassermann negative, but that is no sure sign that the patient is free from the disease. The general practitioner and the patient both care only for a complete clinical cure, but that is not enough. Even after the complete clinical cure the patient must

be under treatment for at least two or three years. At this time the blood and the cerebro-spinal fluid must be examined now and then. Once it may show a negative reaction or a few consecutive tests may show a negative reaction, but after a time it will be a surprise to both the patient and the doctor that again the blood shows a positive reactien. But God alone knows how this can be attained unless some form of compulsory treatment is enforced, and unless the lay public are made to realise this necessity, otherwise it seems to be that before long the syphilitic spirochaetes will become a normal constituent of the human body.

To brand a syphilitic as a sexual criminal and to look down upon him is not a sane attitude for society. The syphilitic reaps his full vengeance on human society for this by keeping his disease secret by not getting himself treated and by thus broadcasting his store of spirochaetes. Thus the society which affects to shun the sexual criminal for his misdeed gets its full share of his vengeance.

My thanks are due to Lt. Col. Skinner I.M.S. who had been kind enough to go through this paper and make a few corrections here and there as were necessary.

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*THE PRESENT DEVELOPMENT OF RADIUM AND RADIOLOGY IN INDUSTRY AND MEDICO-SURGICOLOGY.

BY

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(*Continued from page 20 of January '30.*)

Electro therapeutics, principal methods of electricity used in medicine and surgery:—High frequency electricity is electricity in a state of extremely rapid oscillation. High frequency currents are said to increase metabolism. All the effects of high frequency currents are due to their thermal action. These currents by *virtue of their extremely rapid oscillations* are quite innocuous, as far as ordinary electrical effects are concerned. Hence very large doses can be given though in giving electrical treatment of any kind, *every precautionary measure must be taken for proper mode of treatment and dosage application.* The heat production however is directly proportional to the strength of the current, consequently, (H.F.E.) *High frequency electricity* is a means of raising the

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internal temperature of the body, that is only limited by the power of the apparatus at our disposal.

Diathermy.—In diathermy we have a means of raising any portion of the human body to almost any desired temperature. *The heat* represents fresh energy brought into the body by the electric current and has a potent action upon every single cell that is traversed by the current. The term Diathermy was used by Dr. Nagelchmidst of Germany. It comes to be used as *Medical Diathermy and Surgical diathermy.*

Surgical diathermy.—When it is desired to destroy tissue, it is necessary to *increase the strength of the current* and to reduce *the size of electrode*, until the current is sufficiently *concentrated active electrode.* (It is a small electrode). So that surgical diathermy is (S. D.) is *heat coagulation. It is chiefly used in the destruction of malignant and other growths, and certain chronic tissue degenerations*, and has added to the equipment of a surgeon and a replacement to the knife.

Electric Propulsion for ships:—Among various other developments this is one of interest. The Peninsular Oriental Pandoo line are launching an *all electric ship* to be fitted with high pressure steam and *Turbo Electric propulsion.* She will be propelled by twin electric motors and Turboelectric generators, taking high pressure steam from patent yarrow water tube boilers burning oil fuel. At reduced power one alternator only is in use, supplying current to both motors, the second alternator standing in reserve, thus obtaining the maximum economy in fuel, both at full and reduced power, a great advantage in a vessel which does part of its voyage at something less than, the maximum speed and power.

Among other advantages of the *Electric propulsion*, are, absence of noise as compared with a geared turbine, the absence of propeller racing in a heavy sea, and the use of fewer and smaller steam pipes which will maintain coolness. The absence of vibration, due to the fact that the whole of the machinery is of the rotary type, will also prove a great benefit to the structure and accommodation of the ship. The all Electric ship is designed to contrive greater economy with increased comfort.

Electrical Heating and cooking might he added to the modern comforts.

The wireless system.—It is a method of communication without the aid of intervening wires. To the perfection of this system the credit is due to *Marconi,* who was the first to apply the isolated discoveries of, among others such men, as Faraday, Hertz, Preece and Lodge. The system is named as the *Marconi system. Its working depends on the following principles.* The first practical application of the Marconi system was the establishment in 1898, *of the wireless.* Any sharp electrical discharge as that of a *Leyden jar or an induction coil sets up electrical waves* in the surrounding media. The waves travel, to great distances and at an enormous speed *and set up electrical disturbances in other bodies upon which they impinge, provided such bodies are capable of vibrating at the same rate.* The disturbances in these bodies may be made evident to the senses by the employment of certain delicate instruments. Thus in actual practice where there is an existence of wireless installations, the powerful electric discharges from the *Transmitter, set up electric waves that travel in all directions*: just as one sees *ship in the sea or the waves of the sea during the sun and the storm.* In the *receiver* which is a part of installation instrument, a delicate piece of apparatus known as *coherer*, betrays the presence of these waves, by permitting to pass through it a current of electricity, to the flow of which *it offered effective resistence as long as it mas unaffected by the electrical disturbances.*

World's debt to electricity.—This is due to electricity, I need not here mention the advantages of it as they are apparent, though there may be further future developments. The universal news, programmes of politicians, electric machination, development of science, broadcasting of lectures, the melodious tunes and soft voices from the stage, the operas, even pictures by wireless are the latest scientific developments, in the advancement of currents. These will tend to make the universe happy or foggy according to the return waves that are transmitted from all quarters.

Now I shall say some thing about electrical units and certain electrical physical phenomenon.

Electrical units.—They are all used as a system of measurement, known as the *centimetre gram system* (C. G. S.).

The centimetre.—is the unit of length; The *gram*—is the unit of weight; The *Dyne*—is the unit of force. The *erg* is the unit of work.

Absolute system of electrical units.—The relation between strength of current, electro motive force and resistance is stated Ohm's law.

Ohm's law.—The current varies *directly as the electro motive force*, and *inversely* as the *resistance.* It is expressed thus:—

$$Current = \frac{\text{Electro motive force}}{\text{Resistance}}. \quad C = \frac{E}{R}$$

Electro motive Force = Current and Resistance. E = C R,

$$\text{Resistance} = \frac{\text{Electro Motive Force}}{\text{Current}}. \quad R = \frac{E}{C}$$

The practical system of electrical units—The unit of work is *joule.*

Joules Law.—It states that the heat produced in a circuit is directly proportional to the *square of the current, to the resistance and to the time.* The unit of quantity is *coloumb.* The unit of current, is the ampere, the unit of pressure,is the volt, the unit of Resistance is the—Ohm ; The unit of power is the—watt. *The Kilo-watt* is a larger unit of power. *The unit of capacity* is the *Farad The Board of trade unit* (B. T. U.). It is the commercial unit for purposes of public supply.

Let us see what in reality Electricity is—Electricity exists everywhere, permeating all matter, but in a condition of such even distribution, that we are unaware of its existence. When the distribution is altered, the effects *which are termed electrical,* are then made manifest, by merely altering its distribution producing in one part an excess, in another part a deficit—Hence the terms of expression—*Positive charge or positive electricity, and negative charge or negative electricity.* The modern view is that electricity consists of units or atoms. The *term electricity* was given to the phenomenon by William Gilbert in 1603, though it has been described previous to this by certain Greeks. *The electrical law.* It *repels* other electrical charges of *the same kind as itself,* while it *attracts charges* of the other kind. *Electric plant installation* where there is no main current available directly for the purposes of electricity, *Kohles electric lighting—Plant may be installed at a reasonable cost.* Full particulars may be obtained from Messrs F and C Osler Calcutta who have been kind enough to reply to my inquires. but the limited space of my paper prevents longer descriptions.

What is ether?—Let me now say a little about ether. The empty space in the universe is filled with *ether* It is absolutely cold. Five *hundred degrees colder is the temperature of space.* Space therefore is full not of matter but of ether. *The ether is other than matter.* We on the earth are five hundred degrees Fahrenheit warmer. Ether fills all space in a thorough manner There is nothing so omnipresent and so efficient in the physical universe. We employ the ether every day and every minute of our lives.

The first thing to realise about ether is its absolute continuity *Matter* is discontinuous, The *matter* is built up of minute electrical charges both negative and positive which are called electrons and protons. *All pieces of matter and all particles are connected together by ether and by nothing else.* Ether has

another property *and that is of conveying light.* The rate at which ether waves travel, the thing ordinarily called *velocity of life.* All ether waves however else they differ, all travel at the same pace. The speed of life is not only the speed of that by which we see things, but it is the speed with *which every disturbance travels in the ether of space.* Ether has electric and magnetic properties. One stimulates elasticity and the other momentum. It is owing to these two properties that vibrations and waves are possible.

Radium:—The discovery of Radium was made by *Monsieur and Madame Curie of Paris in the year 1898* whose laboratory I had visited in the year 1925 during my west continental tour and studies. Closely following Rœntgen's memorable discovery of x-Rays, Monsieur Henry Becquerel at Paris in investigating the field of Phosphorescent light, discovered that the element *uranium* emitted rays capable of traversing material bodies. Thereupon the analysis was made by *Curies,* who concluded that the rays were due, *not to phosphorescent action,* but to the *disintegration of the uranium atom,* and that in its process of disintegration uranium produced a new element *which Curies called Radium.* Since then there have been many collaborators. Becquerel discovered that Radium was capable of effecting an *inflammatory reaction in normal skin,* and *Besiner* suggested its use for therapeutic purposes. Then followed valuable pioneer work in the treatment of number of diseases with Radium by Danloo, Lazarus. Mache, Szilard, Masotti, Wickham, Dequias, Bashford, Czerny, Freund, Bajet, Shiff and others. The subject of Radio activity was further investigated and the theory of the ionisation of gases developed by Wilson, Thomson, Rutherford, Townsend, Cobwell, Russ, Sady Villard, and various others.

Properties of Radium :—Radium is the chief product of uranium elements, (Pitch Blende). It is a rare Radio active chemical element (Symbol Ra) belonging to the group of alkali earth metals, which comprise the elements, Barium, Strontium, Calcium, magnesium. As a disintegration product of uranium, Radium is never found in a natural state apart from its parent element. They always occur together in the definite ratio of one part of Radium to each 3,400,000 parts of uranium. Its atomic weight is 226. Its chemical behaviour is identical with that of Barium, forming a series of analogous salts (Bromide, Chloride, sulphate, carbonate etc). In its metallic state it is pure white metal, but it is never used in that form, because it changes quickly when exposed to air, and reacts with water, decomposing it into Hydrogen and oxygen, with the production of Radium Hydroxide,

Hence it is always prepared and used for therapeutic purposes in the form of different Radium salts. Radium is very costly and its use is therefore limited.

Radium emanation.—The first product of disintegration of Radium is Radon (Radium emanation). This is a true gas with atomic weight 222. Its rate of decay in a sealed container is constant, the initial Radio activity falling to one half in 3. 85 days, and to one fifth in 8·8 days. At the end of 40 days only 0.07 percent remains. Emanation is a short lived gas. Its growth and decay proceed at a precisely even rate.

Radium as Therapeutic Agent.—It is therapeutically used only in the form of salts namely Radium Bromide (Ra Br2 2H2o) or Radium sulphate (Ra So4). The Radium Bromide is recommended only when a soluble salt is required (for instance in an emanation apparatus). For enclosures in containers, *Sulphate* Radium is always used.

Both Radium salts and Radium emanation emit three kinds of rays, Alpha, Beta, and Gamma. Gamma Rays are the hard rays which are used specially in malignant diseases. Radium also has been used conjointly with X-Rays therapy treatment specially in malignant diseases. Combination of different rays has been used recently and they provide further research. It may be possible in the future to discover new kind of rays.

The value of radium therapeutically is believed to be due chiefly to the fact that its intensive radiation is capable of inhibiting the growth of cells in malignant diseases. Great experience is required in giving the dosage. The approximate calculation and the table of decay of emanations has always to be used as a standard. It is not being published for want of space. The dosage is being calculated by milligram hours, microcuries hours and millicurie hours. Unit of measurement—The *millicurie* is the practical unit of emanation measurement ie. the thousand part of curie. A *curie* is the quantity of emanation in equilibrium with one gramme of radium element. *Micro-curie* is the thousand part of the millicurie. Millimicrocurie is the thousand part of the microcurie. It is the practical unit of measurement of radium emanation.

Milligramme Hours is the amount of radiation given off by one milligramme of radium element during one hour.

Millicurie Hours.—One millicurie being the quality of emanation in equilibrium with 1 milligramme of element; it will be readily seen that a preparation containing 10 mgrs of radium element applied during 1 hour will provide an intensity of 10 millicurie hours corresponding of course to 10 milligramme hours

when stating the quantity of micro-curies or milli-curies that this term indicates the quantity of emanation which is produced and destroyed during the unit of time (hour) while when stating the intensity in millicurie hours a constant quantity of emanation in equilibrium with radium is indicated.

Precautions.—Whenever Radium is used, it is of great importance to see that it is used in proper applicators and with proper filters. It should always be kept in Lead chamber.

Radium—Decay constant is—0.0004 per year.

Radon-Decay constantis—0.0075 per hour.

Radium A-Decay constant is-0.231 per minute.

PITCH BLENDE

It is a scarce mineral and is the source of Radium. It is an oxide of uranium. It occurs in masses with ores of silver lead, and tin. It is found in Cornwall, Saxony, Bohemia. Hungary and North American continent. It is an opaque brittle mineral. Its disintegrations comprise of Ra^{A}, Ra^{B}, Ra^{C}, Ra^{D}, Ra^{E}, Ra^{F}, Ra^{G}, with Alpha, Beta, Gamma rays.

Cases & Comments

RETROGRADE DILATATION OF THE OESOPHAGUS FOR CARDIOSPASM.

BY

DR. T. S. S. RAJAN, M. R. C. S. (ENG.) L. R. C. P. (LONDON).

Trichinopoly.

Cardiospasm is a persistent spasm of the muscles of the cardiac opening of the stomach at its junction with the Oesophagus and the clinical phenomena is either partial or complete obstruction to the passage of food either solid or fluid. This spasm is not associated with organic strictures caused by cicatrical contractions or obstruction by new growths in the lumen of the Oesophagus, in its wall or from outside. It is a nervous spasm the cause of which is not clear. Often it is associated with psychoneurotic tendencies, but the case with which I am concerned had no such tendencies, nor even a predisposition towards it.

The treatment adopted in this case was not one of choice. It was a matter of necessity. In going through the literature on the

subject, I found in the April issue of 1929 of the "Surgery, Gyneacology & Obstetrics", page 494, that at the Mayo Clinic, 700 cases of cardiospasm have been treated by the hydrostatic dilator. Dilatation from below has been done in only a few cases—only three having been done at the Mayo Clinic till now. I had not the Hydrostatic dilator with me and I could not wait till I got one from abroad, the patient's condition not admitting of any delay. I had perforce to employ dilatation from below through a gastrostomy opening.

Report of the case:—A young man S, aged 22, native of a village in Chidambaram taluk, South Arcot district of the Madras presidency, was brought to the clinic on the evening of the 11th. October 1929, complaining of dysphagia of three years duration.

Condition on admission:—The boy was weak and exhausted, his eyes sunk, cheeks hollow and eyes blood-shot. He was very emaciated and thin and scarcely able to stand on his legs. He was suffering from intense thirst. Tongue was slightly coated and dry. He had to be helped out of his carriage to his bed.

Family history:—Nothing very particular—Father healthy and alive-Mother died of puerperal sepsis—Brothers three, sisters four, all of them alive and healthy.

Past history:—A sturdy young man keeping good health with regular habits; had not suffered from any serious illness till the present trouble. He is a vegetarian. He does not smoke, does not chew tobacco or betel leaves. He is a teatotaller. He is a student in Intermediate class.

Present history:—For the first time during October 1926, he noticed some slight difficulty in swallowing particularly when he took solid food. But the condition did not give much trouble although it persisted. During 1927 the trouble began to get worse. He was treated medically for six months at Madras but after that period got tired of taking durgs and the trouble though slightly relieved was not entirely cured. During the early days of October 1929 the trouble was gradually getting worse and on the 10th October he could not swallow even fluids. He tried to swallow fluids but it did not seem to enter his stomach. There was a sense of oppression in the chest when he tried to swallow more. The fluid taken in slowly welled up into the mouth without going down, and any change in the posture caused the fluid to flow out. He was very thirsty and hungry. He has been losing weight slowly and lost a good deal during the ten days preceeding this severe attack. He had become considerably emaciated during this period.

[*To Face page 177.*]

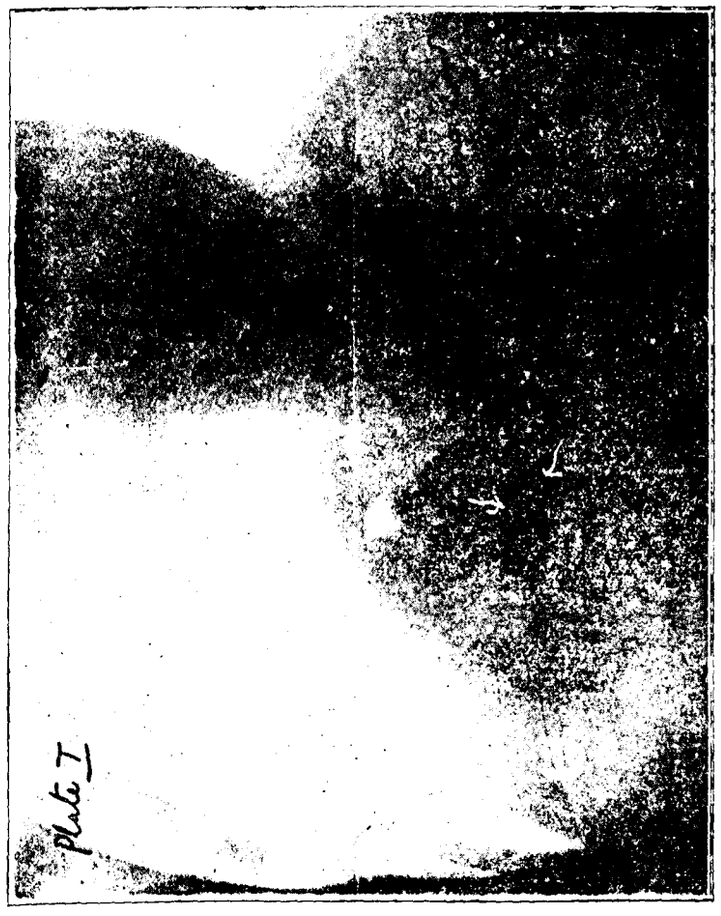

Plate I.

A fusiform shadow of a dilated œsophagus is seen with a small conical [illegible] end of the stomach.

[*To Face page 177.*]

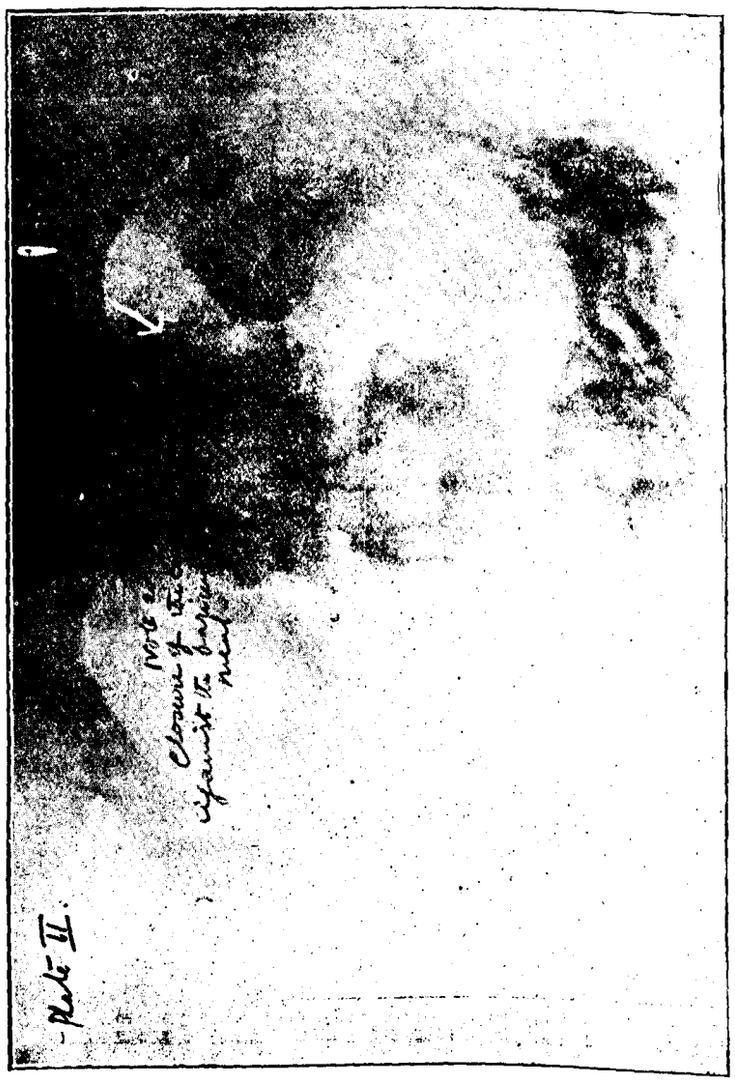

Plate II.

The œsophegeal sphinctor is seen tightly closed at the cardiac opening, blocking the passage of the barium meal.

Plate II.

Examination :—Tongue slightly coated and dry—teeth clean

Circulatory system:—Pulse normal—72 per minute, slightly low tension but regular. Heart normal.

Digestive system:—Stomach nothing abnormal. Liver normal. Spleen normal. No tumour or swelling palpable anywhere. Urine normal.

Respiratory system :—22 per minute—both lungs normal.

A provisional diagnosis of cardiospasm or stricture of the oesophagus was made.

On admission a pint of warm glucose saline was given per rectum. The quantity was readily absorbed by the tissues. The next day 12th. October a stomach tube was passed with some difficulty particularly noticed at the cardiac end and the patient fed through this tube.

13th. October :—A barium meal was given by mouth and X-ray plates were taken.

A small quantity of the meal having got into the stomach has evidently set up a spasm of the cardiac opening which has blocked the passage of further quantity. There is nothing abnormal to be noticed in the stomach.

Diagnosis :—Cardiospasm.

Treatment :—For ten days after admission the patient was fed through the stomach-tube three times a day. His general condition improved in consequence.

Operation :—On the 23rd. Oct. after preliminary preparation of the patient, a gastrostomy opening was made. The mucous membrane of the stomach was slightly inflamed and contained blood-stained serous fluid. The gall bladder was found distended with bile. An attempt was made to feel the cardiac end of the stomach which proved unsuccessful. The opening was so tightly closed even with the patient fully under chloroform that beyond feeling a dimple corresponding to the cardiac opening in the diaphragm no passage could be felt enough to insinuate the tip of the little finger.

A stout stomach tube was then passed through the mouth and forced through the cardiac opening from above. As soon as the tube was inside the stomach it was clamped by a spencer-well's artery forceps. The tube was then gradually drawn up from the mouth while the tip of the index finger was kept closed to the tip of the artery forceps which was being pulled up through the cardiac opening of the stomach. The cardiac end was thus located but the grip of the cardiac sphinctor was so great that mere manual dilation with one finger became impossible. A stout

guarded three bladed cervical dilator was used and the opening mechanically dilated to seven centimeters. There was reflex suspension of the respiration during the dilatation. After the dilatation the cardiac opening lay loose and flaccid and the four fingers closed up could easily get in and out. The stomach and the abdomen were closed in the usual way. The patient has had an uneventful recovery. Liquid nourishment was given six hours after the operation and there was no trouble in swallowing. Solid food was given on the fifth day.

The patient was discharged on the 30th November. He was taking solid food and enjoying it in a way which he had not done during the three years prior to the operation. His general condition improved rapidly; he put on weight and was happy and cheerful when he was discharged.

I saw the patient again on 26th Feb. '30. The spasm has not recurred and he is able to swallow food normally.

To conclude I may state (1) that cases of cardiospasm though rare are often times met with.

(2) That it produces *distressing* symptoms attended with suffering just like any other form of organic stricture.

(3) That X-ray photographs have made the condition clear and certain.

(4) That *dilatation* from above by hydrostatic dilators is the usual method of procedure.

(5) That where and when such dilators are not available retrogade dilatation through a gastrostomy opening is the only way to get relief.

(6) That during the course of the operation a guide from above either a silk thread or a rubber tubing is necessary to guide the operator to get at the cardiac opening of the stomach.

(7) That a dilatation of seven centimeters is necessary to ensure complete relaxation.

A CASE OF LOCK-JAW DEVELOPED FROM OTORRHOEA

BY

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

Medical Officer. Durgajang Charitable Dispensary, Purnea

A boy aged 3 years was placed under my treatment for otorrhoea (pus in ear) on 20—8—29. The father of the boy was

advised to clean the ear (right ear affected) with Hydrogen Peroxide and the following medicine was given to drop into the ear three times a day.

Tr. opii	M XV.
Tr. Belladonna	M XV.
Glycerine	ʒi.

23—8—29.—The boy was brought to me with lock jaw developed. The right side was more affected than the left. The boy could not open his mouth. The following medicine was prescribed:—

Calomel	gr ii
Sugar	qs

Mft. Pulv. Send one powder. To be given at bed time.

The following was also administered:—

Peacock's Bromidia in m XV doses in ʒii of water. On the day following the boy's ear was cleaned with H_2O_2 and dressed with

Glycerine	ʒi.
Tr. opii	M XV.
Carbolic acid	M III.

Ichthyol, Belladonna and Glycerine were applied over the inflamed external side of the ear. There was marked spasm of the muscles of the neck, back and lower extremity. Contraction occurred even by a simple touch. I did not change the medicine which I prescribed beforehand. Subcutaneously 2%. solution of carbolic acid M viii, was given.

25—8—29.—No improvement. The same injection given with the following mixture.

Syrupus Ferri Iodide	M XV.	
Aqua	ad	ʒ III.

Mft. mist—send 6 such doses. One mark to be given three times a day.

27—8—29.—No improvement, 1 cc. of Acid carbolic injection was given subcutaneously.

Calot's solution ʒ IV was given to drop into the ear after washing with warm normal saline.

29—8—29.—Pus in the ear lessened. The swelling subsided. The boy was able to open his mouth with great difficulty. I discontinued all the previous medicines except the injection and Calot's solution.

31—8—29.—Much improved. 1½ cc. Acid carbolic solution. subcutaneously.

2—9—29.—Condition better; injection was repeated.

Calomel	gr II.
Sugar	qs.

One Powder—was given to move his bowels.

5—9—29.—The boy was able to speak. There was slight spasm of all muscles. There was no pus in the ear and no inflammation of the external side of the ear.

8—9—29.—Same injection continued. The father was advised to give rice and milk.

12—9—29.—The boy was able to walk. The same injection continued.

I have treated many cases of lock jaw with the above mentioned medicines—They were developed from other causes and had been successful in curing them. Calot's solution considerably lessened the discharge from the ear, and acted marvellously in this case. For a detailed description of this solution and its action please see 'Antiseptic' Page 736, Aug. '29.

A RARE CASE OF ASCARIASIS

BY

T. S. SURYANARAYANA AYYAR, L.M.P.

Sub-Assistant Surgeon, Pauk, Upper Burma.

Helminthology is a very important subject as far as the tropics are concerned, and Ascaris Lumbricoides gives rise to all sorts of baffling symptoms the diagnosis of which is not very easy to medical practitioners in the rural areas especially when they are not provided with a microscope. The diagnosis becomes more difficult when the patients are of tender age (which is mostly the general case) as they are unable to give any history whatsoever.

The usual symptoms mentioned in the text books may be briefly enumerated as follows: Disorders of appetite, which may be of either extremes or even perverted, ill-defined pains over the abdomen, foul breath, restless sleep which may be accompanied with the grinding of the teeth, nausea and occasional vomiting, anæmia, and progressive loss of weight without any appreciable cause. Some obstinate cases of Pyrexia are also due to Ascariasis. Besides these, some rarer symptoms are also mentioned in text books. These are jaundice due to the blocking of the common bile duct, volvulus and intestinal obstruction, peritonitis and appendicitis. I have seen cases of Ascariasis simulating typhoid fever. I had recently come across a case of Ascariasis which exhibited a rather peculiar and alarming chain of symptoms, and although I had access to the use of a microscope I could not find time to have recourse to it on account of the urgency of the symptoms.

The following are the particulars of the case:—

Nurradin, a Mohamedan male child aged 6 took suddenly ill on the morning of the 25th September 1929. He was alright till about 8 A.M. At 9 A.M, he complained of vomiting which was quickly followed by very severe *diarrhœa*. I was called to attend on the case at about 11 A.M. I found the patient comatose—His body cold and covered with perspiration, Temperature 97.—Pulse slow, tension low, frequency 66 per minute, eyes sunken, nose pinched, voice husky, fingers shrivelled. Urine was suppressed and thirst marked. Cramps were present in the lower extremity Patient had already had 16 motions and six vomits before my visit. He passed one motion while I was present and the stools were watery, copious and "Rice-water" in colour. Considering the typical nature of the symptoms I diagnosed the case as either cholera or ptomain poisoning, but the latter I soon scored out as the patient's food overnight was a plain one and none of the remaining members of the family who partook of the same food exhibited any symptoms similar to this. There was another reason which made me take this case to be cholera. I had a case of cholera treated in my hospital a day previous to this. But this case was an imported one. The health of the locality was perfectly good, and the patient's house was nearly 400 yards from the hospital, and I did not believe that there could be any infection from the hospital. Anyway I took it to be a genuine case of cholera and began to treat it as such. I put the patient on Mist Pro-diarrhœa min v. mixed with boiled water every half an hour, and Pot. Permanganate lotion 1/8 gr. to an ounce as a general drink. In the meantime I prepared everything for an intravenous saline injection but luckily I had no occasion to give it. Rarely had the patient taken the second dose of the mixture, he complained of nausea and almost immediately vomited and in the vomit he brought forth two round worms. This was indeed a great relief to me as well as to the parents of the patient. Although the diagnosis was changed, the line of treatment was not changed. I did not start the patient on santonin, for the patient had no strength to stand a second purgation. I put him on santonin on the third day and the result was the expulsion of 32 adult worms. The patient made an uneventful recovery and he is quite hale and hearty at present.

Conclusion.—Neither have I come across such a peculiar case of Ascariasis in the general practice nor in the text books nor medical journals. If any of the readers of this article had occasion to see cases of Ascariasis exhibiting rarer symptoms than those mentioned in this I shall be very much obliged if they will kindly communicate the same either directly or through the help of this journal.

A CASE OF ASTHMA DUE TO ANKYLOSTOMIASIS

BY

DR. KALIGATI BANERJEE M. B., SURI—P. O. BIRBHUM

A lawyer of Dinajpore—aged 42 came here with a marriage party and had a sudden attack of asthma one evening. I was called in to see him when he was found to have a typical asthmatic fit. He was suffering now and then—as he said—from occasional bronchitis—doctors there diagnosed the case to be a case of chronic bronchitis due to dyspepsia. He had acid, eructation for 6 months with chronic cough. His blood pressure was 120 m. m of mercury (systolic) during the attack of the fit. He was at once given ½ gr of Ephetonin orally but this could not check his fit. Then ½ c c of adrenalin was tried after a few hours and he was cured of the Paroxysm.

His blood was examined and eosinophila was marked during the quiescent stage. As a routine his stool was examined and ova of ankylostoma was found in numbers there was albumin in urine. He was treated with specific anthelmintic carbon tetrachloride and he is free from any attack of asthma for 6 months. Moreover the complaints of bronchitis and dyspepsia are removed.

The case is of interest as it first pointed out that intestinal-toxæmia may lead to anaphylactic syndrome asthma—but it is very curious that toxin of ankylostomiasis acted as foreign protein to which the victim was oversensitive. But mechanical obstruction of larvae in capillaries may be responsible for the whole mystery. In that case—the hypodermic injection of Adrenalin would have been futile.

POST PARTUM HAEMORRHAGE.

BY

M. M. ADHIKARY

M. O. I/c Iohaghur T. E. Hospital Terai

Prim :—Within 1st 24 hours.

Sec :—After 24 hours.

Causes :—

Prim :—I. Atony (no contractile or retractile capacity). Due to bad management 2nd and 3rd stage. Due to absence of pain.

II. Secondary inertia:—Failing to control uterus placenta and membranes—expelled or not.

Predisposing causes :—

1. Debility
2. Protracted labour.

3. Retained placenta.
4. P. Prævia.
5. Severe laceration.

Treatment :—I Antinatal care. II Proper management II and III stage.

III. Preparation for emergency (specially for bleeding) when predisposing causes present.

1. Take charge of Uterus. (compression of abdominal aorta).
2. Hot douche, Stim. Ergot. Pitutrin, Hot bottles. Raise foot of bed and child to the breast which is very important.
3. Compress (uterus after clearing out placenta etc. if retained).
4. Hot intra uterine douche, 100° to 120° F.
5. Treat. Collapse. warmth, hot drinks, abdominal pressure, raise foot of bed, bandaging of extremities, salines, 10 to 20% glucose.

Secondary P, P. H.

Causes :—

1. Retroverted subinvolutional uterus.
2. Ret. portion of memberanes or placenta + saparaemia.

Treat.—Hot douches ergot + replacement. Blood transfusion from suitable donors.

One case note of Post Partum Haemorrhage is described below for perusal of my fellow colleagues.

Patient, a cooli woman aged about 32, Multipara inhabitant of this garden.

On 14-6-28 at 7 A.M. a cooli came to me with the information that the above woman had given birth to a male child at 3 A.M. and was now in precarious condition. I found the patient in the following state.

Placenta retained in the uterine cavity and the newly born baby was attached with its cord.

On palpation uterus revealed flabily. Patient bled profusely and the character of the bleeding was, a gush of blood coming out with occasional pause. Pulse was not felt at the wrist, brachial was almost imperceptible. Heart sound was apparently feeble. The whole body was icy cold and drenched with perspiration. Patient was semi-conscious.

At once I seperated the child and advised my assistants to render adequate nursing.

I afforded my energy to adopt the following measures towards the recovery of the patient.

1c.c. of *Pituitrin* was injected at once and the following draught was given which she took with much difficulty.

Re.	Spt.	Vin. Gall.	ʒiv.
	Tr.	Digitalis	m. x.
	Spt.	am. aromat.	m. xxx.
		Aqua —	ad. oz. 1.
	mft.	mist for one dose.	

Then I tried to deliver the placenta. I began to knead the uterus for five to six minutes, and this kneading caused the

uterus to become a little smaller and contract, I now pressed it to expel the placenta. This method I tried several times but to no effect. I did not venture to waste my time in vain, I determind to deliver by manual. Prior to deliver the placenta I sterilised my hand with Tr. Iodine thoroughly, I cautiously introduced m£ handinto the uterine cavity, as every moment I was afraid of the patient's life in danger, and grapsed the placenta with the hand, drew it out slowly without causing any bad effect.

One intra uterine douche of water was administered. The uterus was re-examined and found to be firmly contracted. Being certain of the cessation of blood, I turned my attention to another condition of the patient. She was taken on a Khatia and foot of it was slightly raised. Ten ounces of N. Saline was introduced per rectum and 4 bottles of hot water were kept by the side of the patient, and she was well covered with blankets. The following mixture was served:—

℞. Ext. Ergotæ Liq——m xx (Hev).
Tr. Digitalis (standard)— mx.
Aqua———add oz ½
fiat mist
send 3 such E. 2hs.

I went to see the patient at 12 noon and noticed her condition was better. Pulse can be felt at the wrist but feeble. Coldness of the body was gradully disappearing, By this time 6 oz. of warm milk in addition to a drm. of Spt. Vini. Gallici was given by feeding cup and the hot water bottles were replaced. At 4 p. m. I found the patient quite satisfactory.

Axila temp. 97. 4°
Pulse 80 (per Minu).

Bleeding entirely stopped. She was served further two doses of the above mix. and some more milk was ordered.

On the following morning I saw the patient perfectly sound. The undernoted medicine was prescribed:—

Re. Q. Hydrochlor gr. V
Acid N. M. Dil m V
Liq. Strych. Hydr m II
Ferriet am citras gr. IV
Sodi. Sulph. gr. XV
Aqua Chloroform add OZ1.
Send 6 Such TTD.

Chicken broth and milk were ordered for the day.

On the 16·6—28 patient much improved, and there was no complaint except pronounced debility. The patient was put unde Hæmoglobin preparation.

My grateful thanks are due to my C. M. O. for his kind help regarding the case and permission to publish the notes in your valued paper.

The Antiseptic

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THE TREATMENT OF PUERPERAL FEVER.

There is probably no disease which gives rise to so much worry as puerperal fever. As all of us know, it is a preventable disease—preventable in the sense that by leaving the normal case to nature and carrying out those aseptic and antiseptic principles with which every midwife and practitioner are thoroughly familiar, the disease can be prevented. There is also no denying the fact that in spite of all the advances made in surgical and obstetrical practice, puerperal sepsis, in our parts, at any rate, is as prevalent to-day, as it was ten or twenty years ago.

In treating a case local treatment is very important. There is however no unanimity of opinion as to the best method of dealing with the localised wound infection. While deprecating the extreme views either of leaving things severely alone or of sharply curetting and applying strong antiseptics to the uterine cavity, it is difficult to see what harm can be done by the gentle washing with a bland fluid. The presence of pus or placenta can thus be ascertained and a septic cavity can be drained. It is the washing out that is of value and not the stuff and therefore saline or sterile water is sufficient. A glycerine drainage is also recommended by some as being very useful in the mild cases. The patients on admission are usually shaved, and cleaned. The vagina is washed in the lithotomy position, with saline or weak soda solution and any stitches are removed. The uterus is washed and 60 c.c. of glycerine are slowly inserted through a tube which is kept in.

position by loosely packing the vagina with gauze soaked in glycerine and icthyol. This glycerine is injected two or three times a day and the packing renewed twice a day. Another important point to note is to keep the patient in the sitting up posture as much as possible for drainage. This not only helps to improve the local condition, but also drains the uterus, produces lymphocytosis, stimulates contraction and keeps to bring away any retained pieces of placenta or membrane which have not come out by douching.

Serum therapy has also been extensively tried in the treatment of puerperal fever. On the assumption that streptococci are the chief causal organisms, anti-streptococcal sera have been used. But the great difficulty has been the failure of a polyvalent sera, as is now obtained, to exert a specific action. The total result, therefore, as could be naturally expected, has been unsatisfactory. The good results, whenever obtained, are probably due to some other factor acting as a leucocytic stimulant. Serum has been found to have no preventive value and to be useless in complications and localised (infectious such as thrombosis and pelvic cellulitis).

Antiseptics have had their vogue. All sorts of antiseptics were introduced into the blood stream with a view to reduce their virulence or destroy the micro-organism. But the great difficulty, has been to find the ideal antiseptic, which, when introduced into the blood stream possesses the selective action of destroying the bacteria and leaving the undamaged living cells. In fact, with all the present day antiseptics, the cells are more easily affected than the organism with its protective covering. Any how a brief consideration of some of these substances will not be out of place. Eusol, which is a solution of hypochlorous acid, has been given intravenously in fifty to one hundred c.c. doses and repeated several times at daily intervals. While, as usual, a few dramatic results were got, in the majority this was no better than other antiseptics. Other substances like Mercurochrome and acriflavin have been extensively tried but the results obtained have not been uniform. Colloidal metals like iodine and silver have been tried but with varying success. The organic arsenical preparations have also been used with some success. These possibly act by stimulating leucocytic formation and so helping to produce more antibodies. Many other drugs have been tried and the multiplicity of the remedies used is a good indication of their value. Quinine, Nuclein Sodium citrate, Saline, Soamin are among the many drugs which have at one time or other found favour with doctors.

It must not be forgotten, however, that general treatment and good nursing are as important as the so called specific treatment. Rest is essential. Quinine and strychinine should be given as a routine with the object of helping involution of the uterus. Calomel will be useful to keep the bowels clean. Iron and arsenic are the time honoured remedies to combat the mild anaemia.

In conclusion it must be admitted that no true remedy for a well established case of puerperal fever has yet been discovered. The most important aspect we would like to lay emphasis on, is the preventive one. It would not be an exaggeration to say that puerperal fever will decrease in direct proportion to decrease in "meddlesome midwifery" practice.

Medical News and Notes

REVIEW OF MEDICAL PROGRESS IN FRANCE DURING 1928-1929

BY

MAJOR LABERNADIE, M. D. M. S. P E. (Paris)

Dengue.—which was always prevalent in the Mediteranean region in sprodical form, has assumed since a few years an unusual activity—It was frequently raging under the form of epidemical disease stricking a very large number of persons (f. i. several hundreds of thousands) in Greece in 1928.

The virus is always unknown. Spirochaets have been very seldom seen,—very likely there is an ultra virus—

As agent of transmission, besides phlebotomus the stigomya can act—(1). The clinical forms are essentially polymorphos— (2).

Yellow fever.—(3) The violent epidemic which was raging on the west coast of Africa gave way to numerous works on the part of French doctors as well as of foreign physicians who had come to study it on the spot—We remember that Noguchi, the learned Japanese of Rockefeller Institute had attributed the disease to a and spirochaeta (Leptospira icteroides)—He had come to Africa to die and he could never isolate this parsite in patient, suffering from yellow fever. At last he had adhered to the opinion which prevailed, namely, that it was a question of an ultra virus—The

(1) *Anderson*—Revue tuniticunre Sc. midic, 1928.
(2) *Raynand at Dicnot*—Algerie medicale Oct. 1928.
(3) Alegeric-fagetfe der Sc. Redicales Paris 1928.

disease could be inoculated to one species of monkeys only (Macacus shesus asiaticus)—As Hindles (London), Pettit (Pasteur Institute Paris) could in his turn prepare a preventive serum—

Diphtheria.—Since the discovery of "antitoxin" by Ramon, the preventive vaccination against diphtheria is practically realised and greatly used in France (several hundreds of thousands of children every year)—It is known that antitoxin is obtained by allowing the toxin to grow old and by adding formaldehyde (4). All the children below 7 years can be vaccinated; above this age—the Scheik-positive children only are inoculated. Two or three injections are required to secure immunity which lasts at least four years (5).

Tetanus.—The treatment of this disease is very deceptive. Cure sometimes is reached by using strong doses of antitetanic serum to inject concurrently under the skin, in the muscles, and in the veins (6).

Let us point out the excellent helping method of Lhuerre (7) in order to diminish the stiffness and ease the terrible pain—To inject hypodermically twice a day, increasing doses (by a quarter of milligrammes (of sulphate of atropin in distilled water. Let us also say that Ramon has found the tetanic antitoxin and rendered possible the preventive vaccination of tetanus.

Out of the general methods of specific treatment of infectious diseases the S. Herelb's *bacteriophage* is always in favour. We know how much people trust it in cases of cholera—It has given against typhoid fever with encouraging results–The urinary infections with B. Coli are very quickly influenced on condition that it is a question of recent infections and that the bacteriophage used is adapted to the B. Coli. isolated from the patient himself.

As to furunculosis the success is absolutely certain (8)

The *antivirus* of Prof. Besredka (Pasteur Institute Paris) (9) should be much extolled against the external infections.

It was known from a long time that a given microbe cultivated in the same tube ceased to reproduce itself after a certain time. It "grew old"—And however there remained in the tube nutritive elements, since another species could develop itself in it—Prof. Besredka has shown that specific preventive substances (antivirus) were formed in the medium and he has had the idea to use them in

(4) *Ramun.*—Off Dut. Hyg. Publ—Sept. 1928.
(5) *Saintfizors.*—Conconus Medical—Sept. 1928.
(6) *Challieret Mestralet*—Soc. Med. Hop. Lyon—Oct. 1928.
(7) *Bull, Soc. Path Exotyne*—Dec, 1928.
(8) *Grenet ch Isac Georges*—Prene medical—1928-No. 69.
(9) *Annals I. Parteur*—1923—1929.

external infectious diseases due to microbes of the same species—Phials of filtered broth are now found in the trade (*Biotherapy—Paris—*) They contain antivirus which are used as washing or dressing. (Antivirus stophylococcus against boils, abscess;—antivirus streptococcus against impetigo, puerperal fever etc).

Leprosy.—Disease still very rare in France though the cases which are imported increase every year. It is chiefly studied, in addition to the great specialist Marchoox by colonial doctors. (10)

The system of leper's asyla is more and more given up. They try every way to replace them by (dispensaries) for out-patients. Tisseril has made an interesting study on the familial forms of leprosy (11).

Labernadie has seen cases of zona among lepors (12)

The diagnosis is too often made by clinical symptoms, the Hansen Bacilli being very difficult to be found in the beginning of the disease.

The study of R. G. Sedimentation test does not seem to solve the question not more than the Wassermann or various tests of floculation (Labernadie). As to the treatment, K. I. has not given great results! the ethylic esthers are less in favour than before (due perhaps in part to their high price cost). They come back finally to chalmugra oil, the genuine (Hydnocarpus Wightiana) oil, with creossote according to the formula of Prof. Muir?

NOTES

BY

PROF. COL. FROILANO DE MELLO.

Note on some methods of intravenous narcosis. L. Mayer "*Bruxelles medical* no. 9, 29-XII-1929.

Somnifene, injected 20 minutes before the operation, aided sometimes by a slight narcosis by chloroform or ether. Post operative hyperexcitation. Almost all surgeons have now abandoned the method, following the example of Fredet, the plotoganist of the method.

Numal. Kustner injected numal. Some cases of embolia have been noticed. Patry used the numal Roche in 163 patients from 20 to 83 years (140 abdominal, 11 thoracic, 14 members operations). 45 minutes before 0,01 morphine+0,01 atropine is injected. He obtained 2 violent post operative agitations declining after pantopon, 8 mortal broncho pneumonias and 12 bronchitis or

Ann. Red. el Pt.—Col. 1927—1929.
(10) *Bull. Soc. Path. Exotyire* 1927—1929.
(11) do 1929.
(12) do 1928.

bronco-pneumonias cured. Keller obtains very good results, the narcose lasting 18 to 24 hours. The technique of Fredet is: injection of scopolamine morphine (morphine 0'01 to 0'015 scopolamine 2/3 to 3/4 of m. mgr). Twenty minutes after, very slow injection of numal (1/10cc per kilo of the patient weight). The anæsthesia is not absolute and should be completed by a slight dose of chloroform or ether. It lasts 2 to 3 hours.

Pernocton, Gauss, Vogt obtains excellent results in obsteerics. Schneider does not use the drug, because it does not avoid the use of ether. Karo remarks on case of collapsus in prostatic patients. Dax has also abandoned pernocton.

Hedonal, Fraikin reports 6559 narcoses with 10 deaths. The sleep is so deep that there is danger of asphyxia. In one case sudden death, in another pulmonary oedema.

Ethylic alcohol. Method of Miguel Garcia from Mexico, contreindicated in tubercular patients, in those having advanced lesion of the heart, in goitre and in children under 10 years. The anæsthesic dose is 2 to 3 cc of alcohol a 90° per kilo, the lethal dose that of 6 to 8cc. Alcohol should be employed under the form of glucosed hypertonic serum (60cc of serum to 30cc of alcohol a 90°). The day before the operation 2 to 4 gr of chloral may be given. Garcia uses a special apparatus destined to inject continously glucosed serum, simple or alcoholised to the patient. The method has been tried by the author under the supervision of Garcia. 2 deaths in 4 cases, one of which had chronic myocarditis. Intense visceral congestion noticed in necropsy.

On some cases on septicæmia due to thiercelin enterococus.—H. G .S. Morin *Bull Soc. Path Exoc* XXII. 8 1929.

Studies made at Saigon. The clinical cases where the author has found enterecocus septicæmias duly controlled by hemocultures are :

1. Some cases of the so called gastric fever, the septicæmia is ephemerous and the fever simulates a malarial attack. Sometimes it is complicated by Heitz-Boyer syndrom with genital or urinary localisation, often very tenacious with or without colibacilluria.

2. Endocarditis maligna with long duration, the hemocultures being sometimes positive during many months, at least during pyretic periods. Mortal evolution.

3. Terminal septicæmias on cachetic patients. Mortal evolution.

On a case of peritoneal pneumatosis. J. A. Dos Santos.—A Medicine contemporanea Lisbon 49 8. XII 9.

Boy aged 16. Pains in abdomen since three years. Distension of stomach, visceroptosis. Palpation painful when distension is noticed, painless in the intervals. No interesting elements at X Rays. Various dietetic and therapeutic treatments without any effect.

The Laparotomy shows in the whole visceral and parietal peritoneum a lot of small vesicles, full of air, many of them confluent on pyloric, ileocaecal, hepatic and splenic angles. Extraction and incision of all vesicles specially of those whose confluence provoked obstruction of the biliary vesicle, colon, etc.

Complete recovery.—

Dermatomycoses caused by Torula epizoa Corda 1840.—Tomtchouk, (*Journal de Microbiologie* de Leningrade Tome IX. I. 1929.)

Torula epizoa has been isolated by Corda in 1840 from salted meat. Three cases of a pruriginous, desquamating, eczematous dermatosis, with intense red coloration of the affected skin have been found by the author, caused by this Torula identified in the Laoor. Of Mycology and Phytopathology by Prof. Jaczevsky. Treatment: Ung hydrarg. P.P. Albi 2%-5%; ung. acid pyrogalie 5% Cure. Cultures negative after treatment. (In Russian, resume in French).—

Malaria contracted in autumn in Holland develops the disease only in next summer.—Swellengrebel, Graaf, de Buck. *Bull Soc. P. Exot.* XXII 8 1929.

The experimental work carried on in voluntiers has confirmed the fact referred in the epigraph of this paper.

Important conclusions come from this statment for the antimalarial campaign which must be specially based on the destruction of adult house anopheles during the autumn.—

Etiology of Trachoma.—Stepanowa, Azarowa (T. VIII. 2. 1929). *Journal de Microbiologie* de Leningrade.

The authors found in cases of untreated trachoma the *Bacillus granulosis* of Noguchi in pure culture. The inoculations in Rhesus were positive excepting in one case. The inoculated monkeys gave the contagion to other monkeys. One variety of this bacillus

has also been described by Prof. Zlatogoroff. The author's claim that *B. granulosis* is the real cause of trachoma. (in russian, resume in German).

Treatment of chronic rheumatism Govaerts *Bruxelles medical* 24. XI. 29.

The intramuscular injection of iodine and salol in olive oil constitutes a very efficacious treatment of chronic rheumatism. The author shows the following statistics: gout polyarthritis 15 cases, muscular rheum. 125, deformant rheum 4, localised arthritis 20, sciatica 65. Injection of 5 cc of a solution of 3% iodine and of 20% salol in olive oil. Results: complete and permanent amelioration 60 %, slight but persistent amelioration 10%; temporary amelioration 25 %; failures 5 %.

It is not possible for instance to give a definite explanation of these effects.

Acute articular rheumatism. Its treatment by antirheumatic immuno-vaccin (according to the formula of Dr. Bertrand from Anvers) Com. to the Soc. of Therap. 10. X. 29 in *Brux. med* 24 XI. 29).

Report of the bacteriological researches of the author, concluding that the agent of the acute rheumatism is the *bacillus of Achalme*. Studying the polymorphism of this bacillus, the author says that he has obtained the transformation of Achalme bacillus into the diplococcus of *Triboulet-Wassermann* and vice versa.

He objects strongly against the confusion made between the Achalme and perfringens, and between enterococcus and Triboulet-Wassermann diplococcus and points out their differential characteristics.

Dealing with treatment the author tries the anti-rheumatic immuno vaccine, having for basis the Achalme bacillus. In 49 cases complete cure, without recidivation. In some cases where endocarditis was noticed this lesion was also cured.

The activity of the immuno vaccin has also been constant in cases treated by classical method and proved to be salicylo resistants.

He proposes the generalisation of such treatment which is active, faithful and absolutely innocuous.

Colibacillary septicæmia cured by vincent serums.—Weissembach, Beaufond and Basch. *Acad. of Med. of Paris* 26. XI. 23,

Colibacillary septicæmia with large pyretic abcesses, pyuria, arrhythmia, congestion on the bases of lungs, positive hemoculture. 380 c.c. of anticoli serum of Vincent, by daily doses of 30 to 60 cc injected subcutaneously. Progressive recovery. Cure.

Simultaneous immunisation against different infections by means of corresponding vaccines.—Zlatogoroff, Glusman, Kandiba (ibid T. VIII. 2. 29.)

Studying the immunisation of guinea pigs by simultaneous injection of many antigens the authors conclude that such mixtures may produce a weakening of the immunactivity, at least vis-a-vis to one of the antigens employed. So, the streptococcic vaccine diminishes the immunactivity of diphtheric vaccination. A combined vaccination against diphteria and scarlet fever should in this account be carefully considered (in Russian, resume in French). *Journal De Microbiologie* de Leningrade (X. 1, 1929).

Studies on bacteria of dysentery group.—Attarova & Koretzkaia. *Ibid* T. VII. I. 928. Predominance of B. paradysentery X Stutzer. The method of classification of dysentery bacilli by carbohydrate fermentation does not give satisfactory results, specially with cultures isolated long ago (in Russian, resume in English.)—*Journal De Microbiologie* de Leningrade. Tome (X. 1. 1929).

Gleanings from Medical Press

SURGERY

Headache.—*By C. P. Symonds, F.R.C.P.*—Headache is a common symptom, which may be very difficult of interpretation. Few patients complaining of headache present any obvious physical signs, and we depend, as a rule, upon an accurate history for a clue to the diagnosis or to the special investigations which may reveal it.

Considering the problem of headache from an anatomical point of view, we have, first, the extra-cranial tissues (tissues of the scalp) where lesions may give rise to a complaint of headache. The extra-cranial tissues are supplied by two sets of nerves; the trigeminal to the front part, and the great occipital and small occipital from the second and third cervical, supplying the

posterior half of the head and back of the neck. Then we have the cranium, whose nerve supply comes from the same source. Within the cranium are the meninges, which are extremely sensitive, and are supplied by recurrent twigs from the trigeminal, with a twig also from the vagus to the meninges of the posterior fossa. And within the meninges, again, is cerebral substance. The cerebral substance, as far as we know, is insensitive to ordinary stimuli. In operations on the brain under local anaesthesia, the cerebral substance can be incised without the patients being aware. Yet there is some evidence, to be mentioned later, that pain may arise in the brain.

In addition, there are lodged within the head certain organs: eyes, ears, nose and nasal cavities, and teeth, which are important in relation to headache. Their sensory nerve supply comes from the trigeminal.

We may, then, consider headache under pain arising (1) in the extra-cranial tissues, (2) in the cranium, (3) in the meninges, (4) in the brain, (5) in eyes, nose, ears, or teeth.

1. Pain arising in the extra-cranial tissues is not common. It is usually due to fibrositis of the scalp, or to an infective arthritis of the upper cervical spine, with involvement of the second cervical nerve. This latter cause is often overlooked. The patients complain of headache, because the pain is referred to the distribution of the second cervical nerve, up the back of the head as far as the vertex behind the ear. It is due to implication of the second cervical root as it emerges from the spine, and, therefore it is associated with other evidences of cervical arthritis, unwillingness to move the head and stiffness of the neck. A clue to the pathology may often be found in infected joints elsewhere.

Fibrositis of the scalp may be difficult to distinguish from the occipital pain secondary to arthritis. It is usually of a shooting, darting character, and the patient, if questioned will say the headache is not deep, but superficial. During the attack of pain, tender points can be found and tender nodules can be distinguished in the subcutaneous tissues. This headache is due to infective or toxic causes. Heat and massage are valuable local treatments.

2. Headache from pain arising in the cranium is a rarity. A woman was admitted to hospital complaining of continuous excruciating headache and severe pains in other parts. She had no physical signs, but her skull was tender. The x-rays showed periostitis of the cranium and of several of her long bones. She had a strongly positive Wassermann, and all the pains improved under anti-syphilitic treatment. Syphilitic periostitis seems to be now a rare condition. There may be milder degrees of headache

in Paget's disease, another disease of bone which often affects the cranium.

3. Pain arising in the meninges is probably the commonest variety of headache due to organic causes. It may be caused either by inflammation or by stretching of the meninges. The dura matter is extremely sensitive to increased pressure within its limits. The most important cause of increased intradural pressure is cerebral tumour. But cerebral tumour causes headache only through stretching of the meninges, and one may conveniently take the whole group of headaches due to the same mechanism together and speak of them as hyper-tension headaches. The headache of increased intracranial pressure is usually spoken of as throbbing or bursting; and if the increased pressure is generalised, the headache is generalised or fronto-occipital. If the increased pressure is localised, as in the case of a superficial tumour in one compartment of the dura or in the case of localised cerebral contusion, the pain is referred to that part. Tumours or other causes of increased pressure below the tentorium give rise to pain in the back of the head and in the back of the neck.

The headache of increased intracranial pressure, from whatever cause, is hardly ever continuous. A man with gross evidence of increased pressure from tumour will have headache in bouts, apt to come on early in the morning, and then wear off, so that he will probably be free for the rest of the day, or there may be even an interval of a day or two before they come on again.

The other features common to all hypertension headaches are that they are increased by anything which tends to elevate the intracranial pressure, such as coughing, stooping, sneezing, or severe mental or physical exertion. They are usually somewhat increased when the patient lies down, and relieved by sitting up-the effect of gravity on the intracranial pressure. In the milder cases the character of the headache may not be nearly so definite. The complaint may be merely of a sense of fulness in the head. But the headache of increased intracranial pressure is usually described in terms of pain.

Other causes of hypertension headaches are gumma, tuberculoma, and internal hydrocephalus. Milder examples are the headache of cerebral contusion, in which there is a lesser degree of increased intracranial pressure.

There is a still milder variety, due to circulatory changes. For instance, the headache of arterial hypertension. How this comes about we do not know. The increased blood pressure cannot be directly transmitted to the intracranial contents. Probably the increased arterial pressure leads to increased secretion

of cerebro-spinal fluid, and thus there is increased intracranial pressure. That the pressure is increased can be proved by the manometer.

A very rare cause of hypertension headaches is obstruction to the venous outflow from the head. In a man with obstruction of the superior vena cava from syphilitic mediastinitis the leading symptom was headache. The cerebro-spinal fluid pressure was 310 mm. H_2O as compared with the normal 150, and the headache was much relieved by venesection.

Migraine is a very important cause of hypertension headaches. It is characterised by recurrent paroxysmal attacks of headache without development of any signs of organic disease. The headache is often preceded by a visual or sensory disturbance, constituting the warning or aura of the attack. The "fortification spectrum" of the text-books is comparatively rare. The common complaint is of a vague flashing or dimness of vision in one or other half of the visual field, lasting 10 to 20 minutes, and followed by headache. There may also be sensory disturbances in the form of a feeling of numbness and tingling in lips or tongue, usually on both sides, travelling down, often, to one or other hand, and if the right hand is affected, often there is some aphasia. Sensory disturbances may occur independently, or may co-exist with visual distress. The whole of this subjective disturbance commonly lasts 10 to 30 minutes, and is followed by headache, and the headache is of a typical bursting, throbbing, splitting kind, such as occurs in cases of increased intracranial pressure. If it is severe it may be associated with vomiting, and also with slowing of the pulse. This suggests that it is due to increased intracranial pressure, and the probability is that the attacks of migraine are due to localised cerebral œdema. In rare instances the sensory disturbances may go on to motor disturbance, and there may be a transient hemiparesis, with alternation of reflexes.

Lumbar puncture headache has definite characteristics. There is a feeling of intense pressure on the top of the head, or a feeling as if the top of the head was caving in, also a stiffness and aching in the neck. This headache is apt to be provoked especially when the patient sits or stands, and is relieved when he is lying down. In this respect it is the antithesis of the hypertension headache, and one may suppose it is due to hypo-tensions. Probably the explanation is that the brain, being deprived of its proper waterbed, when the patient sits up there is a dragging on the falx and at the tentorium, and so pain due to stretching of the meninges.

The headache of meningeal inflammation is partly, no doubt, due to increased intracranial pressure. The headache of acute meningitis is probably of this origin. In tuberculous meningitis the patient may be in agony from the headache. Lumbar puncture shows the cerebro-spinal fluid under pressure, and if this is reduced by withdrawal of fluid the headache will go for a time.

Chronic meningitis is chiefly due to syphilis, but may be caused by extension of suppuration from the middle ear or a nasal sinus. The pain in such cases is, in some ways, like that of increased intracranial pressure, but it is more apt to have some local relationship. That is to say, pain due to chronic meningitis in the frontal area will be in the frontal area, and when the lesion is in the middle fossa there will be pain from the eye-ball to the back of the head. Pain due to meningitis in the posterior fossa goes down the neck into the shoulder. But pain arising in any one of these situations, though at first local, tends to spread and affect the whole of that side of the head.

The headache of influenza and other acute infections or severe intoxications arises in the meninges, being due to congestion, either of the meninges, or of the cerebrum with increased intrameningeal pressure. Typhoid fever and uræmia provide striking examples.

4. As to headaches arising in the brain we are on rather debatable ground. There is no proof that the brain is sensitive. But there is a large group of patients in whom a particular type of headache is associated with mental distress. There seems to be a relation between the mental stress or tension and the headache. The headache has somewhat characteristic features. It is continuous and is described by the patient in terms of discomfort rather than pain. It is not a throbbing or splitting or shooting sensation, but is usually described as a dull, heavy pressure on the top or the back of the head. It is associated with mental tension, with depression, or anxiety, or fear.

5. Pain arising in the eyes, nose, ears or teeth is generally felt locally, but if the lesion is severe, the pain may spread, first to the division of the trigeminal nerve which supplies the organ affected, but tending to spread, if the pain is very severe and continuous, beyond that to the whole distribution of the trigeminal nerve. And if the stimulus is intense and prolonged it may apparently set up irritation in the central parts of the nervous system, so that the pain may spread to neighbouring nerve fibres. For instance, in the case of an inflamed tooth in the lower jaw the pain is at first felt locally, but it may then spread to the whole of the mandibular division, subsequently to the whole side of the face, and then, by central spread, to the back of the neck, the

shoulder and even down the arm as far as the elbow. In the case of a mild and chronic lesion in any one of these organs, the referred or reflected pain may overshadow the local pain, or it may be the only outstanding feature. And so every now and again a patient will come complaining of a headache which is, in fact, a pain referred from disease of one of these organs supplied by the trigeminal. The writer has never encountered headache from a diseased tooth in the lower jaw; but occasionally one comes from a diseased tooth in the upper jaw. A doctor, aged 37, complained of severe pain, which he referred to the back of his right eye. It was a very severe neuralgic pain, and interfered sometimes with his work. He was a healthy man, and had sought all possible means of relief; he had had his eye examined and his teeth x-rayed, but nothing had been discovered, and he just went on having these headaches, taking an occasional dose of aspirin. In time his last upper molar tooth on the right side began to give him pain, and he found it was tender. It was a "filled tooth." His dentist removed the filling, and when the tooth was probed the patient immediately had a pang of this neuralgic headache. The carious material was removed, and he had no further attacks of headache. This was an instance of pain in the head from concealed inflammation in an upper third molar. But such cases are uncommon.

Pain arising in the ear is usually referred locally, and is not an important cause of headache, although in severe otitis media the pain may spread to one side of the head.

Headache referred from the eyes is naturally commoner, because the eyes are supplied from the ophthalmic division of the 5th, and pain, therefore, readily spreads to the brow. A striking and important example of headache due to eye disease is glaucoma. Eye-strain, that is to say, working the eyes under unfavourable conditions—close work in a bad light, and hard use in the presence of errors of refraction or of muscle-balance—may also lead to frontal headache. This is often complained of when the patient wakes in the morning after having used his eyes hardly on the previous night.

Pain arising in nasal cavities is an important though rare cause of headache. It most often occurs with retention of secretion in one of the accessory sinuses, particularly the frontal sinus. The pain is usually complained of as headache. It is referred to the brow. It is particularly apt to come on after a cold and has some rather special clinical features. The pain is not continuous, but comes on in attacks, apt to be worst in the morning, subsiding later in the day. The patient with occasional blockage of the outflow from the frontal sinus may go on for years, with occasional

bouts of headache of this kind. For instance, a man, aged 40, had suffered for 8 years from attacks of left frontal headache. The pain was worst at about 9 a. m., it eased off towards midday, and then he would be free from it until the next day, when it would come on again at about the same time. That would happen for several days, and would then wear itself off, and he might have an interval of months, or a year even, without a further attack. The attacks more frequently came on after a cold during the winter months. There was no complaint of discharge from the nose, and the colds were of ordinary severity. There were no physical signs, no local tenderness over the brow. But the x-rays showed an opaque frontal sinus on that side; and the nose expert found a deflected septum, the turbinate obstructing the outflow from the fronto-nasal duct. No doubt an operation on the nose will cure the headaches.

Retention in the ethmoidal or sphenoidal sinuses is apt to lead to headache of a similar type, but referred deeply to the centre of the head, and especially to the occiput.

In investigating a case of headache first obtain an accurate description of the pain, its character, site, times of occurrence and aggravating or relieving factors. This will probably give some pointer for further investigation. If the headache is of the hypertension variety enquire particularly for: -

1. Any symptoms of cerebral disorder which may suggest a focal lesion, such as epileptic attacks, speech difficulty, weakness or numbness.

2. A history of head injury—remembering that contusion headaches may follow a relatively slight injury without concussion and that the headache may appear after a latent interval of several days.

3. A history of venereal disease.

4. A history of middle ear or sinus disease. Pay special attention to the optic discs, evidence of any local lesion of the brain, the blood pressure. Have the W. R. done in the blood.

If the headaches are of a paroxysmal and recurrent type remember the possibility of migraine, and enquire for the occurrence of any "aura" and for a family history of this complaint. The general examination should reveal any important toxic or infective causes.

Pain of a superficial and shooting character should make you look for areas of tenderness in the scalp, and if in the posterior part of the head, for cervical arthritis. A description of continuous pressure (often referred to by the patient as "agonising headache") should lead to enquiry into the mental state and sleep.

In any obscure case remember the possibility of referred pain from the upper teeth, eyes or nasal sinuses—*Medical Review.*

Treatment of Gonorrhoea J. R. Waugh, United States Public Health Service, describes the method used at the United States Marine Hospital, New York.

Three important principles are followed in the treatment of gonorrhœa in the Hudson Street clinic. It is the rule.

1. To try to avoid spreading an anterior urethritis to the posterior urethra, prostate seminal vesicles, and epididymes, and not to touch the posterior urethra for a period of at least two and half months if it is believed that it has not become involved.

2. Never to tamper with the posterior urethra while it is acutely inflamed. The complications which may follow, such as epididymitis, will make the patient worse than before.

3. Never to hurt a patient or make him bleed during instrumentation. Such a course will probably make him worse.

Therapeutically, the cases are divided into three groups:

1. Acute first infections.

2. Acute second, third, etc., infections, acute recurrences of chronic infections. (A case in which within about a week a profuse yellowish discharge disappears and the urine changes from a milky appearance to the clearness of crystal with the exception of a few shreds is believed probably to be an acute recurrence of a chronic infection.)

3. Chronic infections. These are cases with or without a whitish discharge (possibly just a morning drop), with a urine loaded with pus or just containing shreds, or with a clear urine and no urethral discharge, but with the prostatic smear showing pus.

Cases in which no gonococci are found, but in which pus and shreds are present, are labelled non-specific urethritis or prostatitis, but treated similarly to those in which gonococci are found. I have had two such cases in which no gonococci were found, although many prostatic smears were taken, but which had an acute flare-up during the course of the treatment, and the profuse urethral discharge then showed gonococci. In these two cases the profuse urethral discharge disappeared within a week and the urine changed from the cloudiness of milk to the clearness of crystal.

In Group 1 the treatment is advanced much more slowly than in Group 2. In first infections about two and one-half or three months time is allowed to elapse before the posterior urethra, prostate, and seminal vesicles are even explored.

All acute cases and, in fact, almost all chronic cases are first started with a suspensory and syringe and a bottle of 1:4000 acriflavine solution. The patient is instructed orally and in

writing carefully to inject only 1 dram, and to hold it for five minutes. After the solution is held five minutes a piece of gauze is placed over the penis to absorb the excess solution and the penis is held upright for five minutes longer. This is to allow the solution to come in contact with the part of the urethra where the fingers have squeezed it. This injection is made by the patient three times a day. Protargol solution (½ per cent.) is interchanged with the acriflavine so that the patient does not use one solution continuously. Protargol may be increased to 1 per cent. Sodium bicarbonate is given by mouth in acute cases and, if there is much irritation, a mixture of tincture of hyoscyamus and potassium acetate. Patients are instructed to allow nothing to cover over and plug up the meatus. A piece of gauze is used for those with a long prepuce. For those with a short prepuce a piece of gauze is wrapped about the penis and fastened with a safety pin to the suspensory.

Acute first attack cases are continued on this treatment for at least two and half months, even though it is suspected that the posterior urethra has become involved. When the fire dies down, then the posterior urethra is treated. In the case of an acute flare-up of a chronic case the posterior treatment is stopped until any or all of the acute symptoms, such as bleeding, frequency, urgency, and perineal or suprapubic pain have subsided. This is done to lessen the likelihood of such complications as epididymitis, acute prostatitis and vesiculitis, and prostatic abscess.

After about two and half months have passed 5 cubic centimeters of 20 per cent, argyrol is placed with the Keyes-Ultzmann instillator into both the posterior urethra and anterior urethra. This may be repeated at the next visit three days later, or on this visit the prostate and seminal vesicles may be gently massaged and a smear taken, followed by the instillation of argyrol. If the report on the slide shows more than five polymorphonuclear leucocytes per oil immersion field, these prostatic massages are repeated twice a week, varied by dilatations with sounds, and followed by the instillations of 20 per cent, argyrol or 1 per cent. mercurochrome. Very little slivernitrate solution is used. If the urine has become clear, with very few shreds and only two or three cells per oil immersion field in the prostatic smear, the patient is discharged after a few sounds have been passed, dilating the urethra to 28° or 30° F., these dilatations being followed by the instillation of mercurochrome. The patient is instructed to report in four weeks for observation, or immediately if any discharge appears or if he thinks he is getting worse.

For Group 2 cases the same treatment is used except that these cases are hurried more rapidly to posterior treatment. It is probable that the posterior urethra has been invaded before the patients reach the clinic. As soon as the cloudy urine clears, with the exception of shreds, posterior treatment is begun as above outlined.

Patients under posterior treatment also inject 3 or 4 drams of acriflavine or protargol solution into the posterior urethra twice a day, omitting one hand injection on the day they have treatment at the hospital. Hand injections are usually stopped at the end of three or three and a half months from the beginning of treatment.

Group 3 cases are treated in the same manner as cases in Groups 1 and 2, except that posterior treatment may be begun within from three days to a week from the time of the first visit to the clinic. Where a patient has only a few shreds and considerable time has elapsed since he first had gonorrhœa, a prostatic smear is taken on the day of his first visit.

Where both glasses of urine are cloudy and the patient has had the disease for two months, posterior treatment may be begun after he has been observed for a week provided that the anterior hand injections have stirred up no acute process.

Instrumentation with the instillators and sounds and the urethroscope is done very gently. If the patient is caused to bleed or pain is caused, he is being injured rather than helped. In a few cases, however, bleeding is caused even with the most gentle instrumentation.—*Venereal Diseases Information, July* 20 1929.—*Medical World.*

Acute Pancreatitis.—Linder, W., and Morse, L. J., *Ann. Surg.* 90: 357, Sept. 1929.

Acute pancreatitis may result from (1) pyæmic involvement (2) contiguity; (3) lymphogenous extension; (4) retrogression of bile into the pancreatic duct; or (5) regurgitation of duodenal contents into the duct of Wirsung. The first two are very rare occurrences. The third also is rare, since infection would have to travel against the lymph stream and through lymph nodes. Infected bile carrying an increased proportion of bile salts is a potent cause. There must in addition be a closure of the sphincter of Oddi, due either to spasm or stone.

Biliary disease is a precursor of acute pancreatitis in 75 per cent of cases. Of the 88 cases reported, 88 per cent were in females. Fifty per cent of cases occurred between the ages of 40 and 66. Eighty cases gave a history of a previous gastro-intestinal upset.

Symptoms are due to local irritation and the circulation of toxic products. Intense splitting epigastric pain was present in 86 cases. Vomiting, which was not progressive, was observed in 85 cases. Shock, collapse, cyanosis, dyspnœa and occasional dermatological reactions were also present. The temperature varied from normal to 102 degrees F. The pulse was rapid. Jaundice was present in 28 cases. Epigastric tenderness was present in 66 per cent. Constipation was the rule.

The condition has to be differentiated from acute cholecystitis, perforation of the gall bladder or a peptic ulcer, intestinal obstruction, renal colic and coronary thrombosis.

Fat necrosis was found in every case. Œdema and enlargement of the pancreas were present in 49 cases, hæmorrhage in 23, sero-sanguineous exudate in 52 cases.

The treatment consists in relieving pressure on the semilunar ganglion and common duct by opening the pancreatic capsule. Cholecystectomy should be performed if the patient's condition permits; if not, a cholecystostomy. The mortality rate in this series was 36 per cent. Proper early treatment of biliary disease will decrease this high rate.—*Stuart of Gordon.*

The Treatment of Torticollis.—Howell, B. W., *Brit, M. J.* 3589; 714, Oct. 19, 1929.

Torticollis occurs in 1 in 150,000 births. The head is tilted towards the affected side with rotation of the chin forward and away from the affected side. Secondary deformities are facial asymmetry and scoliosis. It may be (A): congenital; (1) prenatal. (2) natal; (B); acquired; (1) rheumatic, (2) reflex, *e.g.*, from tubercle of spine, (3) ocular, (4) spasmodic. The deformity is due to a contracture of the sternomastoid muscle particularly its sternal head. It may be due to abnormal posture *in utero*, resulting in a shortening of the sternomastoid muscle, or a localized fibrosis and contracture from interference with the blood supply. Rare forms are due to an abnormal development of cervical vertebræ. The contracture is usually on the right side, very rarely bilateral. The natal subdivision is associated with a difficult labour, usually a breech presentation. A rupture of some of the fibres of the sternomastoid, with or without a hæmatoma, results. The condition occurs more frequently in males.

The earlier the patient is brought to the orthopaedic surgeon the better the prognosis; if within a few days of birth, cure should result in three months. Treatment consists in rotating and tilting the head in a direction the reverse of the deformity, while an assistant pulls down the shoulder and arm on the affected side.

This should be done a number of times and repeated daily. A masseuse should then knead the affected muscle. Correct posture in carrying is also an aid.

In late cases operation, followed by suitable exercises and re-education, is the only cure. Subcutaneous tenotomy of the sternal head of the affected sternomastoid is done. The head is then fixed in a position of over correction by means of a plaster jacket. This remains on for four weeks. The jacket is then bivalved and exercises and re-education commenced. In another four weeks the jacket is done away with. Cure resulted in from three to six months in 19 to 20 cases reported. Open operation is done for incomplete cure or relapse after the method described, and in cases with other abnormalities.

Operation is contra-indicated in; (1) cases having marked congenital bony abnormality; (2) bilateral torticollis; (3) those cases in which the torticollis is secondary to disease of the spine. —*Canadian Medical Association Journal.*

Recognition of Infected Tonsils.—While the theory of focal infection is based on scientific foundation, the practical application of this theory is in many instances not so scientifically worked out.

Recognition of infection in tonsils well illustrates this point. In the majority of cases only the size of the tonsil is considered, whereas their size, color, presence of pus or caseous debride in the crypts, and bacterial flora by culture, should be examined and secondary manifestations of infection be taken in consideration.

History of frequent colds and sore throats, complaint of lack of pep, fatigue and lowered resistance to infection supply signs of a toxic condition which may be the result of an infection in the tonsils.

It is a customary routine to notice first of all the size of the tonsils. In the text books, the statement is usually made that the size of the tonsils is normal if they do not project from the pillars, otherwise they are hypertrophied. In the light of modern knowledge, this definition should be revised. In children very large hyperplastic tonsils can often be seen as a manifestation of status lymphaticus. The pathologic significance of this type is rather negative, the enlargement causing only a mechanical obstruction. On the other hand, the observations of many authors definitely establish the fact that even very small remnants of not completely removed tonsils, if infected, may be the cause of very serious complication.

Therefore, not the size of the tonsils, but the presence of infection in them should be first established. The anterior pillar should be retracted and gentle pressure be exerted upon the tonsil and, in a surprisingly large number of cases, a drop of liquid pus or of caseous matter will be pressed out from some of the crypts, even when the tonsil at sight appeared more or less innocent.

The color of the tonsil and of the surrounding parts supply a great deal of information. While in normal condition, its color does not differ from the surrounding mucous membranes; when inflamed, various shades of red discoloration are present. In adults, infected tonsils of fibrous type, or submerged tonsils, are usually pale, whereas, the inlets of the crypts are inflamed and a characteristic red border is present along the anterior pillars, indicating a deeply seated infection. The extension of the infection from the tonsil to the lymphatic tissue on the lateral walls of the pharynx and into the hypo-pharynx, should be considered. Systematic manifestations as rheumatism, neuralgias, myocardial involvement and so on, are signs of secondary foci of infection.

A complete study of the tonsil should include a bacteriologic examination of the flora of the pus expressed. Besides different groups of staphylo or streptococci sometimes tubercle bacilli or Vincent's bacili can be found, in single instances syphilitic lesions on the tonsils will be established.—*California and Western Medicine,*

The Significance of Abdominal pain.—K. Bucholtz considering the fact that the locality of pain in acute abdominal conditions is usually no guide to the seat of the trouble, explains it by saying that the adjacent portion of the peritoneum is not included in the morbid process at first. Hence the pain in actual peritonitis is local and in character resembles that of a burn or scald; moreover, while it may change in degree it is continuous and never shifts. But early appendicitis and similar stages of infections of the intestines have no effect in producing pain locally but rather in the cœliac ganglion, because the splanchnic nerve-fibres are the sensory path from the abdominal organs. The only exception occurs in the case of intestinal distension; here the peristaltic movements are paralysed, so that there are no irregular and painful contractions of the bowel, and the pain after intensifying until it becomes continuous, subsides leaving extreme tenderness (*Leipzig: Deutsche Zeitschrift fur Chirurgie.* clxxi.) –

Medical World.

MEDICINE.

Addison's disease.—Few diseases can be diagnosed with greater certainty when the typical signs and symptoms are seprent. This is the opinion of Dr. Albert M. Snell and Dr. Leonard G. Rountree of the Mayo Clinic, in a paper read before the American College of Physicians in Boston. This has always been considered one of the intangible medical entities. Tuberculosis is the principal etiologic factor in the production of the disease, but any pathologic lesion which destroys the suprarenal bodies will produce the characteristic syndrome in part or whole. Tuberculosis and simple atrophy are the most common conditions, they account for 80 per cent of all cases. No better definition has ever been given than that of Addison, the discoverer. "The leading and characteristic features of the morbid state to which I would direct attention are anemia, general langour and debility, remarkable feebleness of the heart action, irritability of the stomach and a peculiar change in the color of the skin." The patient is too weak to sit up, dress or eat or perform the slightest exertion without great fatigue. The blood pressure is 105 or less. The veins of the head and upper arms are almost collapsed due to reduction in venous pressure. The heart is reduced in size and may exhibit brown atrophy. The nervous symptoms are numerous and prominent. The most striking are irritability and restlessness. There may be delirium and mania. Pain in the back is most persistent and troublesome; noted in almost every case. There may be mild anorexia, nausea or violet vomiting. The most striking visible evidence of the disease is pigmentation of the skin. Fifty names have been used to describe it. Sunburn is perhaps the best, from that to negroid. The color of the skin is due to melanin. Laboratory examinations are not of great value. There is low specific gravity and varying amounts of albumen. Anemia is rare. The total blood volume is not affected.

The course of the disease is from 18 days to 16 years; the average less than two years.

The treatment has been thankless and difficult. The disease may be due to syphilis. Apparent cures have followed antisyphilitic treatment. This study by the authors marks a most pronounced epoch in the understanding of one of the greatest problems in internal medicine.—*Medical Herald.*

Treatment of the Common Cold.—Sir J. Dundas-Grant (*West London Med. Journ.*, P. 69).—In cases of common cold a hot mustard bath followed by "a warm alcoholic stimulant" immediately before going to bed, with a dose of Broadbent's mixture of carbonate of ammonia, compound tincture of camphor, ammoniated tincture of camphor, ammoniated tincture of quinine and acetate of ammonia, well diluted, before meals and at bed time is a good treatment, safer all round than the fashionable and depressing aspirin, which however gives great relief. Inhalation of creosote dropped on a handkerchief or in a "pocketinhaler" is very comforting. It can be made quite tolerable if combined in the proportion of 3 dr. of creosote, 1½ each of spirits of Chloroform and oleum pini sylvestris and 12 drops each of oil of cinnamon and oil of citronella—*Med. Review.*

Gastric Claudication.—F. Ramond describes a condition of the stomach to which he gives the name of "gastric claudication" on the principle that it is due to the same vaso-motor disturbance that causes ordinary intermittent claudication. This "limping" of the stomach is seen in middle-aged persons the subjects of arterial degeneration, in whom there is more or less neurosis and often marked visceroptosis, although without perhaps much dilation of the stomach. It occasions acute pain and discomfort several hours after a meal, with evident pulsation of the abdominal aorta. The almost invariable relief produced by vomiting, and the attacks arising particularly after the ingestion of rich foods or too hot or cold fluids, together with cramping pains, and the failure of any relief from alkaline treatment are the characteristic symptoms. Hot compresses, with a moderate dose of liquid petroleum, and the hypodermic injection of atropine are the remedies after which a lacto-vegetarian diet must be instituted. (*Paric: Medecine.* iv.) *Medical World.*

Difficulties in Diagnosis of Insulin Coma.—Ernst Wiechmann Cologne (Journal A. M. A., May 4, 1929), made a series of examinations with the object of ascertaining the degree of intraocular tension in cases of diabetic coma and hypoglycemia after insulin injection. Of eight cases of diabetic coma, he found great reduction of the intra-ocular tension in six, while in two cases the tension was normal. These observations show that reduced intra-ocular tension may be present in cases of coma other than diabetic coma. Also in cases of hpoglycemia after insulin injection he found reduced intra-ocular tension. In eight cases it was at

the lowest boundary of the normal, and only in two cases below this boundary. This fall in intra-occular tension in hypoglycemia is not at all to be explained by alteration in the blood pressure. This has been proved by curves of blood pressure and of intra-ocular tension taken simultaneously. One explanation for the reduction of intra-ocular tension in hypoglycemia is to be found in displacements of the body fluids. After injection of toxic doses of insulin, there is a considerable rise in the amount of hemoglobin which falls again after ingestion of food. In contradistinction to this, in hypoglycemia there is a fall in intra-ocular tension, which quickly rises after ingestion of food. It can be assumed from this that these changes are related to the sweating which is typical of hypoglycemia. The fall in tension would then be the expression of the streaming of intra-ocular fluid and of tissue fluids in general into the blood stream. That there is no consequent reduction in the hemoglobin percentage can be explained by the theory that the addition of fluid to the blood from the body tissues is counteracted by the great and speedy loss due to sweating. In all the cases of hypoglycemia which he observed, the temperature fell below 36 C. (96.5 F.). He feels that according to this a fall in temperature is not absolutely pathognomonic of hypoglycemic coma. But according to his observations in general, it happens so often as to deserve a certain amount of consideration in the differential diagnosis between diabetic and hypoglycemia coma.—*Oklahoma state Medical Association.*

Management of Gonorrhoeal Arthritis J. A. Key. Southern Med. J. XXII, 469, May, 1929.—The author reports obtaining gram negative cocci in cultures from thirteen of the last sixteen cases. He describes the pathlogy of these joints. The treatment should be general, to increase the resistance of the patient. Adequate nutrition, increased elimination, and rest relieve pain. The primary focus should be triated by a specialist in genito-urinary conditions. Gonococic vaccines are used for about two weeks. Injection of foreign protein sometimes gives good results. Intravenous injections of mercurochrome and other antiseptics have been tried with variable results in two mild cases.

Local treatment: A plaster cast, bivalved so that it can be removed and replaced when brace or traction is used. This gives rest and relief of pain and also, which is extremely important, prevents deformity. In cases which become ankylosed the joint must be kept in the position best suited for good function. Local heat, baking, and diathermy give some relief; massage should be extremely gentle, if used at all. Motion is postponed until acute

symptoms subside. In severe cases in knees, arthrotomy, thorough irrigation, and closure plaster cast for about ten days, followed by physiotherapy, gives good results if the cases are seen early. The Willams method of arthrotomy, drainage, active mobilization of the joint every two hours night and day, has given good results in some of the severe suppurating cases. Convalescent stage is treated by physiotherapy. Cases with fibrous ankylosis in poor position may be helped by manipulation under anaesthesia and the joint fixed in the best position for function. The range of motion in the joint can be improved by manipulation. If bony ankylosis has occured, an arthroplasty is the operation of choice. —*Journal of the Oklahama State Medical Association.*

An acute abdominal condition dueto oxyuris vermicularis in the Appendix.—By J. C. Diamond, M. D., *Fort Willliam, Ont.*—Two weeks ago I was called to see a girl, 16 years old, who was suffering from a severe pain in her abdomen. The patient was thin and slightly anæmic in appearance. A year ago she had had a similar attack of pain in her abdomen, localized to the right fossa, which passed off in a few hours. This time the attack was more severe and had lasted twenty-fore hours without ceasing.

The physical examination revealed the following: The temperature was 100.5°; the pulse, 120; respirations, 20. The chest was negative; the abdomen was very tender, and there was some rigidity on the right side. At the hospital the white blood cell count was 32,000 per c. mm.; red blood cells 4,000,000; hæmoglobin, 60 per cent. The differential count gave the following proportions: polymorphonuclears, 87 per cent; eosinophiles, 1 per cent. The urine was negative. A diagnosis of acute appendicitis was made and operation was decided on.

On opening the peritoneum no fluid was found, but the peritoneum on the right side had lost its glistening appearance in spots and presented a mottled greyish discolouration. The appendix showed no gross pathological condition, but was distended with its contents. One spot resembling a pin prick was visible.

I removed the appendix and explored the pelvic organs, which were found normal. The appendix was opened and was found to contain numerous pin worms, all alive and kicking.

The next day the white blood count was down to 12,000. The temperature and pulse rate fell to normal, and the patient made an uneventful recovery.—*Journal of the Canadian Medical Association.*

Tuburculous cavities,— P. Ameuille and L. Galli report that although it is admitted a cavity in a remote part of the lung may present no particular symptoms, in one csse of theirs where the X-ray showed it to involve at least one-half of the upper lobe, neither rales nor crepitations were to be heard, the only physical sign being a complete absence of the breath-sounds. On the other hand, they have met with cases where post-mortems subsequently revealed quite small cavities though always deeply situated, which had given rise to showers of crepitations and loud rales strongly suggestive to the stethoscope of the destruction of a large tract of pulmonary tissue. The authors comment on the frequency with which a cavity may be overlooked, the most careful clinical examination failing to discover it. They particularly warn against those not unusual conditions where the displacement of the trachea from the pressure or traction of a new growth may cause apparent cavernous breathing in the lung. (*Paris ; Bulbstin de la Societie Medicale des Hopitaux.* xlvii).—*Medical world.*

THERAPEUTICS

An anaesthetic of diminished toxicity.—In a preliminary report G. H. W. Lucas and V. E. Henderson (*Canadian Med. Assoc. Journ.*, through *B. M. J*,) record a series of animal experiments which demonstrate the anæsthetic properties of a gas named cyclopropane, which is prepared from trimethylene Bromide It has a sweetish smell, like a mixture of chloform and ethylene; it is heavier than air and is explosive in 5 per cent. and upwards of oxygen, but it does not explode in mixtures weaker than 10 per cent. Cyclopropane appears to be an anæsthetic of high potency, 10 to 12 per cent. producing deep surgical anæsthesia in the test animals. Its toxic properties seem to be but slight, and toxic features do not appear rapidly except in concentrations higher than those named, the fatal concentration ranging between 27 and 30 per cent. In high percentages of the gas there is a decrease in respiratory depth and frequently in rate, and in some cases a fall in blood pressure. Respiration falls before the heart and circulation, and the heart appears to be but little affected. In no case did the heart not show a high degree of efficiency. The fall in blood pressure seems to be of vasomotor origin and metabolic effects are slight or absent. Recovery is prompt and with little after-effects ; it is very rapid in the case of doses toxic to respiration, but if the toxicity has shown itself in a fall of blood pressure recovery is not so brisk.

Book Reviews

Bacteriology and Sanitary Science.—*By Louis Bershenfeld P.H.M., B.Sc., P.D. Professor of Bacteriology and Hygiene in the Philadelphia College of Pharmacy and Science, Philadelphia. Illustrated with 30 engravings and two plates. Octavo 432 pages $ 4'00 net. Publishers—Lea and Febiger, Philadelphia.*

This useful and up to date book on the subject is the outgrowth of lectures given to students in pharmacy, chemistry and allied sciences in the Philadelphia College of Pharmacy and Science during the past decade. The scope and arrangements of the subjects treated in this book are the results of many years of experience of the author in the teaching of these subjects to students in several allied science. The fundamental principles, techniques and methods of laboratory work are treated as fully as seems desirable. The subjects with which it deals are handled in as elementary a manner as is possible and this book should find a place in every students' library and if possible with every student and practitioner. The several branches of science considered in this volume are closely intertwined. Hygiene, Sanitary law and sanitation are practically governed by the teachings and findings in bacteriology and parasitology. The volume consists of 4 parts and an appendix. Part I on Bacteriology; Part II on animal Parasitology ; Part III on Infection ; Part V on Sanitary science, we highly recommend the book to our readers—*U. R.*

Fungi and Fungous Diseases.—*By Aldo Castellani, M. D., New Orleans, L.A. 1928, P.P. 203, Illustrated. Americon Medical Association, Chicago—Illionois.*

This monograph is based on a series of lectures given by Prof. Aldo. Castellani at the university of Illinois college of medicine in March 1926.

The monograph is divided into three parts The first part gives a good short historical account of Mycology and traces its growth ever since it was found by Hooke in 1677 up to the recent times. The morphological characters of fungi, their classification Biochemical activities, symbiosis, the mycological method of identification of various sugars and other carbohydrates are lucidly given.

Fungi in relation to plant pathology, economic importance of fungi, fungi as agents of disease in man--some internal mycosis: engage the attention of the author in the following chapter.

In the last chapter skin diseases due to fungi are described. The etiology, pathology symptomotology and treatment are given, together with some illustrative cases.

The book contains a number of good coloured plates and photographs which greatly help the reader to understand the text. The book is sure to be of much value to Dermatologist and the general practitioner as well:—*V. C. S.*

Aspects of Rheumatism and Gout.—*By Llewellyn Jones Llewellyn, M. B. (Lond). Published by William Heinemann, Ltd. London. Pages 295. Price 10 S,*

This volume is made up of essays and addresses written or delivered by the author on various occasions, and naturally we might expect some over lapping and repetition of subject matter. In the first three chapters the rheumatic diathesis is discussed, and how and in what way it affects the causation of rheumatism. The next four chapters are devoted to a discussion of the relation of thyroid, goitre and of Grave's disease in the incidence of rheumatism. The contention of the author is that the inadequacy or instability of the thyroid has a marked bearing on the etiology of acute or chronic forms of rheumatism, the rheumatism develops more easily among the goitrous children, and there is affinity between rheumatism and exophthalmic goitre. But all the same in all these chapters a common thread runs through them, a common back ground of ideas. The discussions on etiology are very original and worth reading. The chapters on prevention and control of rheumatism contain very useful informations and very interesting facts about the etiology of gout, the causation and diagnosis of lumbogo and sciatica, the prevention of rheumotoid arthitis, and relation of oral sepsis to arthritis are dealt with. We highly commend it as a useful and interesting book to all the members of the profession.—*K. L. R.*

A Text Book of Gynaecology.—By L. L. Fulkerson, A.B.M.D. F.A.C.S., Published by Balakistons Sons & Co., Philadelphia. Price $ 9.

This is a general text book of gynæcology suitable for students or practitioners. Its arrangement is good and the majority of the illustrations are excellent.

The section on diseases of the urinary tract is very interesting. It is noted in the Gynocælogy Dept. of the Cornell University Medical School that over 28% of the women examined had urinary symptoms. This shows how important is a careful study of the urinary tract to the gynæcologist.

This percentage would, we feel sure, be confirmed by the figures of any women's hospital in India, and we would urge that more attention should be paid to this tract.

Tuberculous infection of the bladder would appear to be more frequent in America than in most parts of India.

The sections dealing with operations are very well illustrated and the operations are described very clearly.

There is a good bibliography at the end of each section which enhances the value of the work.

It is a very useful book and can be well recommended. *Mary Beadon.*

Surgical and Medical Gynaecologic Technic.—By Thomas H. Cherry M.D.F.A.C.S., Published by Messrs. F. A. Davis & Co., Philadelphia.

Dr. Cherry has written this book with the object of presenting to the profession a technical work on gynæcology.

It is not intended as a text book for students but for practitioners particularly for those who devote themselves specially to gynæcology.

The arrangement of the book is somewhat unusual.

The author begins with hernias and it is not till more than half way through the book that we come on his method of examination. His hints however on routine examination are very valuable and emphasize the necessity for this, which is unfortunately often neglected or done half heartedly.

Dr. Cherry is to be congratulated on the lucid descriptions and on the clear illustrations which are his own work, of the operations which every gynæcologist may have to perform. His technic is so simple that it will encourage many a beginner and is so careful that the old stager will derive benefit from studying it.

The notes on diathermy in gonococcal infection are very good and make one wish that it were possible to treat all cases of endocervicitis and adnexal troubles in this way, but in other infections it is not so useful.

In postpartum and postabortum cases the pelvic inflammation appears to be made worse by diathermy.

Possibly this is because the Streptococcus is less susc[redacted] to heat than the gonococcus.

The book is very well got up and can be confidently recomended to all practitioners who take special interest in gynæcology.—*Mary Beadon.*

"Care of the mouth and teeth".—By Harvy J. Burkhart D.D.S., Published by Funk & Wagnalls Co., New York and London 18 mo. flexible farbrikoid, 45 pp. Price 30 C. net.

"Care of the mouth and teeth," as the book quotes that Sir William Osler had said, "is one of the outstanding public health matters, the promotion of which will do more to prevent disease and promote the health of the human race than any other single activity in the whole field of modern Sanitation." Those who appreciate the value of *clean mouths* and *good teeth* for their children, if not for the *Nation*, will find innumerable hints on *Oral Hygiene*, and know the consequences of neglected mouth. Very fine and simple formulæ are given on Dentrifices mouth washes, and special tooth-building diets for children and expectant mothers. The book mainly describes "Preventive Methods," such as daily cleansing of teeth with proper brush and dentrifices, avoidance of highly pungent pastes, removal of diseased and decayed teeth and stumps, frequently visiting proper Dental Surgeon, if not Hygienist, correction of mouth breathing, throat affections and jaw deformities, proper care and dental treatment for expectant mother, breast-feeding for babies, avoidance of the bottle especially after one year, special care of babys' and children's teeth during sickness, and partaking of hard, unrefined, vitamine containing, as well as Teeth cleansing and building foods, such as human milk, cow's milk, eggs, cod-liver-oil, whole meal bread, oranges, tomatœs, green vegetables, &c., which necessitate much "chewing" as well as the drinking of water between principal meals. The author strongly condemns the allowing to children and expectant mother of coffee, tea, highly seasoned and fried foods, and lastly diets preponderating in carbohydrates, especially when this is given in the form of sweetmeats, and highly milled products. The diet is however incomplete for us, Indians, without butter-milk, which taken the last thing at meal time or between meals is unknown to the Westerners, as the most effective and "exhilarating" agent to pervent *body diseases*, and "*Tooth Troubles.*"—*H. Venkat Rau. L.M.S.*

Hand book of Snake-bites.—By W. Banerji Published by Messrs Butterworth & Co., 6, Hasting Street, Calcutta, Price Rs. 10 Stocked by Sri Krishnan Bros P.O. Box 166, Madras.

There are very few books on snake-bite treatment, and fewer drugs that could be styled as specific for snake-bite poisoning. In some of the Sanskrit works and their vernacular translations, though numerous medicines are mentioned in the treatment of different varieties of snake, not one of them merits the honour of being called an infallible specific or remedy. Such being the case, any book on the subject will surely find a ready welcome. The book before us embraces 11 Chapters in the first 86 pages, dealing with (1) "Lexin", (2) Leading snakes of India, (3) Provincial names of snakes, (4) Poison fangs and poison glands, (5) symptoms of snake-poisonings, (6) Differential Diagnosis, (7) Estimate of common errors, (8) medical jurisprudence, (9) Pharmacology of snake venoms, (10) Geographical distribution of snakes and (11) all about snakes. The rest 341 pages are entirely devoted for case reports—a rather novel feature of the book. One expects much from the above classifications; but finds, when fully gone through, that they do not repay perusal in proportion. Chapters 2, 3 and 10 could rightly have been blended into one chapter. "Lexin" appears as the principal actor in almost all the chapters and one would think that "Lexin" would have been the more appropriate title of the book. The ingredients of this specific of the author are Rectified spirit, Hydrochloric acid, camphor, Trichloride of Gold and methyl violet; and it is credited with a "dyanamic force," as borne out by over 1000 testimonials of respectable persons, to kill all kinds of snake-poisoning. Overwhelming evidence only spoils a case in Court of Law; it may not be so in books on medicine.

The chapter on the symptoms leaves very many gaps here and there. The chapter on medical jurisprudence contains some useful formations; but the falling of hairs, is not, as the author asserts, a sure sign of death by snake-poisoning only. It is an important sign invariably found in death by lightning also.

Despite certain mythological stories, dogmatic assertions and humorous or rather eccentric references to snakes such as Mr. Python, Mr. Cobra and Mr. Viper etc., the book affords interesting reading. As rightly observed by the author, it is not the scientific nature of a remedy that matters, but it is the curative property that counts in the art of healing; and if "Lexin" has the latter virtue in abundance, it surely deserves a kingdom for itself and a crown for its author. The author should also be congratulated for the neat get-up of the book and the most beautiful illustrative plates of different varieties of snakes.—*Kochunni Menon.*

The following books have been received and the courtesy of the publishers in sending them is acknowledged. Reviews will be published from time to time [Ed. Antiseptic].

Text Book of clinical Neuorology.—By M. Neushaedter M.D. P.H.D., Published by Messrs, F. A. Davis & Co., Philadelphia.

Haemorrhoides—The injection treatment and Pruritus Ani,—By Lawrence Goldbacher M. D. Published by Messrs. F. A. Davis & Co., Philadelphia.

Varicose Veins—By H. McPheeters M.D.F.R.C.S. Published by Messrs. F. A. Davis & Co., Philadelphia.

Bacteriology and Sanitary Science.—By Louis Gershenfield M.D. Published by Messrs. Lea & Febiger, Philadelphia, $ 4.00.

Rickets, Osteomalacia and Tetany,—By Alfred F. Hess, M.D. Published by Messrs. Lea & Febiger, Philadelphia.

Birth Control,—By William J. Robinson, M. D. with an introduction by H. Jacobi, M.D.L.L.D. Published by tho Critic & Guide, Co., 12 Mt. Morris Park, W. New-york.

Why did persons fast.—By H. Arnot-From the author.

Synopsis of Midwifery and Gynaecology.—By Aleck W. Bourne B.A. M.B. Bch. F.R.C.S.—Published by John Wright & Sons, Ltd., Bristol. Price 15 sh. or interleaved for notes 12 sh.

The treatment of Varicose Veins—By J. Henry Treves Barbar M. D. Published by Messrs. John Wright & Sons, Ltd., Bristol. Price 6 sh.

An index of Symptomatology.—By H. L. Tidy M.D., Published by Messrs. John Wright & Sons, Ltd., Bristol. Price 42 sh.

German English medical Reader.—By Prof. J. W. Jadhav. Published by the Times of India, Bombay.

Injection Therapy in General Practice.—By R. K. Kurup. By the author. Price 2 sh.

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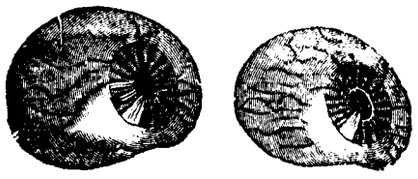

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Rao Saheb U. RAMA RAU
AND
U. KRISHNA RAU M.B., B.S.

CONTENTS

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Vol. 27] APRIL, 1930 [No. 4

Original articles

HISTORY OF SYPHILIS *

BY

DR. K. SINHA, M.B.

Hony. Urologist to Howrah General Hospital and Director, Genito-Urinary Clincics.

Despite the multiplicity of writings dealing with the historical side of Syphilis, the origin of Syphilis is shrouded in obscurity. So far as it is known—and all authorities agree on this point—this name was introduced in medical nomenclature by Fracastor, an Italian Physician in his quaint Latin tale 'Syphilis Sive Morbus Gallicus'. The Italian Physician inspired by heroic epochs presents to us pagan divinities and introduces for the delectation of his readers the Shepherd whom he calls 'Syphilus.' Syphilus was supposed to have used offensive words against Appolo and to have deserted his altars. The god, to punish him, for this insult gave him 'the disease of the genitals' which the inhabitants of the country called 'the disease of Syphilus'. Thus in poetic imagery, Fracastor who wrote the story in 1530 traces the disease back to a mythological origin. Fracastor surely had

* Specially contributed to the Antiseptic.

a wonderful grasp of the subject for his description of the manifestation of Syphilis is accurate and fascinating.

Before Fracastor, the term 'Morbus Gallicus' was employed in Latin, the scientific language of those days, to describe Syphilis and was commonly called the Neapolitan disease, the disease of the Germans, of the Poles, of the Spaniards, of the Turks etc., in fact of all the nations of the world. Besides, common parlance appropriated the names of saints and holy men to describe the syphilitic manifestations, as, for example, it was called the disease of the holy man Job, of St. Samentius, of St. Mevius, of St. Roch and others. But the most current expression employed in the fifteenth and sixteenth centuries was "French Disease", or 'Morbus Gallicus.' Though this expression 'Morbus Gallicus' was widely used in those days, it is very difficult to say definitely the exact connotation of the term. It appears from the perusal of contemporary authorities and records that the term 'Morbus Gallicus' has been interpreted differently by different authors. Certain authorities on the analogy that Pox also received the name of bad itch (Mauvaise Galle) have found in the word Gallicus an adjective designating the disease. Others have bestowed a nationality to it—Gallicus, Gaul, otherwise French on the ground that the French were the first to be infected with this disease at the seige of Naples.

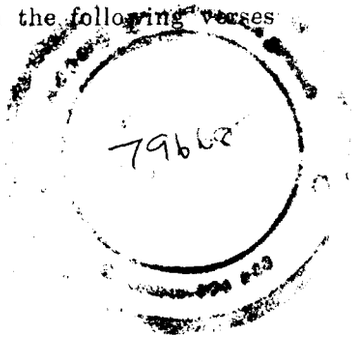
Later on popular imagination noting a few points of resemblance between the pustules of Syphilis and those of Variola (Variole or Verole) fastened a new name of Grosse Verole to Morbus Gallicus in contradistinction to Petite Verole (Small Pox). Syphilis has also been called Gorrhe, Grand Gorrhe etc. Each people gave it a special name. The enemy of the time being was employed as an appropriate sponsor. That is why, the Turks called it the Christian disease, the Spaniards the disease of the Turks, the Italians, the French disease, the French, the Neapolitan disease.

In discussing the ever-recurring question of the origin of Syphilis in European literature, we are faced with an absurd and utterly false story of its American origin. It is found again and again in the contemporary records of the fifteenth and sixteenth centuries and is continued down to the present day by half-educated and ill-informed historians that Syphilis was the gift of America to Europe and the old world. It was said that the sailors of Christopher Columbus, who were the first to be contaminated by the natives of the Antilles, spread this disease through their contact among the inhabitants of Europe who in their turn infected the other parts of the world. Those enthusiasts who have pinned their faith on this absurd theory delight in giving an exact date

for the spread of this disease. They believe that Syphilis was born, as far as the old world was concerned, in 1494 at the time when the French army invaded the Neapolitan kingdom. It is assumed by them that the Army of King Charles VIII of France was perfectly saturated by the syphilitic virus through coming in contact with the women who were originally contaminated by the crew of Christopher Colombus, and was solely and primarily responsible for the widespread outbreak of this fatal disease in 1494.

After the war when the soldiers were disbanded, it was alleged, the disease was transported by them to different countries of Europe and also was soon taken by the Portuguese to the far East, to India, China and Japan. This view was widely held after the great outbreak of Syphilis in the Middle Ages even by great scholars and learned men, which we know to-day, was not based on authentic material. It is summed up in the following verses attributed to Voltaire :—

Quandes les Franrais in tete Folle,
S'en allerent dans L'Italie
Its Gangnerent a L' etourdi
Et Gene et Naples et La Verole,
Puis ils furent chasses partout,
Et Gene et Naples on leur ota,
Mais ils ne pedrient pas tout
Car la verole leur resta.



For maintaining this view-point a good deal of literature has been devoted throughout the centuries and the story has been repeated parrot-like without examining dispassionately the foundation on which it is based. No doubt when the disease assumed an epidemic form throughout Europe, men on account of the enormity of the disaster lost their balance of mind and true perspective and in this bewildered state they were at a loss to find the origin of the disease or explain its virulence. At this stage a theory of the American origin of the evil proved very handy. It was doubly useful because it absolved the European nations of all guilt and at the same time presented a convenient scapegoat to hurl accusations against. And this past-time of hurling accusation has been carried on to our own times on the flimsy and dishonest statement of an individual who properly did not take his own opinions very seriously.

Now-a-days there is more and more a tendency among scholars and historians to declare America absolutely innocent. But it must be admitted that it took more than twenty years for the authors who were contemporaneous of the epidemic to think of finding the origin in San Domingo. Poor Columbus never suspected this fact

for he does not mention a word about it in his letters even after several voyages. It required a pompous individual in the person of Fernandez Y. Oviedo to cast accusation on the natives of America nearly twenty-five years after their discovery and it must be remembered that this inventive genius was not considered very reliable by his own contemporaries. The best proof that we can adduce to demonstrate the falsity and spuriousness of this assertion of Fernandez Y. Oviedo is in the multitude of names given to Syphilis at the time of its outbreak in the fifteenth century. If the disease, whose origin was supposed to have been unknown up to that time, had really been imported from America, would it not receive and have rightly retained the name of American evil? And Christopher Columbus would not have gone to his eternal sleep without even suspecting that the country discovered by him was a focus of a new Virus.

This legend of its origin, though no longer defended by reputable authors, still finds favour with the public but the latest and most startling discovery attributes this evil to Africa, no doubt with an ulterior object of focussing and concentrating all the hatred of the civilised world on the poor natives of Africa who are helpless to retaliate by flinging some learned rubbish on the heads of Europeans proving its European origin. To such lengths history can be prostituted.

But the fact of the matter is, as an eminent French writer puts it, that it is more probable that the crew of Columbus might have given the disease to Americans than the other way about. "*Quant a L' origine Americane de la maladie, on ne Saurait S'Y attacher bien longtemps aujourdhui et il est infiniment plus probable que ce Sontles Compagnons de Christophe Columb Qui en ont dote les Antilles plutot quils ne l'ont importee en Europe.*"

its antiquity for one's own country and invite condemnation on the devoted heads of one's own countrymen ?

But happily sanity has returned. Historical research and criticism are slowly trying to extricate themselves from the morass of prepossessions, national or racial hatreds and ulterior motives which degraded and prostituted them. Historians can no longer trade on the credulity of the masses of their countrymen. Though it should be admitted that some writers still indulge in writing history with political and racial bias, it can be asserted without any fear of contradiction that such attempts cannot face the searching glare of modern criticism for any length of time. The world opinion is far too wide-awake, the scientific study of history is far too advanced and impartial on the broad facts of history to stand any uncritical view or malicious statements of propagandists and charlatans.

But the field for research is still very vast and workers are few specially on the subject of the origin of Syphilis. It would be sometime before we can form a final and impartial judgment about the responsibility or otherwise of any particular nation or race.

But enough has been brought to light to show that no particular nation or race is accursed of God to nurse and spread this evil throughout the world.

Modern research has, for example, unearthed the true facts about China. It has proved that Syphilis existed in China specially among the Mongolian tribes long before America was discovered by Columbus. Syphilis did not come to China from the South nor was it imported as is generally assumed by the Malays or Arabs or Portuguese. Texts and documents in Chinese are extant which describe Syphilis correctly long before the disease was known in Europe. These documents antedate the Christian era by many centuries and conclusively disprove the theory that the disease was brought to China by foreigners. They describe in unmistakable terms ulceration of the genital organs, abscesses of the groin and certain eruptions and they established clearly that Venereal diseases were transmitted by sexual contact.

As regards our own country it can be safely asserted that Syphilis existed in ancient times especially at the time when Ayurveda was compiled. Several authorities could be quoted to establish the truth of this statement but it is foreign to our present purpose. Suffice it to say that the ancientness of this evil is perfectly patent to our Ayurvedic practitioners who happily still exist amongst us in all parts of the country. They would unhesitatingly declare that Syphilis was an ancient disease with an ancient effective remedy. Besides we must remember that

India is one of the very few countries of the civilised world which contributed a very efficacious formula for the cure and conquest of this fatal disease. India and China were the first to discover and apply successfully the remedy while other nations were groping in the dark.

Thus the legend of its American origin has no foundation in fact. It cannot stand the test and scrutiny of historical criticism. It is an ignorant assertion based on the figment of a perverted imagination and naturally would not bear a close examination.

The truth is that Syphilis is and was everywhere but not so intensely in all countries and at all times and above all, was little known, not to say unrecognised. It is found in all corners of the globe. It is a cosmopolitan evil which requires a world-wide campaign and co-operation of all nations for its destruction from the face of the earth. It raises its head in proportion to the knowledge a people have regarding the sanitary and moral laws. "*Ce que L'on sait a coup sur, C'est que la Syphilis sevit a L'heure actnelle sur L'humanite tout entire et d'autant plus gravement qu'elle attaque des groupes humains plus denues de sions entendu et demeasures therapeutique. Elle est par excellence Un Mal Cosmopolite Contra lequal L'entente Universelle pourait obtenir des mesures efficaces depreservation en raison de la Connaissance exacte Qu on a aujourdhui de cette maladie infectieuse et de la puissance indiscutable de la therapeutique a son endroit.*" It is hoped that the universal campaign against this evil will gain for mankind immunity and freedom from this curse on account of the unchallangeable power that modern medcine has vouchsafed to our generation. "All that is requisite for the attainment of this end is that those engaged in the study and practice of general hygiene and those concerned in the safeguarding of public morality, should not weary in their efforts; and that scientific research should pursue its aims firmly and clearly, uninfluenced by the tyranny of custom and independent of prejudice." (K, F. Marx).

In his chapter on Biblical times, Buret (Syphilis in Ancient and Prehistoric times) includes a considerable number of allusions which he uses to aid him in trying to establish that Syphilis existed among the early Hebrews. Referring to Mose's Commandment against the Midianites and the worshippers of Baal Peor, Buret is convinced that the scourge of Baal Peor was nothing else but Syphilis against which Moses carried on unceasing and ruthless warfare. Not content with killing the guilty of his own tribe, Moses declared war against the Midianites who were supposed to have tempted the Israelites to the worship of Baal Peor. When the Midianites were defeated and their men-folk killed, his

Generals out of human kindness brought women and children to Mose's Camp. Moses got incensed at the action of the Generals and cried out in anger. "Are those not the women who have seduced the sons of Israel at the instigation of Balaam and who have made you deny the Lord, your God, to make your sacrifice to Peor, from whom is come the scourge which has stricken our people.....Therefore kill all male children, even the new-born and strangle the women who have known men carnally; but allow female children and young Virgins to live." Flavius Josephus states that this disease (according to Buret of Venereal origin) was highly contagious and was transmitted to different members of the same family. Hamonic says in writing of the scourge of Baal Peor that Moses knew its prognosis since he had it himself. It was neither Gonorrhoea nor balano-posthitis nor genital Herpes, nor even soft chancre which were all well known and too frequent at that time. They would not have alarmed Moses to the pitch of taking such a drastic action. "The disease of Baal Peor was something more intense, more violent and more dangerous for the public health; and although the Bible does not furnish the clinical symptoms, it is plain that this disease constituted a grave social danger, which Moses endeavoured to avoid by all possible means. Certes the legislator was too keen an observer of phenomena to make a gross error of diagnosis between diseases which already existed among his people and the new epidemic.

The inevitable conclusion from what precedes is, that the scourage of Baal Peor was "Syphilis." Again to utilise the Bible a little further it is asserted by Buret that Abhram and his wife Sarai (about 1921 B. C.) were instrumental in spreading Syphilis wherever they travelled and the descriptions that are left to us in the Book of Genesis of the symptoms leave no doubt in our mind, according to the above writer, that the disease they were suffering from was nothing else but Syphilis. Taking the last illuminating instance of king David who enticed away the wife of his own officer by sending the latter on some errand of great danger, Buret cites many sayings of David which undoubtedly create in our mind some grave suspicions about the king being infected with Syphilis by the beautiful Bath-Shaba. Buret asks us to listen to the lamentation of David who will himself describe, with poetical metaphors the symptoms of his disease (Psalms):—

'Pity me, O Lord, for I am ill; cure me, O Lord, for my bones are diseases.

'I am become old'.

'I am a worm, and not a man; I am the opprobrium of man.'

'All those who have seen me have mocked me.'

Buret says that David would have been pitied instead of being mocked if the nature of the disease was not known at the time.

'All my bones separate'.

'All my strength dries up like clay, and my tongue cleaves to my palate'.

'My bones are diseased'.

'I am an opprobrium.....all those who have seen me abroad have run away from me."

The writer thinks that 'Day and night thy hand weighs upon me', probably means that David had acephalagia.

38th psalm does seem to make a case against David. It describes lesions that are well known to Syphilogists,

3rd Verse:—"There is no soundness in my flesh because of thine anger; neither is there any rest in my bones because of my sin."

5th Verse:—"My wounds stink and are corrupt because of my foolishness".

7th Verse:—"For my loins are filled with a loathsome disease and there is no soundness in my flesh".

10th Verse:—"My heart panteth, my strength faileth me; as for the light of mine eyes, it is also gone from me".

11th Verse:—"My lovers and my friends stand aloof from my sore and my kinsmen stand afar off".

In the forty-first Psalm will be found this suspicious Verse-8th Verse:—"An evil disease, say they, cleaveth fast unto him and now that he lieth, he shall rise no more",

Thus, although somewhat vague, the symptoms put together do create a somewhat plausible picture of Syphilis. Terrible pains especially at night, alterations of bones, purulent and chronic ulcers are insisted upon. The patient complains of the pain in the bones. They disintegrate, separate (Caries or Necrosis). Purulent ulcers are probably related to the diseased bones and it must be through them that the fragments of bones escape.

He loses strength and has a marked Cachexia. His mouth, especially his tongue is diseased. He is loathsome to everybody. Morbid symptoms at first localised become general ('there is nothing healthy in my flesh') and to crown all, eyes are affected and sight is obscured. Visceral symptoms appear at a given time and general symptoms plunge David into a hypochondria. Let us add that the child borne by Bath-Shaba died at the end of seven

days.....a fact which would point to Syphilitic infection, So exultantly declares our author: "I will conclude by saying that David who in his old age required a young virgin to warm him (I Kings Chap III V. 1. 2. 3. 4) is probably one of the most ancient Syphilitic kings who ever lived".

All this learned contribution to the literature of Syphilis is very interesting and clever but in justice we must recognise that all this tremendous effort is based upon allusions to passages culled from different chapters and pieced together. The same thing applies more or less to other claims which maintain that this disease existed in ancient times on the authority of certain chance descriptions of its morbid conditions that are supposed to be found in Egyptian Papyri, Assyrian and Babylonian inscriptions and Japanese literature. We must admit that simple allusions and sheer guess-work are faulty raw material for writing history. We want something more substantial and more convincing than the mere exercise of uncontrolled imagination. So far as we can discern, the evidence which connects Syphilis with the most ancient historic record of the Egyptians, the Assyrians, the Babylonians, the Japanese and others is vague, indefinite and inconclusive and all attempts based on such flimsy material are not worthy of our credence.

Connected with the theory of prehistoric Syphilis is the name of Professor J. Parrot of the Faculty of Medicine of Paris. He was the first to make an attempt at demonstrating that Syphilis existed in Stone age and he was unshakeable in his conviction inspite of violent opposition and great incredulity, His first famous lecture was delivered in 1877 at L'Hospital des enfants Assiste's. Before this date i.e., 1872 he had convinced himself that lesions found on the skeleton of a woman recovered at Solutre and which in the opinion of competent anthropologists belonged to the Stone Age were certainly Syphilitic. In a lecture in 1877 he dealt with the lesions of hereditary Syphilis on the skulls of children i.e. thick and persisting osteophytes found especially at the superciliary ridges. He then showed the existence of these ridges on the skull of five Peruvian children of a period antedating the conquest. Parrot was supported in his opinion by the discovery of the identical lesions on Four Peruvian skulls in possession of the Musee Broca admittedly bolonging to Galacial Periods. All these point to the antiquity of Syphilis. They show that it existed in Peru at a time when the Europeans did not not know the use of iron. Investigation of skeletons of wandering tribes of Gaul during the Stone Age and in Druidical times before the Frankish dynasties proves that the the tibias of Celts were not spared by this disease. With reference to the latter Parrot says "Those

who have studied pathological anatomy will appreciate all the importance of these proofs brought forward to support the high antiquity of Syphilis.....How much these proofs are superior in certainty to those derived from written documents! To simple presumptions, to discussion of texts, to interpretations of terms, to assertions, to account of authors I oppose the fact itself, the disease in action. It is the delectum flagrans which forces conviction with its irresistible power. Syphilis existed, then in Europe at times which preceded history; and if, as everything would lead us to suppose, it existed equally in other parts of the world, we are justified in considering it as one of the most ancient, and perhaps, as the most ancient disease of man.

Buret who is a great believer in the theory of prehistoric Syphilis in a fine eloquent passage writes thus:—'Let us desecrate the ancient sepulchres; let us draw from the clays, from the conglomerates containing bones, from the caves of Celtic Dolmans, the remains of prehistoric man spared by the great Cataclysm. Let us evoke the spirit of these first representatives of our Species, from whom five or six thousand years separate us: then perhaps, their skeletons, ranged in our Museums, lifting their skull studded with osteophytes, and brandishing their tibias swelled with exostoses, will cry to their descendants of the nineteenth century: 'Yes, we escaped the universal deluge; we are those human beings you denominate prehistoric, and whose flight upon the ridges of the Continents of those times inspired the symbolic ark of Noah.'

The race of Mammoth is for ever lost; it sleeps in the midst of Polar ices which have served as its winding sheet. The mastodon and dinotherium gitanteum repose between the layers and strata of the tertiary period; they are lost in the sands or locked up in the centre of the rocks which were their tombs; the Species is extinct. We, your ancestors, we have survived where these Colossi perished; and we had Syphilis. Know then that it is with it that our race has traversed the centuries".

It was the heritage of the antedeluvian man; it has come to us intact.

ARTIFICIAL PNEUMO-THORAX TREATMENT OF * PULMONARY TUBERCULOSIS.

BY

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I wish to speak this evening on a subject, which to-day has been proclaimed by all eminent physicians on the Continents, to be the most effecient and valuable method of treatment that we possess in our present phthisis-therapy, in selected cases of pulmonary tuberculosis, viz., "the treatment of pulmonary tuberculosis by artificial pneumo-thorax".

The method though in principle a surgical one, is at once simple, easy, and effecient and may produce marvellous results if applied in time, in well selected cases. It is noteworthy that all the remedies and methods of treatment recommended so far during the last 100 years for this desease, have been stated to exercise their curative effects, only during the incipient stage of the disease. When every other method of checking the progress of the destructive process in the lung has been tried and found wanting, when fever consumes the body or life is threatened with copious pulmonary hæmorrhages, this method of treatment has been applied with striking success. Since its application it has rescued many a life formerly considered to have gone beyond the bounds of human aid, and has restored the lost to life or at least to a measure of comfortable exsistence.

I believe it will not be out of place here, to give a short history of the origin and development of this method of treatment. "No more hopeful ray of sunshine" writes Dr. Clive Reviere "has ever come to illumine the dark kingdoms of disease than the discovery of artificial pneumo-thorax treatment of pulmonary tuberculosis."

It was James Carson of Liverpool who first conceived the idea in 1821 of immobilising the diseased lung. While treating surgically cases of abscess of the lung, this eminent surgeon realized that the elasticity of the lung and its continuous movement during respiration was a great bar to the healing of these abscesses; this led him to contemplate over the ways and means that would obtain rest of the diseased lung, after getting rid of the toxic products accumulated therein. Considering the nature of the lesion in pulmonary tuberculosis, he remarked "It has long been my opinion that if ever phthisis is to be cured of which I am by no means to despair, it must be accomplished by mechanical means or in other words by a surgical measure".

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* Specially sent for publication in the Antiseptic.

In 1832 James Houghton reported improvement in a case of an advanced phthisis as a result of spontaneous pneumothorax—the patient, a brick-layer was found thereafter working 12 hours a day. In 1837 Stokes reported another case where spontaneous pneumothorax exerted a favourable influence on the course of phthisis. It was not till 1880 that the subject of Artificial Pneumothorax (to be hence-forward termed A.P.) aroused special interest among the leading physicians of the time. In 1882 Forlanini set down to work at it methodically and patiently till in 1906 he reported 25 cases treated by this method and since then this method of treatment has found its way into the scientific world. In 1899 Schelle of Indiana tried it in haemoptysis. These publications attracted notice of Brauer, the eminent German surgeon to whose researches this method owes much of its credit. Brauer's method of operation by open incision up to parietal pleura has since been practically abandoned, but the safety gained by the water manometer is to his credit.

In Italy Forlanini took the lead, in France, Dumarest and Kouiss adapted it in 1910, in America Harris, Mary Laphum and Robinson Floyd in 1911, in England Colebrook. Lillingston, Vere Pearson and Rhodes, and in Germany Brauer in 1906.

Thus the treatment of consumption by A. P. first suggested on theoretical grounds, later on supported by clinical grounds from the observations on cases of spontaneous pneumothorax, now holds a firm place in phthisis-therapy.

Let us now turn our attention for a moment and reflect upon the rationale or *scientific basis* of this method of treatment.

The external appearance of a disease is merely an expression of the internal changes taking place in the diseased organs; in other words, the entire chain of events that take place in the course of a disease is the result of the pathological changes that the diseased areas undergo (in fact, one can infer most of the signs, symptoms, complications and sequela of a disease from an exact knowledge and intelligent scrutiny of the anatomy and pathology of the organs involved in that disease).

Hence in our search for an efficient remedy, to my mind, there can be no other better principle than to study these phenomena, which are Nature's processes of destruction and repair, and endeavour to tread along Her foot-steps by investigating the paths that will help Her beneficent art of healing. Let us therefore consider the pathological condition and processes that are taking place in the lungs of a case of chronic pulmonary Tuberculosis, viz. a chronic ulcerative condition with a central area of caseation surrounded by areas of consolidation and hyperaemia, where the constant movement of the lungs during respiration and the

avascularity of the diseased part, render the healing of the ulcer well-nigh impossible and whence the specific toxins are being absorbed and carried to the general circulation, giving rise to symptoms of auto-inoculation, viz. fever, rapid pulse, night sweats, emaciation etc.; and when we compare this with that of chronic tuberculous periostitis or osteitis, we notice that the pathological processes are essentially the same. The analogy is very close between the two; the difference we notice is due to the difference in the structure and nature of the organs involved. In the lungs the process begins with hyperaemia and infiltration and with the progress of the disease, caseation sets in, which, from the expectoration of the waste products of the disease, may lead to excavation, while evidences of repair are seen by the processes of fibrosis and calcification of the diseased area and its surroundings. In the bone or periosteum, the hyperaemia and infiltration are usually noticeable as a painful swelling which as the disease progresses, caseation and suppuration take place, leading to the formation of an abscess, the contents of which are evacuated (viz. pus and sequestra) perhaps leaving a sinus while healing is effected by sclerosis (a process of deposition of dense bony tissue around the margin of the diseased area). Thus we see that the entire pathological process of a disease is Nature's effort to rid the body of the diseased area or its toxic waste products, to prevent its extension through contiguity of tissue and ultimately to repair the damage caused by the disease. Our aim and efforts therefore should be directed towards achieving this end and this is what is achieved in the treatment of Tuberculous periostitis or Osteitis. If we now study the treatment of this disease, we shall find that the principle underlying it, is to help Nature to get rid of the diseased area or its waste products by an operation or by washing, cleaning, and immobilising the part by the application of splint and bandage and hasten healing by formentations, Bier's hyperaemia and other (general) measures of improving the general health and resistance of the patient. We have seen that in phthisis there is the local lesion in the lungs, whence the toxins are absorbed and give rise to the constitutional symptoms and hence if this local lung lesion could be effectively treated, like the Tuberculous lesion in the bone or periosteum, all the symptoms of auto-inoculation will gradually disappear and the lesion will in time heal up. In both these diseases, we know of no other better measure to help Nature to repair the damage caused by the disease than to promote the general health of the patient by treating him on ordinary hygeinic and sanitary lines, viz. fresh air, plenty of good nourishing food, rest and graduated exercise when indicated. In both there is local lesion which requires to

be treated; in the one case, the lesion in the bone which is usually easily accessible and hence is easy to deal with; while in the other, the extreme difficulty of treating the elastic, vital and constantly moving lung, has at last been solved by the remarkable discovery of the collapse therapy, carried on by means of A.P. or thoracoplastic operation. In both, the principle of treatment is essentially the same; the difference in the method and device between the two is again due to the difference in the structure and nature of the organ to be treated. Under A.P. the diseased lung is gradually made to collapse completely when it becomes a firm, airless, inert, fleshy mass seen retracted at its root under X-ray. Cavities and tubes are flattened out, their surfaces become adherent and the diseased part becomes permeated with fibrous tissue. In such a lung, air has no access and hence the tuberculous processes are set in abeyance. As a result of the collapse, fluid excretions present in it are evacuated and can no more accumulate, caseous areas are rendered drier, cavity walls unite and the diseased surface is at worst, much reduced in area, and absorption of toxin considerably diminished. Both the methods of producing a collapse of the lung, viz. A.P. and thoracoplastic operation have their respective merits and demerits, which can only be expressed here briefly in the following words: "A good A.P. is better than a thoracoplasty but a thoracoplasty is better than a bad A.P." or it may be stated as:—A thoracoplasty secures a good collapse of the lung where A.P. fails to do so, on account of the presence of extensive pleural adhesions.

Time and space will not permit me to dwell upon all the aspects of this method of treatment (A.P.) exhaustively, so I shall confine myself only to the essential portions of the following:—viz: (a) Indications and (b) Contra-indications, (c) Technique of the method, (d) Refills, (e) Accidents and (f) Complications.

Now the first question that naturally arises in one's mind is, which are the suitable cases for A.P. treatment, in other words, what are the indications for this treatment.

It has been stated that most cases of phthisis at one time, or other pass through a stage which is suitable for the application of A.P. and this stage should not be missed by the physicians, in a country where tuberculous dispensaries and experts are at work to detect the onsets of the disease, which is of prime importance in reducing its mortality.

Indications in general may be stated as:—

(1) Active tuberculous lesion limited to one side with the other lung clear or nearly clear to physical examination is said to be a 'Classical' case for A. P. particularly if the signs and symptoms of the disease persist after a month's Sanatorium treatment.

(2) Tuberculous lesion involving both the lungs with slight inactive or quiescent disease of the better lung.

(3) Recurrent or repeated hæmoptysis (tuberculous or otherwise).

(4) Bronchiectasis, if there are toxic symptoms with copious offensive (sputum).

(5) Acute pneumonic types of tuberculosis may be tried.

(6) Abscess of the lung limited to one side.

(7) Pleurisy with effusion complicating phthisis.

(8) Apical phthisis in certain cases.

Among *Contra-indications* may be mentioned:—

(1) Bilateral lesion with more than a third part of the better lung involved.

(2) Extensive tuberculous lesion elsewhere, e.g. enteritis, severe laryngitis.

(3) When pulmonary tuberculosis is a terminal infection or inter-current with some general disease e.g. Diabetes, chronic nephritis, etc.

(4) Extreme debility and emaciation.

(5) Extreme cold and extremes of age.

(6) A highly neurotic temperament.

(7) Pregnancy in certain stages.

(8) Severe visceroptosis.

Opinions are divided however as to the applicability of A.P. on the two following points:—

(a) Unilateral disease in which the lesion involves less than a third part of the affected lung.

(b) Bilateral disease with slight lesion of the better lung.

There are two schools of thought with regard to these two points. The Liberals of the Continent induce A.P. in a small unilateral lesion straightaway while the more Conservative England would defer its application until a fair trial has been given to the ordinary methods of treatment; as to the second point of controversy, although the majority agree that active disease in the better lung is a contra-indication, and inactive or quiescent disease is no bar, yet cases with commencing active lesion in the better lung have many a time recovered under A.P. Of course, the better lung should be watched and examined during the course of the treatment. From the numerous authentic reports collected by the Research Medical Council, Drs. Burrel and Mac Nalty are of opinion that as soon as one perceives the disease is not yielding to ordinary methods of treatment, A.P.

should be induced as soon as possible. In carrying out this procedure, the patient will be given the best possible chances of recovery.

As already mentioned, the method is essentially a surgical measure without the horrors attending it and permits of being easily carried out in the patient's own home and bed. Little difficulty is experienced to get even the nervous patients to submit to the operation since the entire procedure is practically painless.

Various *Gases* have been used, viz. Nitrogen, Oxygen, Carbon-di-oxide, but experience has taught that ordinary purified atmospheric air serves the purpose equally well, though Nitrogen is still preferred by some.

The *Apparatus* required for the operation is very simple. It consists of two unequal glass bottles and a Manometer connected with one another by means of glass and rubber tubings. The Manometer is the essential part of the instrument and consists of two narrow glass tubes connected by a rubber tubing at the bottom. When not in use, its two limbs contain colored water up to the mark O, which by it oscillations indicate its (being in) connection with the pleural cavity or otherwise. The longer of the two glass bottles is graduated in cubic centimeters and is in connection with the Manometer and the other bottle and before use, is filled with Nitrogen gas or purified air. The other bottle (*viz.* the pressure bottle) is filled with water (colored) containing 1/2% Carbolic acid. When the needle is in connection with the pleural cavity and the clips are turned on, the water from the pressure bottle enters the graduated bottle by syphonage action and replaces the gas or air from the latter which finds its way into the pleural cavity.

The *technique* of the method is better grasped from a demonstration than from even a detailed description of it, so it will suffice to give a short account of it here.

At the initial operation Calomel may be given the previous evening followed by Salts next morning and Morphia 1/4 grm. hypodermically half an hour before the operation. The patient is examined and an idea is formed about the suitable site for finding a free pleural space: and he or she is then asked to lie on his or her sound side near the edge of the bed convenient to the doctor with a pillow beneath the sound side of the chest and with the arm of the affected side stretched up to widen the intercostal spaces. Usually the 5th interspace at the mid-axillary line is chosen for puncture which is cleaned and shaved if required and Iodine is applied. About 2 c.c. of 2% solution of Novocaine is injected with

an ordinary syringe at the selected spot to anæsthetise the part up to the pleura, and the needle point is left in the subcutaneous tissues with the syringe removed from it. The operator waits for about five minutes for the anæsthetisation of the part during which he washes his hands and takes other aseptic measures, sees that the Apparatus is in order and ready for use, and uses preferably Clive Reviere's needle with the trocar and Canula for the initial operation to avoid certain accidents. He then takes out the needle and places the A.P. Needle at that point and pushing it for about 2 cms. takes out the trocar and then keeping his eye fixed on the Manometer, pushes the Canula slowly till a good fluctuation in the manometric fluid indicates that the needle has entered the pleural cavity, when air or gas is allowed to flow into the pleural cavity at a somewhat negative pressure to start with, and about 300 c.c. of air are usually put in and the clip is then turned off, and the final manometric oscillation noted. Then a good area of the skin and subcutaneous tissues around the needle is pinched up, the needle is withdrawn and its track obliterated by rubbing the pinched up tissues and applying a thin piece of cotton with Collodion at the side of the puncture.

No gas should be allowed to flow unless the needle is in the pleural cavity which is indicated by the oscillations of the Manometer. Different kinds of manometric response have their different significance and help to guide us to reach the pleural cavity by informing us as to where the needle point is, while absence of response indicates adherent pleura or a block in the needle. If unable to find a free pleural space a second attempt may be made at the base of the lung in the Scapular line. Not more than two punctures should be made on the first day. Two more punctures at different sites may be tried next day one in the 4th or 5th inter space in the posterior axillary line and the other in the 2nd interspace below the clavicle if the character of the disease permits.

After the operation, the patient may complain of pain of a varying degree and there may be a reaction, which if severe as evidenced by a sharp rise of temparature the same evening and an exacerbation of symptoms of auto-inoculation, the second operation should be delayed till this subsides.

The subsequent introduction of air in the pleural cavity at different future dates is termed *Refills*, the main object of which is to obtain gradually complete collapse of the lung and to maintain it. Refills are easier to give on account of the presence of an air cavity produced at the initial operation and its procedure is practically the same as in the initial operation except that Morphia is not administered and an ordinary Saughman's needle

may be used, instead of Reviere's. No hard and fast rule can be laid down for the quantity of gas and the interval for each refill and to ascertain this, the intra-pleural pressure and the general condition of the patient are our best guides. In giving refills our aim should be to find out the optimum pressure for each case i. e., the Intra-pleural pressure at which the lung is completely collapsed and this is where X-ray is of immense value in carrying on the treatment, in the absence of which the physical signs and symptoms of the patient are our sheet anchor.

As a general rule the *Interval* is spaced as follows:—

1st Day 2nd day, 4th day, 7th day, 11th day. 16th day, 22nd 29th day and then a week's interval which is gradually increased by a day at each refill till at the end of six months, an interval of three weeks is obtained which is kept up till the termination of the treatment which lasts on the average between 2-3 years, varying to some extent with the character of the disease. Usually a complete collapse is obtained (i.e., a good artificial pneumothorax cavity is produced) by the 5th or 6th refill but pleural adhesions may prevent the production of a complete collapse and the gas may be enclosed in a pocket, forming a partial collapse, which may admit of being enlarged by a high intra-pleural pressure.

The quantity or volume of gas to be introduced into the pleural cavity at each refill entirely depends upon the intra-pleural pressure. During the first few refills a quantity of gas should be given that would raise the final intra-pleural pressure at each refill in a ladder-like manner till the optimum pressure at which the lung is completely collapsed is reached. Once this optimum pressure is ascertained, which is on the average between 2 to 5 cms of H_2 the quantity of gas that would bring the intra-pleural pressure to this level, should be introduced at the subsequent refills.

As a result of the treatment, improvement is noticed after few refills. Sometimes the drop in temperature, pulse and reduction in cough and sputum and in other symptoms of auto-inoculation are dramatic. When the temperature and pulse have come down to normal for a week, the patient may be allowed to sit up in the long chair and gradually put on his legs.

The operation, simple as it may appear, is not without its dangers and complications.

Dangers or accidents attending it are:—

(1) Pleural Shock. (2) Gas embolism.
(3) Surgical Emphysema. (4) Puncture of the Lung.
(5) Puncture of heart, this should never occur.

I. *Pleural Shock* is now a rare accident, causing sudden death at the time of the operation. Symptoms are like that of "Shock" varying in degree from a mere faintness and dizziness to those of Vaso-Motor paresis and other embolic phenomena. Injection of morphia and novocain before the operation and warming gas before introducing it, prevent its occurrence. If the accident occurs, in spite of this, the needle is withdrawn and the case is treated as for "Shock".

II. *Gas Embolism* is an exceedingly rare accident now-a-days. It occurs when the gas is introduced in a blood vessel and hence its occurrence is prevented by making sure that the needle point is in the pleural cavity and not in a vessel, before allowing the entrance of gas and using a Clive Revier's blunt canula in the first operation. Symptoms are sometimes indistinguishable from those of pleural shock.

Treatment is to be carried on as for pleural shock.

(3) *Surgical Emphysema* may be (a) Superficial or (b) Deep. They require no special description. Should *not occur with* careful observance of the technique.

(4) *Perforation of the lung* is a sad accident. The patient complains of a sudden sharp pain in the side followed by hectic temperature, pleural effusion and perhaps by slight haemoptysis. There is drop in the intra-pleural pressure, which cannot be raised by introducing gas. Prevention consists in careful observance of the technique and forbidding all violent and sudden movements during the operation.

All the above accidents occur more commonly at the initial operation and a careful attention to the technique prevents their occurrence in most cases.

The *Complications* that may arise during the treatment are:—

(1) Pleurisy (2) Adherent pleura (3) Displacement of Mediastinum (4) Infection of the needle track which is pactically unknown now, with the observance of the modern aseptic methods.

I. *Pleural Effusion* is the most common complication, occurring during the treatment in nearly 50% of cases and the longer the treatment and the more advanced the disease, the greater the percentage of occurrence. If the effusion be small there may be no symptom and the condition may not be diagnosed. The only physical sign that may be detected on careful light percussion is by marking out the lower limit of resonance of the lungs on either side at the back, with the patient sitting upright. If this lower limit of lung resonance be the same on both sides, it indicates about 1" of fluid on the A. P. side, which in the absence of X-ray, may be confirmed by a diagnostic puncture or noting the intra-pleural pressure. Usually the doctor's attention is drawn first by

the patient, to the splash perceived by them on movement. The little fluid gets absorbed naturally and usually needs no treatment.

When the effusion is large, the treatment should be carried on along the same lines as for an ordinary pleurisy with effusion, when if the fluid fails to get absorbed, it should be aspirated and replaced by a lesser amount of gas to bring the pressure to the former level. The occurrence of effusion does not materially affect the course of the A. P. treatment except that the interval of refills should be longer than usual. It is gratifying to note that cases developing pleurisy fare slightly worse than those not developing it.

(2) *Adherent and thickened pleura* results from leaving too long an interval between refills.

(3) *Displacement of the mediastinum* leads to displacement of apex beat and should always be watched during the course of the treatment, as extreme degrees of displacement have been found to light up fresh disease in the sound lung. The limit of safe displacement of the apex beat has been found by experience to be, on the right side—the nipple or mid—clavicular line on the left—the anterioraxillary line. If it occurs, prolong the interval and reduce the quantity of gas given at refills.

Lastly instead of giving statistics, showing the results of the treatment I have preferred to quote below extracts from some of the latest expert opinions on the subject stated in the report of The Medical Research Council (in 1922) which will speak for themselves.

1. Dr. Morrison Davies—"This method of treatment is by far the most valuable one that we possess for arresting the progress of pulmonary tuberculosis. If only this desease were recognized earlier and only if this line of treatment were more universally carried out I believe that the additional number of lives that can be saved and the number of people that could be returned fit for their employment would be enormous. The importance of constant control of the collapse by X-ray cannot be over-estimated".

2. Dr. Fernandez — "A. P. is the only real advancement in phthisis-therapy for the last 100 years. Statistics so far published in England and abroad, granting inaccuracy, all record beneficial results in 40–50% of cases after a reasonable interval. In severe haemoptysis, this treatment is eminently successful and beyond all expectations and can be relied upon, as for an emergent abdominal operation. A. P. is only to be undertaken by experts in the subject".

3. Dr. Lillingston "This treatment gives better results than any other in a limited number of cases. Results depend not so much on a careful selection of cases, as on the care and skill of

the physician in charge. Every Institute practising A. P. treatment should be equipped with X-ray".

4. Dr. Clive Reviere — "This method is of enormous value in selected cases. I have certainly saved many lives by it in advanced one-sided cases".

5. Dr. Tattershall — "The results speak for themselves and prove the immense value of A. P. treatment. In my own 26 cases which have been completely treated, the prognosis, in every one previous to treatment was hopeless. Results after treatment are:— well and at work 35%. Improved 32%. Dead 33%".

6. Dr. Woodcock "I belive A. P. treatment is valuable in most cases of advancing pulmonary tuberculosis. ..... I do not wish to be limited to A. P. therapy. I want my patient to give the advantage of sanatorium regime....." In conclusion, he writes, "if I were allowed but one curative agent A. P. or Sanatorium, I should feel obliged to prefer A. P. to the Sanatorium."

In conclusion, I wish the medical prefession in India will not be slow in picking up the method and adapting it in suitable cases, and I am eagerly looking forward to the glorious day, when with the advance of knowledge and experience as years roll on, the method will attain its perfection, when with its modifications and improvements, the accidents attending it will be an event of the past and the complications, specially pleurisy, at worst, will be of rare occurrence; and when the slight difference of opinion prevailing at the present day on the application of A. P. in cases of small unilaterel lesion, will disappear with the revelation of more facts about immunity and individual resistance and with a more accurate comprehension of the degree of toxoemia suitable for the application of A. P.

THE 1928 EPIDEMIC OF DENGUE IN THE CENTRAL JAIL, COIMBATORE*

BY

L. A. RAMASWAMY IYER, SUB-ASSISTANT SURGEON.

Jail Hospital, Coimbatore.

For the past few years there has been a seasonal prevalence of a six to seven days' fever between the months of May and August in this Jail which has been variously diagnosed as influenza, Sandfly fever, Dengue, or Pyrexia of uncertain origin. This coincides with the out-break of the South West Monsoon in the adjoining Malabar District which is indicated here by heavy

*Specially contributed to the Silver Jubilee issue (April 29) of the Antiseptic.

moist winds and occasional light showers of rain. The weather changes from one of dry heat to a moisture-laden atmosphere and mosquitoes thrive in large numbers. As with the Police and Military, the tendency in the Jails also is to carefully watch malingerers shirking work and to punish them; and with the excellent sanitary conditions and preventive measures existing in Jails, the sick rate is generally reduced to a minimum. Even though Jails are supposed to be places where definite etiology, diagnosis and courses of disease could be thoroughly investigated there are certain draw-backs and difficulties which the Medical man has to encounter—viz., prisoners are released all of a sudden on bail, expiry of sentence or transfer to other Jails; mild varieties of disease do not report sick at all; sometimes men on easy work report sick only after a few days of their getting ill. Hence I do not claim to be in any way perfect, complete or definite in my observations of the subject on hand. Ever since, I took up duty in this Jail early in 1927, this fever has been prevalent throughout the year though in small numbers during other months. From the Hospital records, I quote the following figures for the past three years of persons who were acutally admitted to Hospital throughout the course of the above illness:—

1925.	... 50.
1926.	... 25.
1927.	... 10.

This year the fever assumed an epidemic form accounting for nearly 200 cases for an average population of about 1400, i.e., 14 per cent. While the epidemic was mostly confined to the inmates of the Jail the surroundings of the main Jail occupied by the staff did not escape, but the number affected was proportionately less. The civil population adjacent to the Jail was also affected in a mild degree. In rapidity of diffusion, this disease appears to be unequalled. It was first recognised in 1779, in Cairo and Java and we heared of widespread epidemics in India, China and Egypt in the early part of the 19th century. In 1780 Benjamin Rush described an epidemic in Philadelphia. Kamal describes of a sudden epidemic of Dengue in 1927 affecting the whole of Egypt from the shores of the Mediterranean to the extreme south of upper Egypt preceded by sudden climatic changes viz., thunder storms, winds and rains sweeping the whole country followed by the appearance of Dengue.

The disease is known to be transmitted by a variety of mosquito, Stegomyia Fasciata. The U.S.A. Medical Department Research Board organised experiments and concluded that a patient with Dengue could infect Stegomyia Fasciata during the first three

days of his illness; the Dengue virus appears to remain in the infected mosquito for about eleven days before transmission to non-immunes and the infected mosquitoes continue to propagate the disease probably throughout the remainder of their lives. In the Philippine Journal of Science published in 1926, it was proved that the insect-vector of Dengue is Stegomyia Fasciata and not Culex Fatigins. It was also proved that a Dengue patient might infect mosquitoes during a period from a few hours before the first symptoms appear to the end of the second day of the disease and possibly for another 24 hours or so after which mosquito infection fails. Graham describes as the possible cause an Intracorpuscular protozoon which he found in the blood of Dengue patients in Beyrout and Syria and he believes that the disease is transmitted by Culex Fatigans. Bancroft in Australia considers the virus to resemble that of yellow fever both in being Ultramiscroscopic and in being transmitted by Stegomyia Fasciata. The disease has been transmitted to healthy men experimentally both by blood of naturally infected men and by means of infected mosquitoes. Use of curtains as in malaria and filaria is known to prevent contagion. The destruction of musquitoes in Port Said resulted, Munro says, in the disappearance of Dengue from that place. Stringent anti-larval measures in this Jail such as disinfection of drains by bleaching powder solution, limitation of water tanks in the workshops of the Manufactory Department and oiling of such tanks, discontinuance of direct trenching of night soil in the gardens adjoining the Jail—in short every measure tending to the destruction and inhibition of growth to the musquitoes and their larvæ were the only means by which the disease could be fruitfully encountered. H. Scott describes a seven day Dengue in Lucknow, the cases presenting typical features as described in Calcutta 20 years ago. G.H. Dye describes a similar outbreak in Aden as shown by an analysis of 100 cases. Urines were examined for leptospira with negative results. The piroplasma like organism of Graham is probably an artefact. R. Knowles and Guptha report on a pseudo-organism in the blood of dengue cases by dark ground illumination method and have seen as a rather refrigent spirochæte, but afterwards this was proved to be not a true spirochæte but an artefact. J. W. D. Megaw discusses the Dengue Sandfly probelm and associates Roger's seven day fever with Endemic Dengue. The Japanese 7 days fever-probably a form of infective jaundice whose virus is said to be Leptospira hebdomadalis appears to be distinct from Dengue for which no virus has yet been discovered. Examination of blood showed an average leucopenia of 3500 to 5000 per C. M. M. as a constant feature. Polymorphus neuclears

were conspicuous by their relatively small number. Lymphacytosis both of the small and large ones were characteristic in a large number of cases, amounting to nearly 30 to 40 per cent. Eosinophiles also showed a larger number relatively i.e., about 5 per cent.

The morbid anatomy observations of the disease could not be made as the death rate was nil.

Premonitory symptoms were observed in a few cases such as headache, malaise and anorexia. But in the majority of cases, the onset was sudden with headache, backache, chills, and joint pains, temperature 105°F or 106°F disproportionately slow pulse, and such febrile symptoms as Anorexia, coated tongue, constipation, suffused eyes and bloated face. The description given by Rush is so characteristic and real that the disease is unmistakable in diagnosis. "The pains which accompanied this fever were exquisitely severe in the head, back and limbs; the pains in the head were sometimes in the back part of it and at other times they occupied only the eye balls. In some people the pains were so acute in their backs and hips that they could not lie in bed. In others the pains affected the neck and arms, so as to produce in one instance a difficulty of moving the fingers of the right hand. They all complained more or less of a soreness in the seats of these pains particularly when they occupied the head and eyeballs. A few complained of their flesh being sore to the touch in every part of the body. From these circumstances, the disease was sometimes believed to be a Rheumatism, but its more general name among all classes of people was break-bone fever." The patient while on duty developed high fever preceded at times by rigors. Frontal headache, excruciating pains in the lumbosacral region and over the joints of both limbs were typical. Some patients were picked out from the workshops in an unconscious or semi-conscious condition. Some were observed to be mentally depressed. The fever generally lasted from 4 to 8 days and was usually of the saddle-back type.

The following were the types of pyrexia observed.

1. The mild or the Abortive type in which the fever lasted for a couple of days or so with temperature below 100 degrees F.

2. The gradually declining intermittent type in which the temperature which at first goes up suddenly comes down by lysis on or about the 6th or 7th day.

3. The irregularly intermittent type in which the temperature which rose up rapidly at first came down gradually by slight morning remissions and evening exacerbations of an irregular type..

4. The saddle-back type of remittent temperature. The majority of cases were of this type.

5. The remittent *continuous type* as in lobar pneumonia with abrupt on-set and termination by crisis.

6. The long continuous remittent type in which the temperature continued for one to two weeks in an irregular way.

The temperature was not the criterion with which the severity of the attack was related. The patients who had mild temperature only viz., those who were below 102 degrees throughout the course of their illness were feeling worse than those with 104° or 105° who had only mild symptoms. The convalescent period was practically nil. The patient with nearly a week's fever with all the concomitant signs and symptoms was none the worse for his sufferings and was eager to go off to his daily work on the day after the temperature became normal. Some patients complained of præcordial distress although no organic lesions followed the disease. The breath in some cases was foul smelling and fœtid. The tongue showed a white fur in the middle with the margins reddish. In a few cases the throat was congested with inflammation of posterior wall of pharynx and sometimes tonsillitis. Nearly 30 per cent of the cases had vomiting and nausea from the beginning and persisted throughout the disease. No enlargement of the liver or spleen was seen as in acute infectious diseases. The nervous system too, was in no way affected except that a few cases were mentally depressed, during the course of the disease. None was delirious though the temperature sometimes shot up to 106°.

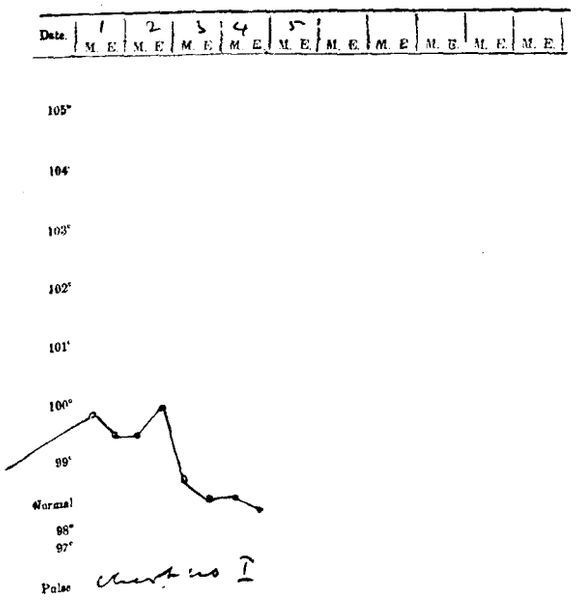
Urinary system was also observed to be unchanged except in five cases out of 200, slight Albuminuria was seen which disappeared soon. There was one diabetic patient who became slightly delirious—but I could not say whether the comatose condition was due to the high temperature or the chronic diabetic condition. In about 5 per cent of the cases the Lymphatic glands were enlarged—mostly cervical; in two cases inguinal and one case parotid.

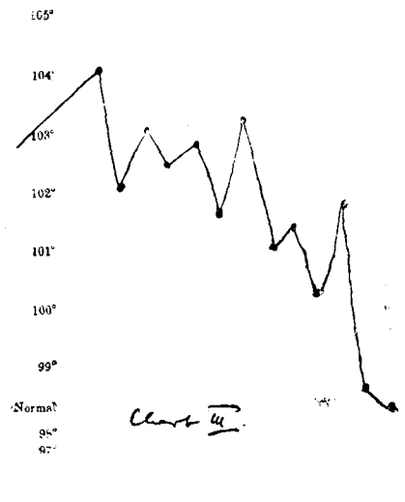
The last symptom but not the least in importance was that the epidemic was singularly conspicious by the absence of rash of any description in any of the cases. Dengue has been described by various authors and writers but every one appears to have given a predominant place to the rash as a constant factor in the disease. Doerr does not in his description allude to the terminal skin eruption which noted authors as Manson and others believe to be of very constant occurrence in the disease.

Complications and sequelæ:—Diarrhoea and dysentery were seen in two per cent of the cases after the temperature came to normal. Epistaxis occurred in five cases. Haematemesis in 4; Bleeding and spongy gums in 10, Haematuria in one, Brady-Cardia in about fifteen cases with fifty beats of pulse per minute during the convalescence, irritation of palms and soles were seen in ten cases which lasted for nearly a fortnight after the disease; Stomatitis occurred in 20 cases with acute pharyngitis; and Herpes were seen in five cases. A relatively few patients only showed loss of weight and even these made up in a week to ten days. The children of the staff who were attacked, were the worst sufferers. One child was actually throwing out into convulsions with 106 degrees temperature and another child started intractable Diarrhoea after the disease. Relapses were quite uncommon—two cases had a mild relapse out of the 200 cases.

The diagnosis had to be made in the most searching way possible. The absence of rash made it far more puzzling. The wide—spread epidemic incidence, the absence of sweating and the typical temperature with definite duration of the disease diagnosed it from Rheumatism. Examination of blood smears, the non-enlargement of spleen and the time incidence of the febrile attacks excluded any malarial infection. Respiratory involvement and the irregular temperature eliminated influenza. From measles it was disgnosed on account of the less sudden onset, Koplik's spots, throat symptoms, absence of pains and the deep red rash coming on at a definite period. Scarlet fever is rare in the tropics and is easily recognised by the course of temperature and character of eruption. From Japanese 7 days fever, the disease was distinguished by the absence of Jaundice and by the absence of Leptospira Hebdomadalis. Negative Widal's test and the short duration negatived any typhoid tendency. The magnified general symptoms, crisis after a week, relapse a week later and the presence of spirillum in blood diagnoses it from relapsing fever.

The prognosis was invariably good with no mortality nor any bad complication. The mortality in Dengue epidemic in Australia has been discussed by F. Mc. Cullum and J. P. Dwyer in light of Vital Statistics who agree with the general consensus of opinion that it is very low.—30 per cent and 70 to 80 per cent attacks. I cannot say that the immunity conferred by an attack is complete. Treatment was purely symptomatic. An initial purge, an alkaline fever mixture with salycilates were the routine drug treatment; an ordinary fever diet with plenty of fresh milk and occasional imperial drinks formed the chief routine dietetic part of the treatment; hot applications to the affected joints were of great





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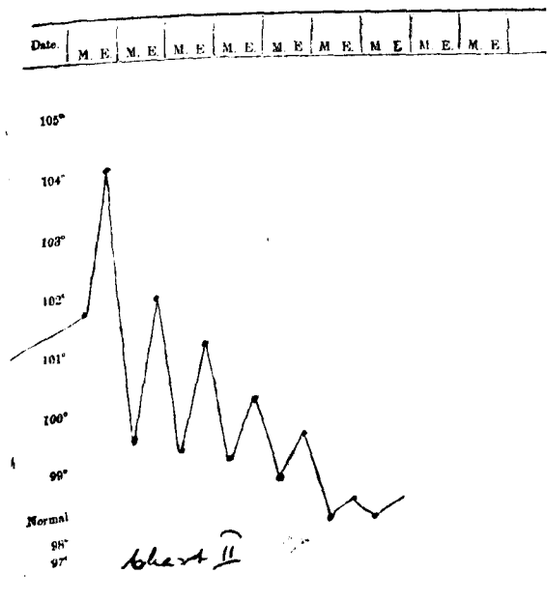

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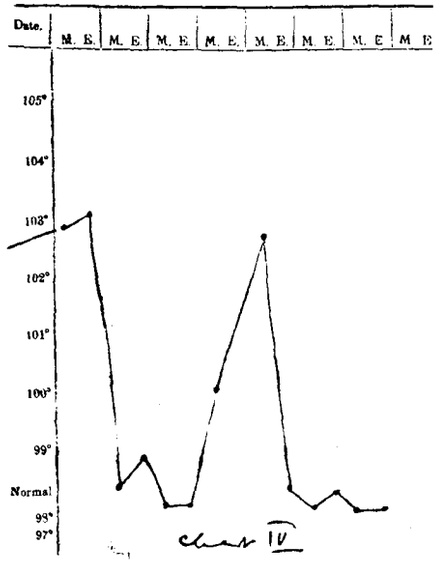

8782, Chidambara Pandiakam.

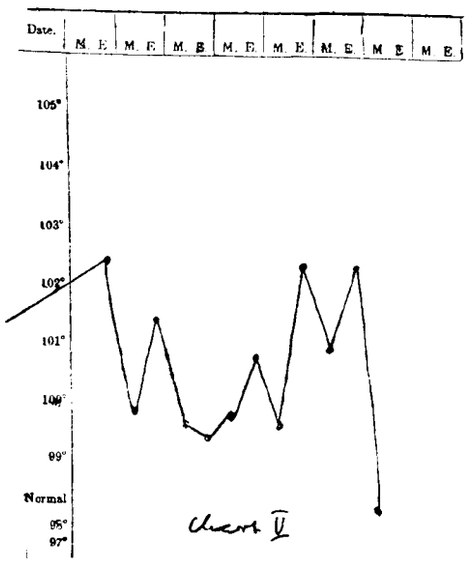

Chart V

7039, Kandasami Thevar.

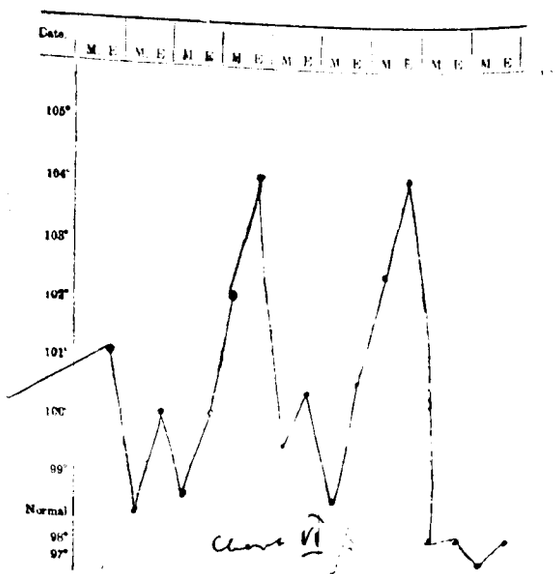

Chart VI

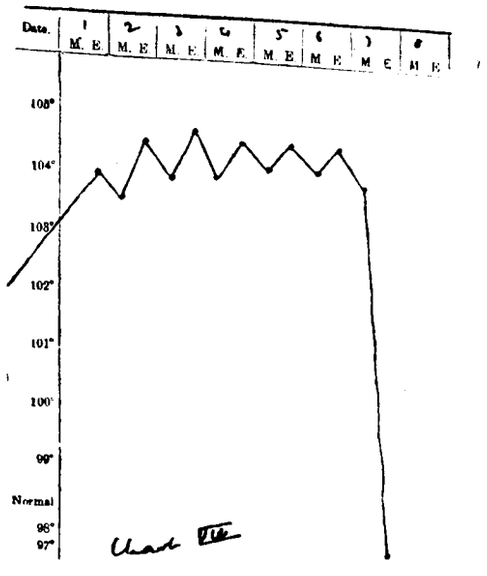

Chart VII

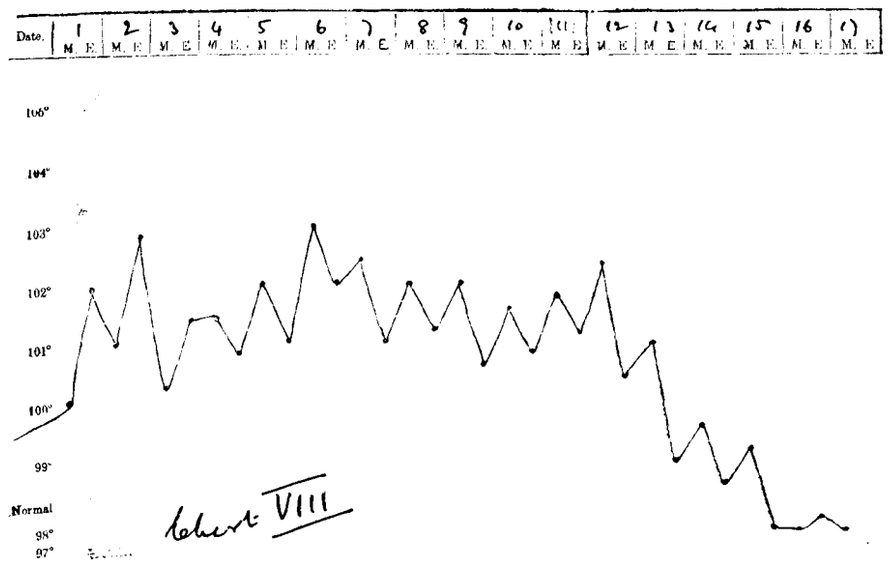

Chart VIII

use. Complications were met by appropriate remedies--too well known to deserve any mention here.

In conclusion I respectfully beg to thank my Medical Officer, Lt. Col. P.L. O'Neill, C. I. E., I. M. S., for the learned help he rendered in easily diagnosing, controlling and treating the epidemic and for permitting me in bringing out this humble memoir of mine.

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SUGGESTIVE THERAPEUTICS.*

BY

S. KANTHIMATHINATHAN, L. M. P.

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In these modern days of materialism very few of us have any faith in the cure of diseases by suggestion. But in America, France and Germany clinical study is being pursued in the art of suggestion and intractable and incurable diseases are being successfully handled by suggestions. In this ancient land of ours, though this mode of treatment is not extensively practised now-a-days the art had its glorious days when people were simple, honest and truthful and free from all vices of this age. Sages, nay, even ordinary men when they spoke with a sincerity of purpose saw things actually coming true and their words had the power of curing ailments wonderfully. Even to-day many of us do not know how certain cases get remarkably well more by our advice rather than by medicine. It is those who experience this psychological method can understand the power of suggestion. It is commonly believed that anything given by a doctor endowed with a "gifted hand" acts as a panacea for all ailments. With this belief people flock to him and he becomes a centre of attraction and a successful practitioner. What is the reason for this unique success? It is nothing but the faith of the doctor first in himself, *i.e.*, his selfconfidence and this faith when transmited inspires faith in the patient also. The modern criterion of life is money first and money last. So long we keep money as the only end and aim of our life, success will not be within easy reach. Though money is an essential factor in life, our ideal should be centered in love and service. Money will automatically follow these. It you want to achieve success as a Medical man, or for that matter, even in your ordinary life, do everything with a sincerity of purpose and love of

* Specially Contributed to the Antiseptic.

duty irrespective of the monetary help you are likely to get. Kind words, a smiling face and a loving heart create a confidence in you and the patient whether he takes medicine or not gets cured by that intense faith which he has cherished in you. Faith can move mountains. How are we to create this faith? First of all to acquire self-confidence one should understand beforehand the nature of the case he handles and the various modes of treatment approved of by eminent men and should cultivate firmness of mind even under desperate circumstances. If we undertake a case with a determination and a love of service, no ailment will remain without being wiped out. Once that self-confidence is acquired, the patients will get relieved of their anxieties as soon as they see your looks and movements, and hear your encouraging and soothing words. The mental calmness developed by your self-confidence will shine through your eyes, the outlet of the inner mind. A steady and calm gaze if cultivated, will help you a long way in accomplishing the success you aim at. By your gaze you can mentally communicate with your patient and soothen his troubled nervous system. The mysterious power of the eyes is so much that even the wild animals are enslaved by a steady gaze. Look calmly and steadily but not rudely and express your wish by kind, soothing, soft words which should spring from your inner-most mind. You will be simply astonished at the results obtained by such actions of yours. In addition to gazing and suggestions, passes over the seats of ailments will bring immense relief. To quote a few of my personal experiences, scorpion stings, severe head-aches, neuralgic pains, hysterical mischiefs are cured by suggestions and passes with no recourse to medicine. In one particular case of retention of urine, passing catheter had no effect due to false passages already formed. The suffering of the patient was acute. Before attempting to draw out the urine by supra-pubic puncture, the suggestive procedure was adopted. To my surprise out came the urine with a gush, without any effort on the part of the patient. From this I learnt we could command the inner working of the internal organs. We know with all the modern advance of the Medical Science, the power of regulating or commanding the inner working of the internal organs has not yet been mastered. We are not still the masters of our house, this body of ours. Our power of volition stops short with the motor and sensory nerves. The complex and confusing system called sympathetic nerves otherwise known as inner mind adjusts and does things in its own way without our knowledge. But by our concentrated mind aided by the steady gaze and commanding [redacted]ords we can throw suggestions to this inner mind which invaria-[redacted]y obeys the command. Hence those of us who are well-versed

in the internal secretions and workings of the various organs can command the particular organs which are defective to produce the necessary secretions for setting the house in order. As for instance, internal as well as external bleeding could be stopped, uterus or bladder could be made to contract at our will and any other disease which could be rectified by the stimuli of the sympathetic nerves could be cured unless the organs concerned are organically disrupted. If we advance a little further in this mysterious art, we can produce general anaesthesia what is called hypnotic sleep, enabling us to do any major operations without the slightest degree of danger to life. My only object in writing this thesis is to invite the attention of my medical brethren to this part of useful science which forms the keystone of the real success in life. Those who take real interest will be benefitted in no small degree by its allied branches such as personal magnetism telepathy, television, clair-voyance, etc. By mastering this art you are transformed really into a man of sublime qualities doing service to humanity at large notwithstanding the material gain and fame that befall on you. In this connection I would like to warn my brethren not to use passes haphazardly since each pass means so much of magnetic current sent out from our body. Before throwing out passes you should understand how you can regain the magnetic energy, that is so much surcharged in the sun's rays, atmospheric air and cold water, by some concentrative processes. Otherwise in addition to your losing the vital energy that is stored in you, you may possibly contract the disease of your patient when your store of energy becomes below par. Our modern physiology is incapable of revealing the secrets of the workings of the lungs. To a keen observer it will be seen that while one lung is working more forcibly at a time the other lung practically remains inactive taking probably rest. This fact could be verified by closing one nostril and opening the other. The nostril corresponding to the active lung will be open and breathing quite free while the other nostril gets blocked and its breathing gets choked. Every fifteen minutes this active and inactive process goes on alternately with no effort on our part nor with our volition. Since we have no knowledge in the art of breathing the lungs are not expanding to the full. Hence the apices of the lungs are always clogged with foul air which forms a suitable pabulum for the tubercle bacilli to have a luxurious growth. This is one of the reasons why in our days consumption is ever on the increase. It is the duty of every-man much more of a medical man to know how to cultivate full deep breathing so that no alveoli is left without being aerated. By systemic deep breathing we get a full supply of vitality or *prana from* the air, the prime storage of energy. When once this

vitality is full to the brim you can afford to spend some for the sake of your fellow beings and can recoup the lost energy by resorting to the systematic breathing. Speaking even from a selfish point of view the breathing exercises tone up your system in a wonderful way and convert your lungs into a most unsuitable soil for the scourge of consumption. Deep breathing brings pure air to every cell of the lungs so that no anaerobic microbe could thrive. One sure way of combating the tuberculosis both as a prophylactic and curative measure is the cultivation of deep breathing by all men, women and children. Without this deep breathing any amount of free ventilation and fresh air will not help the subject to escape from the jaws of this white plague. Those who are liable to catch cold at every atmospheric alteration or change of weather will be radically benefitted by this deep breathing.

The following procedure, if properly adopted, will bring success in the art of suggestive therapeutics.

A calm place with free ventilation and clean surroundings and a suitable time preferably early morning hours should be selected for the practice. After washing your face, sit upright so that the head, neck and back are on the same level as a straight line and speak to yourself without much noise these suggestions :— (*I am healthy. I am a success. I can control myself. I can control others. My powers are immense. I am all love. I am all bliss. I am all ananda*) Repeat these suggestions regularly a dozen times at least every day if possible both morning and evening at your selected hours. If you are suffering from any particular ailment you may add suitable suggestions and may throw passes over the affected regions. You will realise what wonderful effect they produce. In addition to these suggestions I will advise to have three or four steady and deep breathings so that each corner of the lung is ærated. Do not attempt to retain air for a long time within the lungs as advised in some Yoga books. Any such attempt without a proper guide will entail dangerous consequences. I know instances in which young men without proper knowledge in the art of breathing practised and consequently suffered from bronchiectasis hæmoptysis owing to the rupture of small blood vessels on account of high pressure inside. But ordinary deep breathing without any strain on your part will not bring any serious troubles but on the other hand will improve your vital energy, and power of resistance to diseases. Mother Nature is ever ready to reveal her secrets for those who sincerely wish to fathom and success in life is always awaiting you if you are really thirsty and striving. Let those who deserve, feel that this life is no longer a burden but really a blissful one worthy to be enjoyed.

Cases & Comments

SALINE INFUSION IN ALGID TYPE OF MALIGNANT MALARIA.

BY

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This year malaria is highly prevalent in this part of the district of Pabna, Bengal where the writer of this note practises. It is most astonishing that this place presented almost all the types of the disease, both malignant and benign. Among the malignant variety, algid form was common while meningeal and hæmorrhagic types though few were not rare.

In about 6 months, I have treated 30 cases of algid type, 3 cases of meningeal and 2 cases of hæmorrhagic type.

In treating the algid type of cases I thought it to be rational to use saline infusion and this gave me such a satisfactory result that I cannot check the temptation of reporting this note. Moreover I do it with this idea that my fellow practitioners may also try it whenever they find any opportunity; thereby saline infusion treatment may be allowed a wider scope and as a result better light may be thrown on the subject.

In this series of 30 cases of algid malaria, 28 required saline infusion, two did come round without it, while 2 out of the 28 treated with saline died. To avoid repetition, notes on only one typical case of this kind are given below.

1. Kadnibini a woman of 40 years was suffering from occasional attacks of malaria from the month of August '29. Each time fever came with violent shivering, characteristic cold extremeties, hot and sweating stage. The interval between the attacks never exceeded a fortnight, repeating the same over and over again often twice in a week.

On a certain day I was requested to go and see this woman as she was in a bad condition of collapse. The husband of the woman gave me the following information:

She was keeping a bit well for the last fortnight uptill the morning of that day when she was doing her household duties. At about 10 a.m., while she was cooking for her husband, she was suddenly seized with chill and violent shivering. Temperature rose very high. At about 12 noon she began to purge and vomit and within an hour she was brought to the following condition

hurried respiration, choking sensation, extreme pain in the chest, and back, cold, sweating, cramps in the extremeties no pulse in the wrist and elbow, sunken eyes, blue lips, hiccough and wringing in the ears. Heart extremely hurried. Spleen and liver enlarged greatly. Passing stools containing blood and mucus.

In short she exhibited almost all the symptoms of the last stage of cholera.

Treatment:—

Firstly I gave her one Strychnine and Digitalin combined injection, waited for 15 minutes, no improvement in the condition of the pulse. So I decided to give pituitrin and adrenalin chlor. Sol. at short intervals but no improvement in the condition of the pulse.

Having every similarity with the symptoms of cholera, I intended to treat it accordingly and ordered 3 pints of Hypertonic Saline Sol. This was infused intravenously with adrenalin chlor. Sol m X per pint.

Pain, hiccough, cramps, respiratory distress and wringing in the ears disappeared like charms. She was given twenty grains of Quinine Bihydrochlor intramuscularly on either buttocks and the following medicines were prescribed.

℞

Quinine Hydrochlor	gr. X.
Acid Nitro Muriatic (dil)	m X.
Liqr. Arsenicii Hydrochlor	m I.
Spts. Vini Gallici	m XXX.
Liqr. Strychnine	m II.
Tr. Strophanthus	m II.
Spts. Chloroform	m X.
Aqua. ad	℥ I.

Mitte. VI.

(Sig) ℥ I every 3 hours.

℞

Adrenalin Hydrochlor 1in 1000	m X.
Urotropin	gr. X.
Aqua ad.	℥ I.

Mitte. VI.

(Sing) ℥I every 3 hours alternately.

This prescription was continued for a week and the patient made an uneventful recovery.

Success in this case encouraged me to try this method in similar cases and the result was most gratifying.

I request my fellow practitioners to try it and publish their result.

AN INTERESTING CASE.

BY

DALIP CHAND BAHL, L. S. M. F. (REGD.)

Physician & Surgeon Ambala Cantt.

I was called to see a girl aged 18 years at 8 a.m. on the 3rd March 1929. I went there with two other Physicians of the town and saw the girl in the following condition:—

(1) Temperature 101 F.
(2) Pain in the right Hypochondric region.
(3) Swelling in the same region.
(4) Griping pain during defaecation.
(5) Slight cough.

We inquired into the history of the patient and the parents related thus:

Present history:—The girl was alright till the previous morning when at about 4 p.m., she got a sudden rise of temperature 105 F. There was no chill. They gave medicine from their family doctor for three days but to no effect. On the fourth day she got pain and swelling in the region of the liver.

Past History:—She got dysentery in the beginning of 1928 and a high continued fever in October 1928 which lasted for 4 months. She remianed alright the whole of February.

After having known the history of the case, we examined her systematically. Examination of the lungs and heart showed nothing abnormal. The liver was found 3 fingers' breadth below the costal margin and was tender to touch. There was a definite swelling. Right rectus muscle was hard. Examination of blood was negative for M. P. and B. coli. The case was diagnosed as that of Hepatitis by the other Physicians, but I was of opinion that it was a liver abscess due to amœbic infection of the liver. Anyhow the treatment was started with liver mixture and urotropin orally and Belladonna Glycerin locally, but to no effect. After a week they changed the treatment and adopted Homeopathic treatment which they continued for a week, but there was no change.

Then the parent, again adopted an allopathic treatment, So I with another practitioner saw the girl. The girl was in much more emaciated condition than we saw her before. We again examined the girl and found her in the same condition except that the swelling disappeared with the application of Belladonna. Examination of the lungs showed some crepitation on the back, and the other physician hearing this crepitation declared it a case of T. B. while I persisted in my previous diagnosis. Sputum was examined 26 times here and 3 times in Mayo Hospital Lahore

(20 hours) but the result was negative. Blood examination at Lahore showed B. Typhosis + 1 M 20 Polymorph 75%.

Nine emetine injections (gr. ½) were given but to no use. I advised the parents of the girl to get her liver explored, to which they did not agree. They left the treatment and adopted the treatment of a Hakim, which they continued when all of a sudden on the 10th August 1929 she sank and temperature came down to 98° from 103 °F with profuse perspiration. I was called at once, I gave her some stimulants and, she became better, but on the 12th August she became worse, began to pass pure blood and pus and no stool, and became semi-unconscious. Tongue and legs were paralysed. She continued passing pus and blood for four days and died on 16th August 1929 at 7-30 a.m.

I am of opinion that death occurred from bursting of the liver abscess into the abdominal cavity.

My excuse for sending this case to your journal is to request my fellow brethren to clear me of my diagnosis, and also to let me know through this Journal if they have seen such a case.

VALUE OF ATROPINE SULPHATE IN OBSTRUCTED INGUINAL HERNIA.

BY

PRAGJI P. MEHTA, M.B.B.S.

Physician and Surgeon, Palitana

On the morning of 8—12—1929 I was called in to see a case of a Jain Sadhu, having a big inguinal rupture of 20 years duration. The patient was very old and debilitated.

He complained of severe pain and swelling as big as an ordinary water-melon in size, on the left side of the scrotum. I tried taxis without success. Dr. P. Pallonji, the C. M. O. was called in for consultation. He also tried taxis, but without any avail. The swelling in fact, was irreducible, by manipulation. Ice application was objected to on religious grounds, so we had to apply an evaporating lotion. The patient was against any kind of surgical interference. Then to give him a chance, we both agreed to inject him with 1/100 gs. atropine sulphate, hypodermically. To our surprise the effect was marvellous. Within a few hours, the swelling was reducible, the pain disappeared and the patient felt much better.

Thus atropine-sulphate injection is worthy of trial in suitable cases of irreducible hernia.

My thanks are due to Dr. P. Pallonji for his kind help and advice.

A SIMPLE AND EFFECTIVE PROPHYLAXIS AGAINST VENEREAL DISEASES

BY

CAPT. SHYAM LAL, CIVIL SURGEON, BALLIA.

Nearly every body in the medical line must have heard of calomel ointment and irrigation of urethra with Pot. Permanganate lotion. But this old method has not been popular, as the method suggested is not ordinarily practicable.

One indulging in improper ways of sexual gratification cannot be supposed to be running about with an irrigator and a fairly big bottle of lotion in his pocket; while calomel ointment is always very useful chiefly in persons with a long prepuce.

The following procedure is very simple, clear and more effective than the old one. In this one requires nothing but a small phial containing methylated or rectified spirit in one's pocket, and a little cotton, wool or clean handkerchief.

The procedure is as follows :—

(1) After sexual intercourse, wash the glans and the penis with soap and water (if available).

(2) Bathe the glans, fore-skin and body of penis with Rect spirit.

Spirit being liquid will penetrate all the crevices and furrows of the fore-skin. This is the great advantage of using spirit over calomel ointment.

When the penis has not been washed previously with soap and water, the spirit will soften the discharge sticking to the glans and the prepuce which can easily be removed.

This will cause slight irritation and burning sensation about the private parts and nothing more.

(3). Now make water; urine being generally sterile will clean the urinary passage. The desire for making water will also be created by the burning sensation and irritation caused by spirit.

(4) Now touch the Mucus membrane at the external urinary meatus with a little cotton wool or the end of a clean handkerchief soaked in spirit.

This ends the procedure.

AN INTERESTING CASE FOR DIAGNOSIS.

BY

S. T. VENKATARAMAN,

Medical Officer, Srimushnam,

I was called on to see a boy, named Pichai aged 9 years living two houses next to mine on 23—2—'30 at 10-40. A.M.

His condition on examination was as follows: Mouth open partially. Tongue folded inwards and the lip touching the roof of mouth. Saliva dribbling down the angle of mouth. Breathing had a wheezing noise. Lungs—nothing abnormal, no crepitus, no râles The sight of a person or the touch makes his body an arch, heels and head only resting on the ground, the patient staring at the intruder and making a more vigorous hissing noise. Pupils slightly dilated. Temperature normal. Pulse quite normal. No convulsions.

History of the commencement of the attack :—At 8 a.m. he complained of pain in the stomach and after a few seconds he felt giddy and he laid himself on the floor and the condition became as stated above. After nearly 3 hours the boy took some water and was quite alright, playing within a few minutes. He is not conscious of what happened to him. To my question put to him at the time of examination whether he wanted water to drink, he shook his head implying that he did not want. This eliminates his complete unconsciousness during the attack. He passed one or two times urine during the attack.

Previous history, He had similar attacks 3 years before. But the attack used to last only 10 minutes or 20 minutes and he used to be quite alright after drinking water. The mother of the boy says that no male member or foreigner should approach the boy during the attack and touch him, since that makes his body a complete arch and the hissing breathing vigorously induced and he used to move away with the body arched thus, as if in terror. They tried all sorts of native treatment and puja offering to special goddesses. The present attack only lasted for about 3 hours whereas the previous attacks lasted only 10 or 20 minutes.

May I request the readers to kindly enlighten me as to its diagnosis and treatment.

Any further information regarding the boy's pulse, temperature, lungs and general condition will be glady supplied. The parents are anxious to have him cured of the disease.

A CASE OF TYPICAL MIGRAINE

BY

CAPT. SHYAM LAL, B.A. M.B.,

Civil Surgeon, Ballia.

Cases of true Migraine are so rare that I take the liberty of publishing the case that has recently come under my observation and treatment.

Mr. X—,a Government Officer, aged about 43, has been getting these attacks for the last 14 or 15 years, his mother has also been getting similar attacks for the last 40 years, hence there appears to be some hereditary taint. His two sisters and one younger brother have also inherited the disease. The attcacks are nearly confined to the months of March and early April on one hand, and September and the early October on the other i.e., when change occurs in the season.

Attacks :—Attacks begin unexpectedly while he is working in court, all of a sudden he feels that he cannot see a letter here or a letter there; then vision becomes blurred, sometimes totally lost in one eye, sometimes in the other, sometimes in both. This is soon followed by severe pain on the top of the head opposite to the eye in which he felt visual disturbances; if visual disturbance occurs in the right eye, pain is felt on the left side and vice versa and if visual disturbances occur in both eyes, pain is felt on both sides. The pain is accompanied by a sensation of nausea and giddiness. The patient cannot sit and has to lie down.

Severity of the pain and the length of the attack also depend on the severity of visual disturbances and the length of the time occupied by them.

While lying down he feels severe nausea and giddiness, the sensation brought about or aggravated by the raising of the head from the pillow or movement of the head and he vomits bilious matter several times during the attack. Vomiting relieves the acuteness of pain to a certain extent. The usual attack takes about 5 or 6 hours to pass. Sometimes one attack is followed by another. Bowels are generally constipated. He does not like to open his eyes and to see about on account of fear of visual disturbances and the repetition of the attack. He tried all sorts of medicines and treatment (Vedic, Unani and Western system) in the case of his mother and also took her nearly to all important places of India for treatment but to no avail. Hence he is not very hopeful to get any relief in his case as well.

I have prescribed for him a mixture containing Liq. trinitirin m. i., Liqr. Strychnine m. v., Tinct. Galsemi m.x., Sodii Bromide

Gr. 10 made acid to preserve the stability of the Nitro Glycerine to be taken three times a day.

This mixture was advocated by Gowers and is given in Price's medicine.

Any suggestion as to any other line of treatment will be highly welcome. I am also thinking of using "Luminol" in the case. As the attacks of migraine appear to be similar to those of Epilepsy, hence the idea of trying the medicine.

A CASE OF ERYSIPELAS TREATED WITH MILK INJECTION.

BY

T. C. KANNON L. M, P.

Mental Hospital Bangalore.

K. I. Male age 21 years was admitted into this hospital in semidelirious state as being unmanageble at home. It was reported that he had epistaxis followed by fever for 3 days prior to admission.

On admission on 2-3-30 his temperature was 104, pulse 102, respiration 30. He appeared very exhausted and mentally was dull and stuporous. There was redness and ædema of the right side of the face, involving the right eyelid and ear and the whole of the forehead where a distinct raised line was noticeable showing the edge of the swelling. The skin over the affected one was smooth and glossy. Deglutation was difficult, tongue dry and furred. Calomel grs 3 was given on the night of admission and Mist Diaphratic Oz 1 every 4 hours-the affected part was painted with Tincture Ferri perchloride.

The next day, the edge of the swelling was found to have extended up to the middle of the scalp and there were signs of desquamation on the lower part of the face. The general condition was no better.

3-3-30. Sterlised milk 2 c.c was given intramuscularly and the affected part was covered with a lint soaked in a saturated solution of Mag. sulph.

4-3-30. There was improvement in the patient's general condition, but no change was noticed in the inflammation of the face and scalp. The temperature was 102; sterlised milk 3 c. c injected intramuscularly.

5-3-30. Temperature 101 there is marked improvement in the general and local condition. Patient is cheerful the; inflammatory spread of the inflammation on the scalp, 4 c. c of sterlised milk injected.

6-3-30. Temperature 100; complete subsidence of the swelling and desquamation of the part has commenced. General condition much better, 5 c. c sterlised milk given. The patient's mental and physical condition continues to improve; his temperature normal; the Erysepelatus inflammation has disappeared and further progress was uninterrupted.

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THE GENERAL MEDICAL COUNCIL OF GREAT BRITAIN AND ITS FATEFUL DECISION

The ultimatum issued by the General Medical Council of Great Britain to the Government of India with regard to the recognition of the Indian Medical Degrees referred to in our December '29 issue having expired on February last, the Counil has resolved to withdraw the temporary recognition of the Medical Degrees of the Universities of Bombay, Calcutta, Lucknow, Madras and Punjab and thus sever all connection with India for the nonce. The text of the resolution of the General Medical Council runs thus:—

(1) "That in the absence of authoritative information respecting Medical qualifications and Standards in Bombay, Calcutta, Lucknow, Madras and Punjab Universities, the executive Committee is unable for the time being, to recognise the medical degrees of these Universities as furnishing details of guarantees of possession of the requisite knowledge and skill for the efficient practice of Medicine, Surgery, and Midwifery in this country and that, accordingly, the conditional recognition hitherto granted to these degrees has now lapsed.

(2) The proposal of the Government of India to appoint a temporary Board, contained in the India office letter of January 11 has been carefully considered but the Executive Committee is unable to accept the proposal as furnishing a satisfactory method

of supplying the Council with authoritative information on medical qualifications and Standards in India and with the necessary guarantee of sufficiency.

(3) The Executive Committee has carefully considered the proposal of the Government of India to appoint Temporary Inspectors for the qualifying Examinations of the Rangoon and Patna Universities but find it undesirable for reasons given in the President's letter of June 12 and December 6, 1929, to renew the practice of approving the appointment of separate Inspectors which it has already found inadequate for the purpose of ascertaining sufficiently the Standard for Indian Medical Degrees actually required and enforced by the Universities".

That the Government of India were not slow to recognise the gravity of the situation is evidenced from the fact that they had made several alternative proposals to the British Medical Council all of which had been rejected by the Council. One of those proposals was the establishment of a temporary Board, which had found favour with the entire medical and lay public in India. The Government of India had suggested that the Board would consist of the Director-General of Indian Medical Service, as the Chairman and one Member from each of the medical faculties in India, who would be mostly I. M.S. officers and that they would be empowered to appoint 3 Inspectors, experts in Medicine Surgery and Midwifery respectively and report on the conduct of examinations and the sufficiency of the standards and qualifications of the Medical degrees in India. That was indeed an adequate guarantee and no manner of objection could be raised to this course. But the perversity of the General Medical Council never heeded such a sane proposal. The Council had further added insult to injury by attempting to explain away their conduct by bringing extraneous matter such as language difficulties and different Standards of civilization as affecting Medical Education in this country. These differences always existed and it may be said without fear of contradiction that they are less acute now than before. The General Medical Council is evidently perturbed at the rapid Indianization of the Medical Services after the advent of the Reforms and the loss of British prestige and British monopoly in Medical matters. Another proposal which the Government of India made was with regard to the Patna and Rangoon Universities. This related to the appointment of temporary Inspectors—the very men whom the G. M. C. had countenanced and approved of already once before—which the Council had also rejected. Col. Needham and no d--d nonsense appears to be the Council's only slogan.

All avenues of an honourable compromise with the General Medical Council having thus been closed up, two courses are now open for the Government to adopt. The first is retaliation and the second is the immediate establishment of a General Medical Council for All-India. So long as Indian Medical degrees remain unrecognised in Great Britain and in other countries in which it has reciprocal arrangement, so long must the medical degrees of those countries remain unrecognized in India. Indians have always held the field in all competitive Examinations either for the I. C. S. or the I. M. S, or any other Service and no question of inferiority has till now arisen. Why should the G. M. C. of Great Britain then condemn our Medical Standards and qualifications? It is because of the unique service conditions prevailing in India, by which the I. M. S. have obtained preferential rights and privileges and also because the Government of India hanker after British Medical qualification as an essential pre-requisite for the entrants to this Service. If the rules for admission to the I. M. S. are revised and only such candidates as possess qualifications registerable in India are held to be eligible for the commission, we dare say, a fairly good proportion of the European element will be eliminated from the I. M. S. ranks and the injustice done to the Indian medical graduates wiped out. India has produced several well-known and world-renowned scientists and scholars and if the General Medical Council should claim superiority over the Indian Medicoes, we must only attribute it to race arrogance and colour prejudice and not to any disparity in intellect. We are not, however, prepared to say we are perfect, so far as Medical Education is concerned. There are, no doubt, defects and drawbacks in the curricula of studies prescribed for the medical course; but they are the outcome of the vicious system and the bad teaching and training given in Medical Colleges, where experts in the various branches of Medical Science have been deliberately excluded, in order to make room for the I. M. S. who are considered to be all-round experts. Professorial chairs in Medical Colleges must henceforth be thrown open to specialists and must no more be confined to the I. M. S., if efficiency has to be secured. Provincial Ministers must be given a free hand in effecting these necessary and desirable reforms, in order to cope with the present situation The Secretary of State must be approached without delay to effect the necessary alteration in the rules regarding recruitment to the I. M. S.

Much is made of the ill-effects of this decision especially in the Anglo-Indian Press. But in our opinion, we think, there is no ground for despair. The only glamour that sets our young graduates to pursue post-graduate study in England is the I. M. S. and if

the Government of India should rule that a registerable qualification in India will quite suffice for entrance to the I. M. S., all that glamour will be gone and trouble and expense saved. As for those Indians, who are now studying in England, it will do, if the qualifications they have obtained in England are recognized in India. Then, the only class of men that are left will be those who wish to settle and practise in England. Such of them may well afford to have a few more years of study and spend some more money to obtain a registerable qualification in England, for they are out to earn money there and compete with the Britisher in his own home.

The next course which the Government of India should pursue is to hold themselves in readiness to introduce at the Simla session of the Legislative Assembly their bill for the establishment of an All-India Medical Council. The Secretary of State has already expressed himself in favour of this measure and the following statement in the House of Commons testifies to his sincerity and honesty of purpose.

"Mr. Benn told Major Pole, on February 3rd, that the Government of India was anxious to introduce the necessary legislation to establish an All-India Medical Council at the earliest possible date. It was however, doubtful, whether that would be possible during the present session of the Indian Legislature".

"Dr. Freemantle asked Mr. Benn to do his utmost to impress on the Government of India, that unless there was reciprocity between the Government and the two Medical Councils, Indian Practitioners would be debarred from the possibility of practice throughout the British Empire and it was therefore extremely important to keep the General Medical Council and the Medical Council in India working together".

"Mr. Benn replied that the Government of India was fully aware of the facts mentioned by Dr. Freemantle".

The Secretary of State and the Government of India are thus favourably disposed towards the creation of an All-India Medical Council. The General Medical Council of Great Britain also welcome it and consider it as the only permanent and satisfactory solution of the problem. The medical and public opinion outside is clearly in favour of this measure. The opposition comes solely from the Provincial Ministers and they must be veered round at any cost. In this connection the following pregnant observation made in the Indian Medical Gazette (Vide P. 164. March '30 issue), is worthy of reproduction here. It says:—

"Opposition to an All-India Council is less easy to understand. There does not appear to be any real danger that such a Council would override the Provincial ones. With medicine a

transferred subject, the Provincial Councils are in a fairly strong position. We believe that there is a consensus of opinion, both among the medical profession in India and amongst the lay public as to the need for such a Council, whilst its creation would once and for all meet the requirements of the General Medical Council of Great Britain. It would give India Self-Government in Medical Education, together with reciprocity with Great Britain."

The duty of the Government of India and the Secretary of State is now clear. They must try to safeguard the interests of the thousands of Indian Medical graduates who have been left in the lurch by the perverse and precipitate action of the G. M. C. and even if in doing so, they should come in actual conflict with their own kinsmen at home, they must stand by their words and not be led away by the maxim "Blood is thicker than water'. The Assembly must also stick up to their guns and not yield to the threats of the G. M. C. They must unhesitatingly pass the Medical Council Bill, which may be introduced by the Government and if no such Bill is introduced they must bring in a private Bill and get it passed at the next session of the Assembly. This fight for Swaraj in Medicine is but a prelude to the greater fight for Swaraj for India and on its success depends the future of medicine in India and the well-being of the Indian nation as a whole.

Medical News and Notes

NOTES

BY

PROF. COL. FRIOLANO DE'MELLO.

Neuritis of the abdomino genital nerve due to preherniary lipoma of Grinfeldt-Lesshaft square. M. Gamboa, H. Mollard, A. Battro (Revista de la Sociadde *de Medecina Interna y de la Soc, de Tissiologia* Association Medeca Argentina V. n 2 Nov. 1929).

The limits of Grinfeldt-Lesshaft square are: serratus posticus inferior, spinalis dorsi, the posterior margin of obliquus abdominis internus and the XII rib. The weak points of this square are those crossed by the lumbar branches of ileolumbar vessels, the vasculo-nervous orifices studied by Braun and by Baracz and Buzzynski, and the *interstice of Hartmann* between the obliquous abdominis internus and the deep lumbar muscles.

Cases of lumbar hernia published up to the present time are rare, Ghonila Houri in his thesis (1927) reports 67 cases since 1672. Sillman quotes 77 cases. Barack in 69 cases gives the following etiology : traumatism 22, abscesses 5, spontaneous 24, congenital 18.

The actual case is characterised by lumbar pain lasting sometimes 8 days, and adiating to epigastrium, right iliac fossa, hypogastrium and scrotum. Nothing abnormal in genito-urinary and nervous apparatus. The palpation shows at the level of the spinous apophysis of IV lumbar vertebra a tumour, ovoid, smooth, irreductible. Diagnosis of hernia is made, the pains being interpreted as neuritis or compression of XII intercostal and large and small abdomino-genital. Radiographical confirmation. Operation. Cure.

Regeneration of radial nerve through grafting the sciatic nerve of a calf R. Sole (*La Semana Medica* Buenos Ayres 33 Aug. 1926),

History of a person wounded by fire arm. Three months after the accident, complete paralysis of the left hand.

Grafting with a sciatic nerve of a calf, as the thickness of this nerve is, after tbe reduction caused by the fixation, very similar to that of the human radial nerve.

Fifteen days after the operation, good cicratisation. Return of the movements. One year after the author remarks a complete regeneration of the nerve in order to allow every function of the paralysed hand.

Experimental researches on tuberculosis in refractory animals V. Pettinari (*Bolletin dele ' Istituto Sieroterapico Milanese VIII F VIII* and IX August 1929.)

A long series of researches injecting with Koch's bacillus many refractory or resistant animals among these, rabbit and dog vis-a-vis of human bacillus, guinea pig and pigeon vis-a-vis of bovine type. The inoculations have been intravenous. The animals have been sacrificed from 10 minutes to 90 days after the inoculation and all their organs carefully studied. The conclusions are in resistant animals there is never caseification and the inflammation is always followed by sclerosis. Primitive necrosis is very limited ; leucocytic exudation very precocious disappearing early and followed by proliferative phenomena. The defensive cells are the mononucleors, endothelial cells and specially large macrophages with acid fast grains. The phagocytosis is evident since the 10th minute, and is very weakly exercised by the granulocytes, whose principal action is mechanic and lytic. At the

same time of their local action there is a very strong reaction *a distance* with active participation of lymphatic ganglions, bone marrow and spleen, even when there is no bacillus in these organs. The reactions in these animals are classified by the author into two main groups : the bacilli may be kept as pure saprophytes (immunity of indifference), or give rise to rapid, violent reactions provided with remarkable specificity (immunity of intolerance).

Hemocultures with novirudin M. Lusena *Bolletim del Istituto Sieroterapico Milanese* VIII Fas VIII and IX. August 1929.

Novirudin has remarkable anticoagulant properties. The author proposes to add to 10 c c of blood 1 c c of novirudin solution a 2 % and proceed to further cultures.

On the so called filtrant forms of Eberth bacillus E. Cuboni *Giornale di Batteriologia e Immunologia* IV. 12 Dec. 1929).

Almquist in 1911 has affirmed that Eberth bacillus, cultivated on common nutritent media gives rise to some *granules* able to pass through Berkfeld and to reproduce when sub-cultivated, on lactose agar at 3%, to the so called *bacterium antityphosum* of Almquist. This organism injected in rabbits develops antityphoid agglutinins up to 1/300. The studies made by the author are absolutely negative. Only the filtrates of the cultures keep the antigenic properties and develop a weak agglutinin power, when injected in animals.

On the regula.rity of Ascaris and Tricocephalus eggs emission Avinee, Tiprez (Biological Society os Lille) *Compt Rend Soc. Biol.* C II 36 9. XII. 29.

The reproduction of certain parasites by cycles and with regular intervals has introduced in coprology the notion of *negative phase* in the oviposition of Nematodes. Such phases might possibly induce an error in coprological examination for helminthic ova and Deschiens has advised successive examinations at least during 8 days before giving the patient as free. The study of authors on patients infested by Ascaris and Tricocephalus does not confirm this theory and the so called negative phase may be neglected in the microscopical examination of their ova.

Psittacosis J. Marquez (*Revista de la Sociedade de Medicina Interna y de la Socieded de Tisiologia.*) Buenos Aires V Nov 1929.

We owe to Dubief the study of the etiological relations among human and parrot disease (1892 epidemy of Paris). The bacillus

has been identified by Nocard. Gilbert and Fournier succeeded in cultivating the same bacillus from the blood of a woman patient who died of the disease in the same year. Aero-anærobe, extremely mobile, with 10-12 vibratile cils, it grows well on neutral or slightly alkaline media. Gram negative, does not liquify gelatine, neither coagulates milk, nor ferments lactose. It belongs to salmonella group and is intermediary between Parat B and Gaertner. Extremely virulent, the parrots die within 10-12 hours, when injected with one or two drops of broth culture. Pathogenous to rats, guinea pig, rabbit and pigeon. The lesions produced in animals are those of septicæmia haemorragica.

Contagion from animal to man. The interhuman contagion is rare. Viae of penetration: buccal, with or without erosion and respiratory. In parrots the symptoms are bristly plumes, wings down, inappetence, somnolency, diarrhœa, death within four or five days. In man incubatian from 7 to 12 days. Invasion: malaise, cephalea, generalised pains, bronchitis, dyspeptic troubles hyperthermia, albuminuria. After 5-7 days the symptomes are worse. Temp. 40 in plateau, sabourrhous tongue with red edge and borders, ataxo-adynans. Pulmonary troubles (bronchitis, congestion, pneumonia). Rendu has said that psittacosis is a general disease with a very serious thoracic manifestation. In happy cases long convalescence, begining 8-10 days after the period of stage. In fatal cases coma. Mild cases are observed specially in children and young persons. Prognosis very serious. 30% general mortaliy. Full report of one case.

The problem of chronic granulias. J. Palacio (*Revista de laAssociacion Medica Argentina* Nov. Dez. 1928).

The study of chronic granulias has been made by Burnand & Saye. Clinicial signs are very inconstant and diagnosis can only be made by radiography which shows the following scheme of Bezancon: modificatians of the pulmonary transparence, reticular aspect and granulations. The first two elements are firequently observed in fibrous tuberculosis. Histologic pathology shows complexe lesions, with broncho-alveolitis and *grey granulotions of Bayle*, whose nature is not well known, whether true follicles where the development of connective tissue has predominated, whether miliary tubercle suffering a fibrous transformation. As far as their pathogeny is concerned, chronic granulias are far Burnand & Saye caused by a slow propagation of the process through lymphatic agency, or better, a tuberculosis of the pulmonary intersticial lymphatics.

It is very difficult sometimes the interpretation of a radiological image as granulosis seen by this method does not always

signify tuberculosis: pneumococcia and miliary carcinosis often give granular radiological figures identical to those of chronic granulia.

The evolution of this affection, when no complication occurs, is generally *afrigore*, and may, even with very small temperatures attain a very large surface of the organ. Acute granulia, bacillary meningites, caseous peumonia have been noted among its complications.

The clinical signs are those of a fibrous tuberculosis. Hœmoptysis, and its main manifestations.

Contribution to the study of some respiratory analeptics on rabbits, whether normal or intoxicated by morphine or somnifene. Mme Elin Hellaers (*Archives Internationoles de Pharmacodynamie et de Therapie* X. XXV Fasc II. Dec 1929).

Conclusions

1. Coramine is the most regular and efficacious among the respiratory analeptic studied either in normal or in rabbit intoxicated by somnifene or morphine.

2. The action of lobeline is very irregular in normal rabbit: dangerous in animal intoxicated with somnifene, favourable in that intoxicated with morphine.

3. Cardiazol is analogous to coramine on normal rabbit; its eflects are constant in first injections on somnifene or morphine intoxication but diminishes rapidly in subsequent Injections.

4. Hexeton excites the respiration of normal rabbit as well as that of intoxicated animals, but this action is transitory and the repetition of injection gives rise to toxic accidents.

Experimental researches on the choleretic action of the neptal Chabrol, Charonnat, Maximin, Porin, Bocquent in *Compte Rendus de la Soc. de Biologie* C. II 36 21-XII-29.

The choleretic action of neptal is evident and it shows that in a powerful diuretic there is a certain paralellsm between the choleretic and duretic effects. This action is not due to the mercury contained in the neptal. The law of parallelism above referred to is not absolute, as the calcium chloride, reputed as diuretic, exerts an unfaourable action on bilary secretion.

On one case of pernicious anaemia of pregnancy. Wery *(Bruxelles medical)* X 8-Dec 1929),

Secondipare showing at the end of 7th month pernicious anemia and generalised anasarca. 1,2000.000 red glob. Iron, cacodylate, Whipple. The patient is worse. Two blood transfusions. 15 days after the last transfusion premature delivery. Mother and child well. Good recovery.

CONDITION OF THE MEDICAL PROFESSION IN TAMIL LAND—A RETROSPECT.*

BY

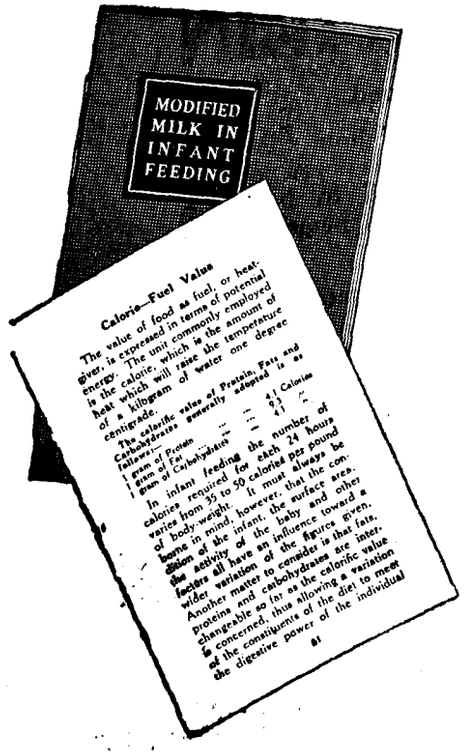
DR. T. S. S. RAJAN,

Trichinopoly.

To present a correct view of the condition of the medical profession in the Tamil land one cannot circumscribe the picture to the allopathic English medical practitioner of today, who in spite of the great addition to his number of late, form only a small bulk of the profession. It has not been possible to get the exact number or even an approximate guess of the numerical strength of the profession. Medical institutions as we know it today have not been in existence in the past history of South India. The utmost that we know is that there have been reputed practitioners of the indigenous system who by their skill and reputation gathered a number of pupils under them and imparted knowledge of the healing art. The successful of them became masters in their turn and thus a heirarchy of teachers handing down their knowledge in succession came to be the only source of medical education till the advent of the English allopathic system. The representatives of the old system are still quite numerous in our country both in towns and villages. Some of them do ply a lucrative trade often to the envy of some of us. But most of them are ignorant of the knowledge as taught and expounded by our ancients as Charaka, Sushruta, Agastya and Boga. Some of them happened to be the sons of their fathers who were successful in their time while many others have taken to the profession as a more paying one than others in which their wits could not find sufficient scope. In fact many of them have no training worth the name. It is only of late the school of Indian medicine is turning out graduates and their number is still vey small.

We have amongst us practising our profession in South India the following groups of people.

* An Address delivered at the inaugural meeting of the "Chettinad Medical Association" on the 24th March 1930 at Kanadukathan and sent for publication in the Antiseptic.



1. The unqualified practising physician-Vaidyan practising partly Ayurvedic system and partly the Siddha system, but truly ignorant of both systems except his knowledge of diseases gained by experience and innate knowledge of our people and their beliefs. These form the bulk of the profession.

2. The next most numerous class is perhaps the barber surgeon cum physician. They are so numerous, popular and cheap that it has become the popular idea particularly in villages that every barber is *ipso facto* a medical man. The only qualificatien these people have is that they are bad barbers dirty surgeons and ignorant physicians. But what is more the barber's wife, mother or daughter, have come to be recognised as lady apothecaries, midwives and specialists in the diseases of children. Verily if political enslavement of one race by a series of other adventurous foreigners could lead to atrocious forgetfulness and criminal ignorance of the elements of hygiene, we have it in our people today. I refuse to beleive that a race that gave birth to renowned writers of medical works like Charaka and Susurata—Samhitas, could have been ignorant of the rudiments of hygiene as is exhibited by the mass of our people. There must have been something rotten in our body politic between then and now to have produced this effect and history records political subjection with all its manifold evils the like of which no other country has ever witnessed.

3. Over and above the unlettered Vaidyan and the illeterate midwife, we have the Mantriks—who by reading horoscopes finds the sources of all human ailments and by a process of propitiating the evil stars profess to secure cure from ailments and sufferings. They have a very decent parctice for they fit in well with prevailing beliefs.

4. A glaring instance of our national degeneretion if proofs for such were ever wanted could be found in almost the universal belief in giving medicine to make one obedient and docile to one's will. It is either a girl supposed to have administered medicine to her husband to make the refractory fellow listen to her against those of her mother-in-law or it is the mother-in-law who gives the medicine to her son-in-law to make the rebellious youngster obey her daugher or it is a jealous cousin coveting the wealth of his brother for which the secret remedies are administered. There are to-day a class of professionals reputed in removing these medicines and they do drive a profitable trade. Go to him or her for there are practitioners of both sexes in this class it does not matter for what disease, he is sure to diagnose the medicine in you, administered by some one some time ago. With this

prophecy he will get at the family history, find out the culprit for you and if you are a disbeliever, he will bring out the very medicine from inside your stomach and exhibit it before your unbeleiving eyes and prove his case to the hilt. Not a day would pass without some one calling into my Clinic to be X-rayed to find out whether there is medicine within once inside and any amount of argument to the contrary will not convince him.

5. The patent medicine vendors are a formidable class of practitioners and perhaps some of them thrive better than the best of us. Western patent medicines are only less recent than the indigenous ones. Even before the booming newspapers with their fatly paid lies called advertisements ever found their way in India, the manufacturer of secret remedies had made his mark and reputation: The more secret the remedy, so popular verdict goes, the more powerful it is. The essence of electricity bottled up, Himalayan remedies secretly learnt, so it is advertised by theft or murder of a great Yogi, sovereign remedies got directly from the Great Healer of all pain are almost as ancient as this hoary land of ours. But modern advertising has put up the pace of this trade and has even tempted qualified men to take up this lucrative line in recent years at the sacrifice of honest professional work.

6. In the medical world of South India these groups are still having their day and into this hotch-potch of ignorance, superstition, blind faith, poverty and squalor the allopathic is thrown to strive to compete and to conquer. Nor are the allopathic practitioners at all homogenous, all the evils of caste system seem to have penetrated into the medical grade in this country. Grades in the imparting of knowledge are things unknown in all ages and in all climes. There is the Seventyfive rupees worth of sub-assistant surgeons, the two hundred rupees worth of Asst. surgeons and the thousand rupees worth of District surgeons. The minimum knowledge required is also graded. The small paid man should study for a less number of years, read less number of subjects and the ratio of years of study and subjects increasing with the higher castes. Then there are the poor untouchables the private medical practitioners. Of the untouchables there is the Palla and the Pariah, the former being bounty fed rural practitioner who is like the Centaur a half Government servant and half private medical man and the latter the independant medical practitioner who is to keep his distance from the Government medical men. This amusing menagerie of the practitioners of one system of medicine it is impossible to find in any other country but India. In this unenviable position, any attempt at

bringing together these caste-ridden elements of our tribe into something like an organised body, for mutual understanding, cooperation and enlightenment should be welcome. It is an undoubted fact that today there is a great lack of understanding and consequent jealousy amongst the practitioners of the Western system of medicine. The men in the state hospitals are not found guilty of over flowing sympathy and good will to the private practitioner whom he often considers as an interloper in his domain. Till recently the private practitioner could survive only as long as he played second fiddle to some boss of the district headquarter hospital or the metropolitan hospital. Now things are changing slowly. The private medical practitioner is growing in numbers and in quality and it is only a question of time-in the near future-when the medical practitioners will come into their own and take their rightful place in society. But the struggle is bound to be hard and the path none too smooth. Poor by parentage, poorer for the costly education they have had, it will be a wonder if and when they launch forth into the world as doctors they could boast of a long purse. Denied the opportunities for efficient post graduate study in the state hospitals, they find the school education not complete in itself to enable them to stand steady on their legs. The average poverty of our country adds to our troubles. The medical man has been comparitively poor as in his emoluments than those of the sister professions of law and engineering not only here but also in other countries. The vanity of some of us which makes us think, we are a superior order of beings and that the stupid world has not rightly understood our merits is ruinous particularly to one who is a novice in the profession. Humility, willingness to learn, a desire to understand our patients more than even the disease are some of the qualities that stand for success in life. It never pays to speak ill not only of the members of our profession but even of others who may in their ignorance commit mistakes.

South India may boast of many hospitals. But most of them are run by Government and the local bodies one by one are giving up the hospitals under their charge to the Government. They want to be relieved of the drain on their slender resources by medical institutions. The progress made towards self-government here seems to be the reverse of what happens in other free countries. In England most of the hospitals are the products of private benefactors, public subscriptions and charitable endowments. The local boards also maintain their own institutions. Very few hospitals are owned or controlled by the state. They are all manned by practitioners who give their service to the institutions almost free. With the fame and experience gained in these institutions

they become speclalists in their line and then their fortune is made.

Allopathic medicine to be of any use must be supplemented by careful diligent and educated nursing. Many of the Government hospitals are very poor on the nursing side. Missionary institutions are trying to train nurses but they are only a few and that is not enough for our requirements. The nurses of the Madras Nursing Home are too costly for the majority of the poor Indians. In fact they cost much more than the doctors and our people cannot understand why they should cost more. There are no private nursing homes if we exempt one or two at Madras, and one or two in the Mofussils. When the nurses are scanty, few and costly, nursing homes are not profitable concerns. The initial language qualifications necessary for a nurs'es training are placed too high for the Indian woman and the education is given in a foreign tongue which only few women understand. We can train men nurses. There are plenty of unemployed youths turned out from all schools and colleges whose qualifications do not find a market. If the Goverment is at all serious they would find quite a crowd of applicants for nurse's training from the school final condidates if only they are offered some decent sustenance and respectable living wage as is held out to the women. In fact many of the ward boys of the Madras General Hospital do make excellent nurses. Medical practitioners would do well to pick up intelligent young men with good character and train them to do nursing work. The midwife can well be trained as a good nurse. A knowledge of English is not a necessary condition for skilful nursing. If this fact is borne in mind then the problem of nursing becomes an easy and accomplished task.

The idea of institutional treatment for diseases is still in its infancy. Our people have come to understand institutional treatment for surgical cases but for medical cases they believe the attendance of a medical man and a bottle of mixture is all that is necessary. For maternity cases it is next to impossible to induce them to come to the hospitals for normal labour. Very crude ideas prevail amongst us about the conduct of labour. No one even thinks that medical help is at all required for normal cases and when they become abnormal and difficult the medical man is called in often too late. Drastic social legislation regarding maternity is a dire necessity. It has done good in all countries where it was enforced and is bound to do good here if adopted. But who is to bell the cat? Will our Health Minister dare do it? Will the Government care to enforce it? It is not part of their budget deficit.

The general medical practitioner in this part of our country starts not with one or two handicaps but a series of them. In fact it is all handicaps for him from beginning to end. No one need be jealous of us. We have a Provincial Medical Council in our province. I have been a practitionor for nearly quarter of a century. I have yet to know what this body is doing. It has found a place in the statute book and has thereby escaped mortality. But a more moribund body cannot exist. Just as our University is famous or notorious by its exam[illegible] the Madras Medical Council is famous by its occasional in[illegible] tional proceedings. Some years ago a medical practitioner w[illegible] hauled up for his association with an Ayurvedic instituiion. Recently, the President of the South Indian Medical Union was informed by this august body that association with qualified practitioners of the Indian system tantamounts to unprofessional conduct. But funnily enough the Local Government turns out Ayurvedic graduates under their stamp and seal from the School of Indian medicine. Absurdity has its limits but our local medical council is blind enough not to set any limit on its absurdities. Once in every two or three years one gets a frantic appeal from some practitioner for a place in the council. Every caste has its representatives on this body and the communal elections appeal to particular caste for notes. Why they should go there and what is it that they or their forbears have done is not told, but every one says he goes to protect and watch over his caste. The truth is there is nothing to protect and there is nothing to watch. The medical education of the country is not in its hands, the services are not in their hands and they are not examining bodies. They are a set of men clubbed together for the glorious task of keeping up a register of medical men of all grades. It comes in very handy for the importing chemist. He gets a list of the army of medical men ready made for him, with their qualifications. No doubt patent medicine samples pour in but we know there is not much philanthrophy behind it. Occasionally a name is struck off the register and no body seems to be hurt by it, except the register.

To-day the General Medical Council of Great Britain has flung an insult in the face of the profession in India and what answer will these dummycouncils make. Have they the strength to protest against it? Our Legislative Council may record a protest if they have enough self respect and if they truly represent the nation. But our medical council cannot do even that. Our medical council has representatives of the I. M. S., the brahmin caste, few in numbers, heavily represented in proportion, the university graduates-the non-brahmin class larger in numbers-proportionately less represented than their number would demand, lastly the

untouchables the sub. asst. Surgeons largest in numbers and smallest in representation in proportion to their numbers. The untouchable qualification is confined only to the four corners of India. Outside India they cease to be medical men. Their qualifications are not recognised by any body. The credit of creating this class belongs entirely to the Government and they are a special patent of the Indian administration. It is not enogh privilege for them to be at all represented equally with I. M. S. men. The university graduate has now come to share the fate of the sub-asst. surgeons! He too is not tobe recognised beyond the Indian shores. It is useless to go into the disgusting reasons given out by the British General Medical Council for witholding recognition. Our climate, our colour and our civilisation all seem to have contributed to their decision. But when you remember that this inferior education is given by the very men whom the British Medical Council has given out of its superior register as our teachers, you may be in a position to know what to think of their decision. It is mere pique, offended vanity and insolence of power. Knowing that we cannot retaliate they should have been generous in their strength.

In narrting to you these facts it is not my desire to overpaint the picture. The facts are grim enough without any relief of colour. If I could have conveyed to you some of the difficulties under which we have to work, the dire need there is for all of us to come together, if for no other purpose but for our self preservation, the objective for such an association that you are inagurating today would have become evident. We must become worthy of being preserved and that can be done only when we have the knowledge, the resources, the utitlity that are indispensable for the societies we want to serve. This association should draw in its fold every medical man in the District. It should serve as a centre for dissemination of medical knowledge, as a place for mutual exchange of ideas, and of healthy cooperation among its members. It must be able to run an ideal well equipped nursing home where-in all its members may bring their cases, do their operations, get their diagnosis confirmed by x-ray and have the full benefits of radio Electro-therapy in addition to the nursing. You have to create the nursing staff suitable to our needs, cheap, useful and efficient. If by your combined efforts you succeed in creating one such institution you would have indeed done some service not only to yourself but to our suffering humanity at large. With these few words I wish you god speed in your noble endeavour.

Gleanings from Medical Press

SURGERY.

Treatment of Ankle Sprains. Charles P. Hutchins. Boston Med. and Surg. Journal, CXCVII, 91 July 21, 1927.

In his article on ankle sprains, Hutchins first inventories the pathological possibilities, that is, the extent to which ligaments and tendons may be involved without fracture or dislocation of bone.

Sprain of the ankle is most often caused by unguarded movement, by which the foot is turned suddenly inward (rarely outward), with sufficient force to rupture the ligaments, and possibly some of the fibers of the muscles, and to strain the tendons and sheaths.

An anatomical consideration is presented by the author to demonstrate that eversion sprains are much less common, due to the arrangement of structures about the ankle joint. He states, too, that when the foot is at a right angle to the lower leg, or when dorsally flexed to a lesser angle than that, sprains at the ankle joint are rare.

Treatment consists of strapping, the following technique being that employed by Hutchins.

"The patient is seated upon a table at such a level that his depending foot hangs six or eight inches lower than the knee of the operator, who sits facing him. With adhesive straps one and one-half inches wide cut to length, the patient's foot is placed upon the operator's knee so that the ankle is dorsally flexed to eighty or eighty-five degrees from the long axis of the tibia and rests the full weight of the extremity upon the head of the fifth metatarsal. The patient's leg must be wholly passive. This leaves the leg on straight alignment from hip to ankle joint, and throws the foot into slight eversion. The first strap runs spirally around the lower calf on the medial side, across the instep and cuboid, under the sole, falling into a natural sweep on the dorsum. This is the salient control of the hypermsbility. The second strap is a counterpart in the opposite direction, acting to limit eversion, and balancing the first. The third support is a stirrup from the middle calf, and passes in the lateral plane of the ankle joint. The fourth and narrow strip retains the third support in contact with the leg at its isthmus above the malleoli. It is imperative that the patient's

leg be maintained in the same posture throughout the dressing, and his muscle action inhibited."

When the joint is firmly held by support, the patient is encouraged to walk; for functional use, if it does not cause further injury, is the best stimulant to repair. When the angle between the foot and the lower leg exceeds ninety degrees, the plaster is changed, Diathermy is used in conjunction with the strapping.

Acute Infective Osteomyelitis Treated by Conservative Methods H. H. Brown. Lancent I, 928, April 30, 1927.

An attempt was made to save the diaphysis by "through disinfection of the bone".

Boy, aged six admitted June, 1921. Had fallen and bruised left tibia six days previously. Temperature 105. Pulse 160. Left leg swollen, red acutely tender.

Operation: Incision along whole length of inner surface of shaft of tibia. Whole of diaphysis bathed in pus, periosteum everywhere separated. But was washed away. surface of bone and periosteum scrubbed with gauze soaked in 1 to 20 carbolic, then methylated spirit, then ether and packed off with gauze. The shaft of the bone similarly cleaned with carbolic, spirit and ether. Slips of gauze soaked in bipp were placed between the periosteum and the bone. and cavity was also stuffed with gauze soaked in bipp

The following day the temperature fell to normal and all œdema, redness and tenderness had disappeared. The gauze packing was removed after three days. The diaphysis retained its vitality and no involucrum was formed round it.

A small sequestrum about theree-quarters inch in length was extruded from the upper end of the tibia.

At present time the leg appears normal. except for the operation scar. A radiograph shows that the tibia is also normal in tructure, and that there is no thickening or deformity.—(*Oklahoma state Medicine*).

Treatment of Facial Paralysis. By W. L. Cahall, M.D., St. Luke's Hospital, Utica, N. Y.

Owing to its peculiar course and relationships, disease or injury to the seventh nerve is of rather common occurrence. Any procedure that will afford encouragement is indeed welcome. The emotional state of the patient is of prime importance. Inability to move the muscles of the face, especially if the orbicularis palpebrarum is involved, induces an exaggerated estimate of the pathology, and an apprehension of a calamitous outcome. It is futile to attempt to assure the patient of a favorable prognosis and probably a speedy recovery, unless recourse is had to a method that is prompt, active and effective. In unilateral facial paralysis, recovery is the rule within one to four months, but this period can be reduced to two or three weeks, and at the same time the emotional apprehension can be alleviated in a day or two. My experience has been that women exhibit a greater panic than men, and are abnormally apprehensive that the asymmetry will be permanent. At the same time, they cooperate more fully when they realize that the treatment is accomplishing the desired results.

Consider the anatomical relationships of the seventh nerve, and lay a foundation for a survey of the etiology and essential elements of the prognosis. The facial nerve arises from the lateral tract of the medulla oblongata, in the groove between the olivary and restiform bodies. Its deep origin may be traced to the floor of the fourth ventricle. The nerve passes forwards and outwards upon the crus cerebri and enters the internal auditory meatus. At the bottom of the meatus, it enters the aqueductus Fallopii and follows the serpentine course of that canal through the petrous portion of the temporal bone, and emerges at the stylo-mastoid foramen. In the Fallopian canal it receives and gives off numerous filaments, forms intimate relationship with neighboring nerves and enters into the composition of Meckels ganglion and the Otic ganglion. At the stylo-mastoid foramen, the nerve is surrounded by lymphoid srtuctures, and in its passage forward, it traverses the substance of the parotid gland. About a quarter of an inch above the stylo-mastoid foramen, the chorda tympani is given off. It ascends in a distinct canal parallel to the aqueduct and traverses the cavity of the tympanum, to emerge through a foramen at the inner side of the Glasserian fissure.

Thus, we see, that throughout its course, it is both securely housed and hazardously exposed. Housed in its bony canal, and jeopardized by its very protection, for it will be readily perceived that any inflammatory swelling, hemorrhage or lymphatic engorgement, would produce an immediate pressure on the nerve that would obliterate its function. Fortunately these conditions are usually transitory, and the function of the nerve is speedily restored; but when they persist for a sufficient time to produce degenerative changes in the nerve, the paralysis is either long standing or permanent.

In addition to the hazards above enumerated, many other etiological factors have been advanced. A central lesion, whether

hemorrhagic, inflammatory or neoplastic, may cause a complete loss of expressional movements of the face, and is usually permanent, and occasionally bilateral. Inflammation of the tympanic cavity may extend sufficiently to invade the nerve, and Teik advocates that a routine examination should be made for an otitis media or mastoiditis, especially in the first two decades. Neumann lays stress upon the large number of lymphatics and lymphatic glands encircling the nerve at its exit from the stylo-mastoid foramen, so that a fulminating pharyngitis or a cervical adenitis may induce a stagnation of lymph, or transmit a frank inflammatory process to the emerging nerve and thus choke it off in its unyielding canal.

But by far the largest number of cases of facial paralysis are the result of exposure to cold or to a draft of air upon the side of the neck. This is the so-called rheumatic type, or Bell's palsy. It is in this type that the most brilliant results are obtainable, and a usual six weeks duration has been cut to two. And not only that, but the patient realizes a distinct improvement in his condition within two or three days. His confidence is gained and his direful forebodings are forgotten. His nervous equilibrium is re-established, and he is amenable to all suggestions as to his own part in restoring conditions to normal. His facial gymnastics assume their proper importance, and active co-operation comes as a matter of course.

A diagnosis of facial paralysis is obvious. There is no sensory symptoms with the possible exception of a slight numbness. At rest, the affected side shows a lack of expression—rather a mask-like appearance. All voluntary movements are impossible on the affected side, and the face is pulled toward the sound side. The angle of the mouth is elevated by the zygomatici, and all efforts to whistle, smile, grin, frown, or to close the eyes, are futile, producing a ludicrous distortion of the face. The platisma is invariably involved, and the occipitofrontalis usually so. Inability to close the eyes is one of the most distressing symptoms, and may eventuate in a keratosis from a lack of control of the tears, which escape over the drooping lower eyelid and run down the cheek. If the lesion is near the stylo-mastoid foramen, the chorda tympani may be involved, and there is a resulting diminution of salivary secretion. Where the lesion is higher up in the canal, the tympanic branch may be involved, and hearing may be accentuated due to the unopposed action of the tensor tympani. When due to middle ear disease, and in disease at the base of the brain, involving both facial and auditory nerves, hearing is lessened. In the latter case, bone conduction will be either diminished or lost.

Thus it will be seen that there is more involved than a mere diagnosis of facial paralysis. The location of the lesion may be determined by examination of the muscle groups involved, and a prognosis determined with a high degree of accuracy.

In treating this condition I first reassure the patient and allay his fears. A calm talk with him as the examination progresses does much to inspire hope and enlist his cooperation. A surface electrode, connected to the Oudin or unipolar current, is applied to the affected side of the neck, and by my fingers, I draw the current toward the various muscle groups, preserving their tone and nourishment, and maintaining the continuity of nerve conduction in preparation for the later sinusoidal current. The electrode is changed to the sound side, and to both cheeks, and by careful manipulation the entire affected side is heated up. A gentle massage is then given the face, with special attention to the paralyzed muscles. The patient is then advised to rest as quietly as possible, making no effort to try out or exercise the muscles of the face and to return for treatment the following day. On the second treatment the same course is followed, and at this time or at the third treatment a gentle stimulation with sinusoidal current is instituted, care being taken that the current is not strong and that the paralyzed muscles are not over-worked. This line of treatment is pursued throughout the period of disability, and gradually intensified especially as to massage and sinusoidal, until complete function is restored. As a return of function is established, the patient is instructed to institute voluntary motion of all the facial muscles on the affected side, but to stop short of fatigue.

I have treated many patients by this method, but lack of time precludes more than a few case histories to illustrate.

Case I. Female, school teacher, gave history of attending a dance, to and from which she rode in an open auto. Two days later, she noted numbness in right side of face and sluggish muscular action. By evening, the entire right face was paralyzed, and she came to me for treatment. As she was very nervous over her condition, and was especially anxious to return to her school, she was given two treatments daily of slightly shorter duration, however. By the second day, voluntary motion was perceptible, and in less than two weeks there was perfect return of function of the entire face.

Case II. Greek school boy, gave indefinite history of repeated colds and sore throat. Was referred to me for treatment on day that paralysis developed. There was complete immobility of all muscles of the left side of the face. The routine treatment was instituted, with the addition of sterilization of the tonsils in accor-

dance with the method reported by the writer before this body at its last session. Voluntary motion was perceptible on the fourth day. There was a lack of cooperation on the part of this patient, and progress was delayed. However, after three weeks there was practically complete restoration of function of all muscles.

Case III. Negro male about sixty years of age. Because of extremely poor articulation, no adequate history was obtainable. All muscles of both sides of the face were paralyzed, but there was slight function in occipito-frontalis. He was put on routine treatment for a month without any perceptible benefit. In the meantime, a Wasserman was taken, and the return was 4 plus. He was sent home as incurable, and died within a month, the diagnosis being cerebrospinal syphilis.

SUMMARY

1. The operator should have confidence in his method of treatment.

2. The fear of the patient should be allayed as much as possible.

3. The first one or two treatments should consist of only a thorough warming of the parts.

4. Sinusoidal should be instituted very gradually, at first a bare stimulation, and as function returns, increasing to good contraction.

5. Facial gymnastics should be urged upon the patient when function begins to return, and the tonsils should be cleaned up, if they are suspected of being a focus of infection.

6. A favorable outcome may be expected in two weeks, and perceptible improvement in two or three days.

7. Central lesions are, of course, not amendable to treatment by this method.—*Archieves of Physical Theraphy.*

MEDICINE

Thymus gland enlargments.—D. H. Smith as a result of animal expriments, questions whether an enlarged thymus is really a cause of sudden death in cildhood so frequently as supposed and recorded. His experience is that the injection under anaesthesia of different quantities of paraffin into the thymus-region of the anterior mediastinum of guineapigs produced no ill and far from any fatal effects. E. J. Barnett in an analysis of twenty cases of enlarged thymus in children, in whon the condition was confirmed by the X-rays, finds that in all of them the same syndrome prevailed. This consisted of coughing, wheezing. and dyspnœa especially at night, the presence of much mucus in the upper air-passages, a crowing note on crying, frequent apparent chokings, with occasionally, convulsions, The presistent respiratory symptoms always attracted attention during the first month or two after birth and were almost invariably relieved, together with shrinkage of the thymus by X-ray treatment, (*Seattle: North-West Medicine* xii) —*Medical World*

Treatment of Emphysema by Mechanotherapy.—Kellgreen-Cyiar, of the Elizabeth Gatrett Anderson Hospital (London), reports a case of emphysema in a male patient, 73 treated entirely by mechanotherapy. (*The Lancet.* Decemser 28, 1929.) He is decidedly encouraged by the results, as in 200 cases treated previously he failed to improve the condition in all but two. He believes that even if some of the manipulations may not be known to the practitioner relief would soon follow merely from *intermiltent* pressures on the front and sides of the thorax, provided they are done evenly, gently and elastically during expiration—followed by execrcises 7 and 8, given below. The exercises follow:

1. Strong manual vibrations over the front of the chest, and and stimulatory nerve frictions on the upper four posterior dorsal nerves which communicate with the posterior pulmonary plexus thru the anterior spinal nerves and rami communicantes.

2. During attempted prolonged expiration intermittent pressures (about 5-9 per expiration) manually, over the upper lobe anterior, first gently, then more strongly.

3. Strong mannal vibrations over the apices, and gentler vibrations on the trachea to loosen the sputum.

4. Short, sharp flicking clapping with the finger-tips to the chest and firmer hacking with the ulnar edge of the hand between the scapulæ.

5. General abdominal manipulation just below the diaphragm especially the gastric area.

6. Petrissage and circumduction of the legs to remove œdema.

As soon as the patient's condition permitted the following exereises were added.

7. The patient semi-reclining stretching, above his head his hands, grasped by the operator, approximated his elbows in front of his face, and during forcible expiration drew them downwards on to his chest, against resistance.

8. The patient sitting upright with straight arms abducted to a right angle, carried his arms forward during forcible expiration against the resistance of the operator's hands placed on the patient's wrists.

The last two exercises were repated three times, the pressure of the contracting pectoral muscels assisting expiration. The patient was also told to practise expiration by himself several times daily. a few breaths consecutivey.

Treatment on these lines daily for a fortnight resulted in increased elasticity of the thorax, diminution of the barrel-shape and kyphosis, the breath sounds become more audible. The pain in the side had gone and the patient had not coughed for two days. Sleep was good and walking quite easy. Six months latter the improvement had been fully maintained.—*American Medicine*.

Correspondence.

TO THE EDITOR "*The Antiseptic*" *Madras*.

DEAR SIR,

Dr. Malek has reported in your journal his experience of injections of emetine in combination with other drugs in hope of getting the opinion of other brother practitioners.

I have been using Emetine combined with other drugs for the last four years and a half with very encouraging results. I have not used the drug in many varied combinations but only with two and I record my experience as under:—

1. Emetine with quinine:—

I have used this combination more than once. It is my practice to use it whenever I cannot arrive at a diagnosis as to whether fever in a case is of malarial origin or hepatic. I remember being called to a patient who had enlarged tender liver as well as enlarged spleen and a history that could be fitted in with both diagnosis. Laboratory facilities are not always within the reach of a private practitioner and they were not available to me then. I gave him a course of combind injection with satisfactory result. I do not use the small dose that Dr. Malek seems to be using. I always combine 1 grain of Emetine with five to ten grains of quinine according to the need of the case. I do not believe in the so-called depressing effect of Emetine. Used properly the drug is quite harmless and needs nothing more than the ordinary aseptic precautions common to all intramuscular injections. I can say this with conviction having given the drug in hundreds of cases in all sorts of conditions.

2. Emetine with Arsenical preparations:—

(a) **With Sodium cacodylate**:—I use this combiuation as well as the following in chronic cases of dysentery. Though I have no statistics to present I have gathered the impression by constant use that combination works much better than either of the drugs given alone. It is particularly valuable in anæmic cases.

3. Emetine with Cyto-serum:—

This is a very valuable combination in chronic dysenteric cases and seems to be much better than the previous one. Besides being perfectly harmless it acts quicker and has toning property on account of Cyto-serum containing Strychnine in small quantity. I use this combination especially in chronic cases which relapse and become acute. I have seen in cases where I require immediate effect, given them by intravenous route without any ill-effect whatsoever. It is interesting but unexplainable to note that patients who are restless and sleepless feel much comfortable and sleep better after the injection. I have noted this repeatedly. I ascribe this effect to Cyto-serum as the effect is noticeable after injection of Cyto-serum alone.

I hope the above experience of mine should encourage Dr. Malek to pursue his practice of using Emetine in combination with other drugs as his has done in my case.

Yours faithfully,
K. V. ADALGA.

Book Reviews

Varicose Veins with Special reference to the injection treatment.—by H. O. McPheeters, M. D. F. A. C. S. Published by F. A. Davis and Company, Philadelphia, Illustrated with half tone and line engravings. P. P. 208.

The book is a resume of the world's literature on the subject including anatomical and embryological details. Experimental and X-Ray evidence of the direction of Venous flow in varicose Veins is given, In addition to dealing with the injection treatment in all its minute details, the general treatment is discussed in a well balanced way. Gross and microscopic pathology following the injection treatment has been specially treated. The treatment of ulcer which is a problem by itself is described with minute care. A common sense method of treatment of Elephantiasis in its early stages is described. Bibliography is included at the end of the book.

This book is by far the best on the subject and will be a very valuable addition to all the libraries and to the Surgeons.—N. S. Narasimha Iyer, F.R.C.S.

Haemorrhoids—The injection treatment and Pruritus Ani. Lawrence Gold Bacher, M. D.—F. A. Davis and Company, Publishers, Philadelphia-illustrated with 31 Halftone and line engravings some in colours.

Most cases of internal Hæmorrhoids are curable without recourse to Surgery and they are treated by injections in other countries. Practitioners who do not have the privilege of first hand experience require a guide which the present book admirably fullfills. There is an additional chapter on Pruritus Ani and a pathological description is given which requires confirmation. Believing in the pathology, "subtegumentary channels and tissue spaces' to be a definite factor, the author has formulated a line of treatment in Pruritus Anus with success. Illustrative cases are appended. The treatment is harmless and is well worth trial in this most distressing malady.

The book is cordially recommended to all surgeons.—N. S. Narsimha Iyer F.R.C.S.

The treatment of Varicose Veins of the Lower Extremities by injections:— By T. Henry Treves-Barber, M. D., B. Sc., with foreword by H. W. Carson F. R, C. S. P. P. 120; illustrated; Price Sh. 6/- net Published by John Wright and Sons Ltd. Bristol;:—

The book describes succinctly the methods of examination, diagnosis and pathology of the condition. Those who are not acquainted with the details of the treatment before will be able to choose their cases; the indications and the contraindications and the minute details of treatment are given. The connection of Varicose Veins with Puerperal Septicæmia is discussed and it opens up a research to combat puerperal infections of unknown and hitherto unsuspected origin. The book will be found useful by Practitioners.—N. S. Narasimha Iyer, F.R.C.S.

Pediatrics.—Edited by Isac A. Abt. M. D., with collaboration of Arthur F. Abt., M, D. 1928. Published by the Year Book Publishers, 304 South Dearborn St. Chicago. Pages 441. Price $2-25.

This is one of the Practical Medicine Series on the year's progress in Medicine and Surgery, published in eight volumes each year. In this small volume the editor has given a brief summary of the year's progress in the field of pediatrics. The importance and usefulness of such a book becomes manifest when you know

that the contributions and views of as many as three-hundred authors appeared during the course of the year are discussed briefly, and these were in different languages by eminent Scientists of the world. To be a successful medical man he should be in touch with the recent advances in all branches of medicine and Surgery, which means reading a vast amount of literature on the subject appearing day by day, which will not be within the scope or means of all practitioners. But a manual of this kind is welcome to the practitioner and the specialist, which could be easily read and referred to. The book comprises all branches of pediatrics, and begins with diseases of the new-born and ends with the important surgical affections among children. A concise summary of the contributions on infant feeding is given and contains a brief discussion on "Nutrition and Nutritional disorders." The Sections on diseases of the different systems of the body will be of interest to all. The importance of such common diseases as rheumatism, tuberculosis, syphilis, tetany and rickets is not lost sight of, and extensive references are given under these headings. The book is a clear exposition of the whole subject, easily readable and understandable. We highly commend it as one of the most useful books which every medical practitioner and the specialist in Pediatrics should possess.—*K. L. R.*

The Eradication of Leprosy from the world—by Ezra Broadfard Stiner, M. A., Published by Orissa Mission Press Cuttack. Pages 175. Price Rs. 5.

The leper problem is a serious question of the day, and no headway is made either by the Government, or the public in the eradication of this dreadful disease. Leprosy is a social waste, and a menace to the whole world and is more prevalent in India than is thought of, for want of proper restraint and treatment of this loathsome disease. This dissertation is a treatise on leper problem, and in this book the author discusses the solution for the eradication of leprosy from the world. The book is divided into three parts. In the first part the nature and development of leprosy with the history of spread from the olden days, the manifestations of the disease and the lepra bacillus, are decribed. The second part deals with the methods of eradication in vogue in ancient and midiaeval times and how it failed. In the last part the author discusses the fourfold course of eradication of the disease by Segregation, by E. C. C. O. treatment by leper clinics and by leper organizations. The book deserves to be read extensively both by the laity and members of the profession for the useful information and the original views expressed on the difficult problem of eradication of leprosy from the world—*K. L. R.*

Methods and Uses of Hypnosis and Self-Hypnosis:—By Bernard Hollander, M.D., M.R.C.S., L.R.C.P., pages 191. Price 6. [George Allen and Unwin. Ltd. London].

This is a small treatise on this mysterious and still unexplored subject of hypnosis and describes the powers of the subconscious mind and how hypnosis can be used successfully in the treatment of nervous and mental disorders and moral failings. The author is well-fitted to write on a subject which he has studied and practised all his life, and the investigations, experiences and views presented herein will be of universal interest. The book is clear, simple and very intelligible even to the general reader, but still full of deep learning and acute observation. The author discusses the best methods of induction of hypnosis, shows that, contrary to common belief, hypnotic state is not necessarily so deep as sleep but a peculiar state of profound abstraction or absent mindedness, in which the subconscious contents of the mind can be brought into conscious activity and utilized for practical ends—a state resembling that in which men of genius have achieved their highest elevations, while completely oblivious of their physical sensations and external surroundings, The treatment of bodily and mental disorders by the application of hypnotism is described with examples from author's practice and shows how senses like sight, touch, smell, can be accentuated and intellectual powers like memory can be increased in a hypnotised individual. A brief discussion on supernormal phenomena as clairvoyance, telepathy, apparitions and premonitions is also given. The book will be of universal interest and great value to the medical and psychological expert and the general reader.—*K. L. R.*

Manual of Hygiene and Public Health.—By Jahar Lal Das D. P. H., Published by Butterworth & Co. (India) Ltd. Calcutta. Second Edition. Pages 661. Illustrations 105 Price. Rs. 3/8.

The manual has been revised and extended so as to bring it up-to-date, The book is the outcome of the author's long and varied experience in public health work, and so more stress is laid on the practical side of the subject with special reference to the tropics. The subject of hygiene and public health is well-written in a simple and clear manner with great detail and profuse illustrations. The book is complete with chapters on vital statistics, house Sanitation, public health survey, climate and meteorology. Medical inspection of schools, maternity and child welfare, and appendices containing useful informations pertaining to public health and Saintary regulations and laws and we firmly believe that the book will be, as before the favourite among the medical

and public health students, officers of public health and others interested in public health work.—*K. L. R.*

Anæsthesia and Anaesthetics—by Syd Ali Hasan M. P. L. Pages 125. Illustrations 16. First Edition 1929. Price Rs. 3/- Published by the author.

The book is based *mainly* on the author's experience as an anæsthetic to the Victoria Jubilee Hospital, Amritsar for a long time and as such contains valuable informations, practical suggestions and original views, The preparation of the patient, the technique of administration of general anaesthesia, untoward accidents during anaesthesia, and after effects, are discussed from a practical standpoint. The Spinal anaesthesia has been fully discussed and will be of valuable and interesting reading to every body. We have to congratulate the author on getting such an excellent and useful book, written clearly and concisely, with up to date and practical informations. We highly commend it to all practitioners and medical students, who are interested in the administrations of anaesthesia.—*K. L. R.*

Sex Problems in India:—By Prof. N. S. Phadke, M. A., Published by Messrs. Tarporevala, Book Sellers, Bombay, 2nd edition. Price Rs. 6/- or 10 sh. 6 d.

This is a very interesting and outspoken treatise on sex problems in *India*, which outstrips even Miss Mayo's book "Mother India-in its indictment of the social customs prevailing in this country at the present day and perhaps, coming as it does from a friendly pen, it has not aroused that amount of storm, protest and indignation which Miss Mayo's book had done. The author has rightly commenced his book with the woeful tale of India's high mortality, in *general*, and the highest infantile mortality, in particular, as compared with those of the other nations of the world and passes on to consider in vain how the equally high birth rate can be a sufficient compensation for this heavy decline of India's population, The panacea for all the social and sex evils in India, is centred, according to the author, in birth control. He begins to prove, by statistics, world's achievements in reducing mortality and producing a manly race, through the adoption of Eugenic principles. His conclusion is summed up in these words "Uncontrolled procreation gives plentiful progeny, but such progeny is unfit and short lived, while birth control gives rise to fit progeny without impeding the net growth of population." After preaching continence of the old Aryan type with all the solemnity he can command, the author, perhaps, rightly, dismisses it as impracticable in this age and from the

point of view of the present day average man and woman in India. He then goes on to discuss the merits and demerits of the several artificial contraceptives in vogue and advises the cap and the quinine tablet as the safest. The abuse of contraceptives and the immorality and sin, which it leads to, have also been discussed in this book and brushed aside with the remark " to condemn contraceptives simply because they are likely to be abused is nothing short of bigotry " Eugenic education is finally advocated. The book affords good food for thought and will be found invaluable to students of Eugenics:--*S. T.*

Tropical Midwifery.—By Dr. V. B. Green Armytage M. D., F. R. C. S. Lt. Col. I. M. S. Thacker Spink & Co. Ld. Calcutta Price. Rs. 3/8.

This little book might have been made very useful both for practitioners and students, as it is obviously founded on large and varied experience and the teaching is given in the brief dogmatic fashion which appeals when one is in haste for a solution of one's difficulty. But it is deplorable that such an eminent obstetrician should not realize that the fœtus in utero has as much right to life as its mother. We are told to destroy the living child in cases of difficulty vide pages 11 and 31 and to induce abortion in several conditions v. pps 142, 143, 147, 149. The fœtus has as much right to live as its mother. It cannot be maintained that it is an unjust aggressor and therefore deserving of death. It is through no act or volition of the fœtus that the mother's life is endangered. If the leading obstetricians in India would preach and practice sound antenatal care in season and out of season. A public opinion would more speedily arise which would bring to mothers in cities the benefits of such care, and would therefore obviate the committal of these medical murders.

The diet advised for pregnant mothers does not seem to be justified by common-sense. We are told that curry should never be eaten. If this were correct the average Indian mother in Bengal or Madras would fare very badly throughout her pregnancy.

The chapter on infant feeding advocates 10 feeds a day for the first month in the case of a bottle fed infant. This might have been the routine twenty years ago but has long since been abandoned by those who have studied infant feeding most carefully.

It is difficult to understand why, if a healthy breast fed baby thrives on five feeds a day it should be necessary to give a healthy bottle fed baby 10 feeds. Perhaps the learned author considers no bottle fed baby is ever healthy. If it is fed on the plan advocated in this book, we should not expect to find it would be —*Mary Beadon.*

Tropical Gynaecology.—by Dr. V. B. Green Armytage. M. D. F. R, C. S., Lt. Col. I.M.S., Thacker Spink & Co. Calcutta Price. Rs. 3/8.

This little book is an excellent one. The lectures are packed with up-to-date information conveyed in such an interesting manner that the reader's attention is absorbed.

The teaching is the result of the author's long experience in one of the largest gynecological clinics in India and may be confidently recommended, both for practitioners and students as it is careful and sensible.

The Stacey Wilson exercises are very well demonstrated and if they were habitually used by puerperal women would banish a great number of the disabilities which hamper women only too often after a slightly difficult delivery:—*Mary Beadon.*

Synopsis of Midwifery and Gynaecology.—By Aleck Bourne. B. A., M. B. Bch., F. R. C. S, Published by John Wright and Sons Ltd. Bristol Price 15 Sh., Interleaved for notes 20 sh.

This fourth edition of this book has been revised and brought up to date.

It gives the main facts about the various conditions met with in Midwifery and Gynæcology in a synoptic style which is very useful when one is preparing for an examination or looking up a point in a hurry. The book should only be used as a supplement to the ordinary text books and if so used would be extremely useful.

The diagrams are very clear and helpful and greatly add to the value of the book.

A book which has reached, its fourth edition is one of proved merit and may be thoroughly recommended to the student and to the busy practitioner:—*Marry Beadon.*

Practice of medicine.—By Hughes Dayton, M. D. 1928; 5th Revised edition. Lea and Febiger, Philadelphia Price $ 2·25.

In the present edition most radical changes have been made in certain of the infectious diseases scarlet fever, in particular. A good deal of new matter has been added to make it uptodate.

Common affections of the upper portion of the respiratory and digestive tracts have been included in this new edition.

Newer classification of the diseases of the kidney has also been added.

The book is divided into 10 sections, and diseases are treated under various systems, as, the circulator system, Digestive system Repiratory system, Ductless glands etc. The subject matter is presented in a very clear yet concise form; and as a ready quick

reference book it is most useful to both students and general practitioners.—*V. C. S.*

Aids to Dermatology and Venereal Disease. By R. M. B. Mackenna, M.A., M. B., M. R. C. P. (Lond.) M. R. C. S. Bailliere, Tindall and Cox: London.

The author presents this little book with the object of enabling students who are preparing for their examination to review their knowledge of Dermatology; by such students it will doubtless be found useful as a source of quick revision.

The etiology, diagnosis, and treatment of the various skin affections are briefly and clearly set forth. Mention is also made of the usefulness of physiotherapy (X-Ray and ultra violet ray) in selected cases.

The last part of the book contains a brief consideration of the Venereal disease.—*V.C.S.*

Books Received.

The following books have been received and the courtesy of the publishers in sending them is acknowledged. Reviews will be published from time to time (Ed. Antiseptic).

The Care of Children.—By Eric C. Spaar, B.A., M.B.B.S., M.R.C.P. Published by Messrs. Bailliere Tindall & Coxy, London. Price 7/6- net.

The Rubino Reaction in Leprosy.—By Dr. C. Russell Amies. Published by the Institute of Medical Research. Federated Malay States. Kuala, Lumpur.

Observations on some factors influencing the infectivity of malarial Gamate Carries in Malaya to Anopheles Inoculation.—By Richard Green. Published by the Institute of Medical Research Federated Malay States. Kuala, Lumpur.

The Institute of Medical Research, Kuala Lumpur F.M.S.—Published by the Institute of Medical Research, Federated Malay States. Kuala Lumpur.

Disease of the Nose, Throat & Ear.—By A Logan Turner M.D., L.L.D. F.R.C.S.E. Published by Messrs. John Wright & Sons., Ltd., Bristol, 20/-

The Elements of medical Treatment.—By Robert Hutchinson M.D.F.R.C.P.—Published by Messrs. John Wright and Sons, Ltd., Bristol 7/6-

Surgical Pathology.—By Cecil P. G. Wakerley, F.R.C.P., F.R.C.S. and J. D. Boxtor, M.B.B.S. F.R., C.S.- Published by Messrs. John Wright & Sons Ltd., Bristol, 45/-

Synopsis of Physiology.—By Rundle Short & C. I. Ham.—Published by Messrs. John Wright & Sons Ltd., Bristol. 10/6-

Physical Signs in clinical Surgery.—By Hamilton Bailey F.R.C.S.—Published by Messrs. John Wright & Sons Ltd., Bristol. Price 21/-

Interns Hand book,—By M.S. Dooney B.A., M.D.—Published by Messrs. J. B. Lippincott & Co., London. Price 12/6-

Medical Diseases of Children.—By D. N. Nicholson M.B., M.R.C.P.—Published by Messrs E. S. Livingstone & Co., Edinburg. Price 1/6-

Mental Disorders.—By Herbert I. Norman—Published by Messrs. E. S. Livingstone & Co., Edinburg. Price 14/-

The Progress Book Record and Development.—Published by Messrs. Mears & Coldwell Ltd., Cranner Road, London. S. W. 9.

Food values in Practice.—By E.M. Dobbs M.A., Published by University of London Press, London. Price: 4 sh.

Those Teeth of Yours.—By J. Menzus Campbell, L.D.S., D.D.S., F.R.S.E., Published by William Heinemann Ltd., London, E.C. 2. Price: 3½ sh.

Acute Infectious Diseases.—By J.D. Rolleston, M.A., M.D., (Oxen) M.R.C.P. (Lond.) F.S.A., Published by William Heinemann Ltd., London, E.C. 2. Price: 15 sh.

Home Pests and their Destruction.—By J. S. Bainbridge. M.Sc., Published by William Heineman Ltd,, London, E.C. 2. Price: 3½ sh.

Devils, Drugs and Doctors.—By H.W. Haggard, M.D., Published by William Heinneman Ltd., London E.C. 2. Price: 21 sh.

A Handbook on Diabetes Mellitus and its Modern treatment.—By J.P. Bose. M.D., F.C.S. Published by Thacker, Spink & Co., Calcutta, Price: Rs. 5.

Improved Prophylactic Method in the Treatment of Eclampsia.—By Prof: W. Stroganoff. Published by E. & S. Livingstone, Edinburgh. Price: Rs. 7-14-0.

A Treatise on Materia Medica and Therapeutics.—By R. Ghosh Published by Hilton & Co. Calcutta. Price Rs. 7-8-0 or 12 sh. 6 d.

Practical Message.—By Hartvig Nissen, Published by F.A. Davis Co. Philadelphia.

A Practical Treatise on Disorders of the Sexul Function in the male and female.—By Max Huhner, M.D.

Ether and Me or "Just Relax".—By Will Rogers, Published by G.P. Putman's Sons, London.

Rheumatism.—By Charles E. Sundell, Published by Southern Libraries Ltd., Bellingham, London, S.E. 6. *Price: 4 sh, 6 d.*

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References

Quarterly Journal of Pharmacy Vol. II No. 3.
Ibid Vol. II No. 4.

A CORRECTION.

On page 214, Vol. 27, No. 3, lines 39 & 40 regarding review of the book entitled, a hand book of snake-bites, please delete the words "Published by Messrs. Butterworth & Co., 6, Hastings Stree, Calcutta", as we understand they are not the publishers of the said book. [*Ed. Antiseptic.*]

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