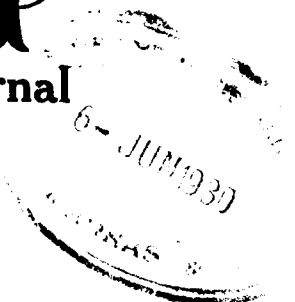


The Antiseptic

A Monthly Medical Journal

EDITED BY
Rao Saheb. U. RAMA RAU
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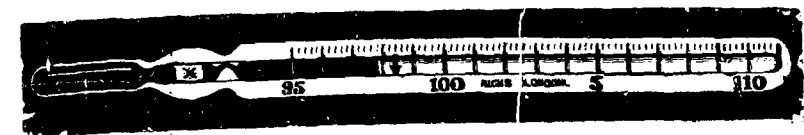
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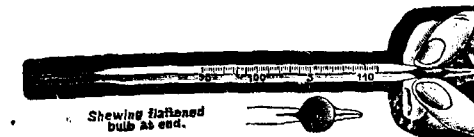
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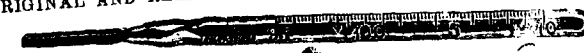


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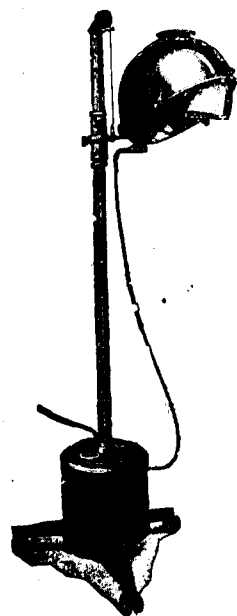
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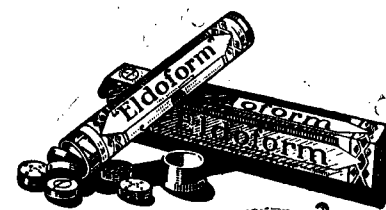
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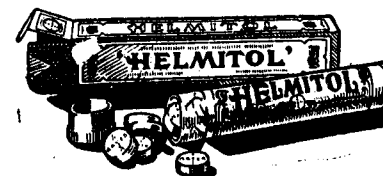


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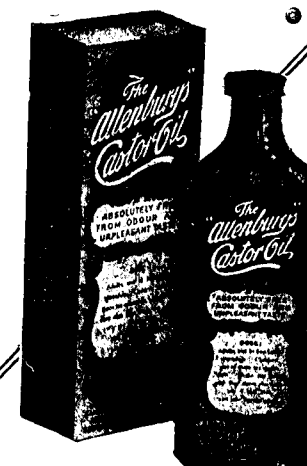
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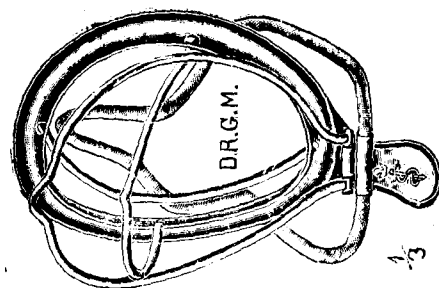
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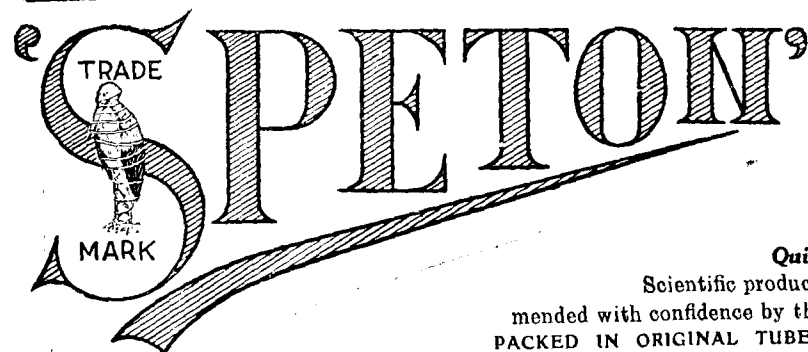
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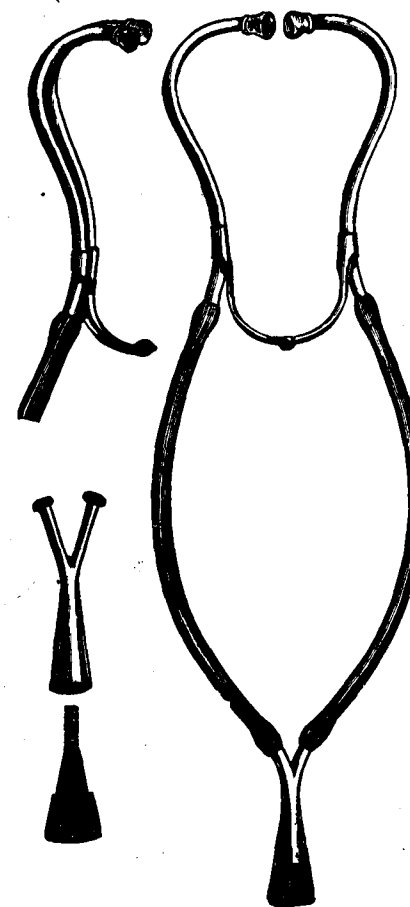
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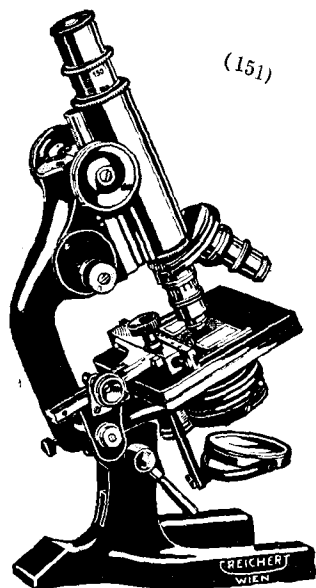
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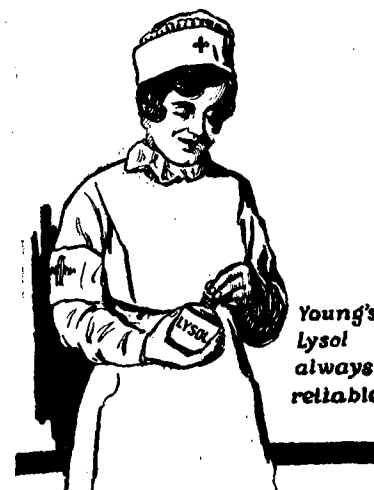
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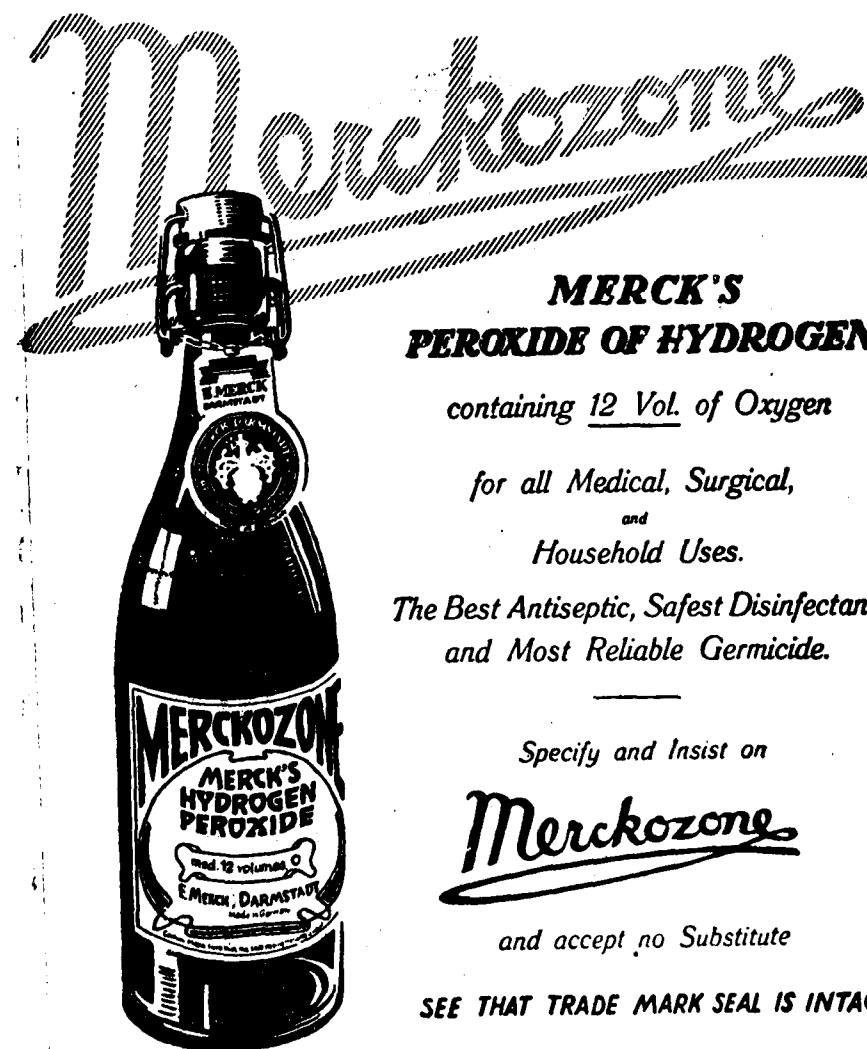
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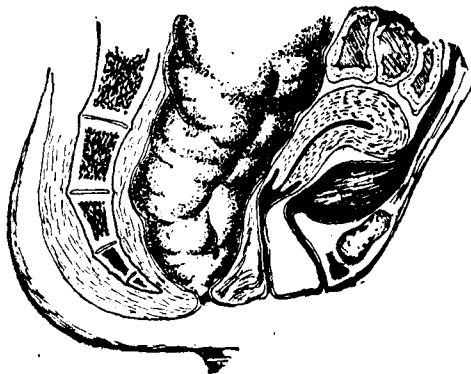
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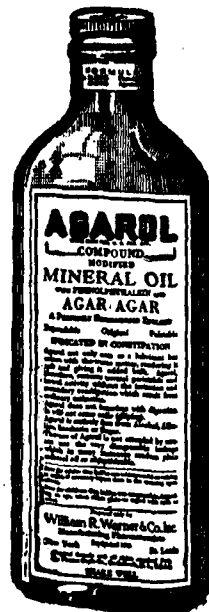
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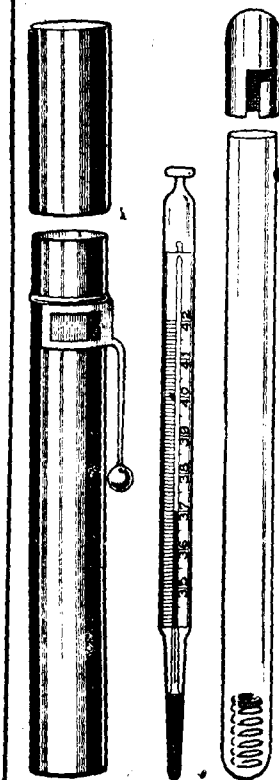
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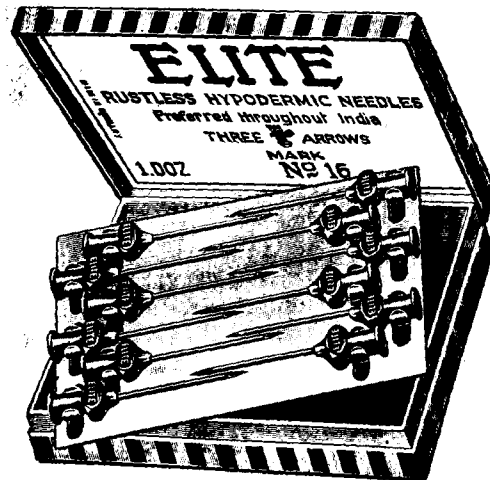
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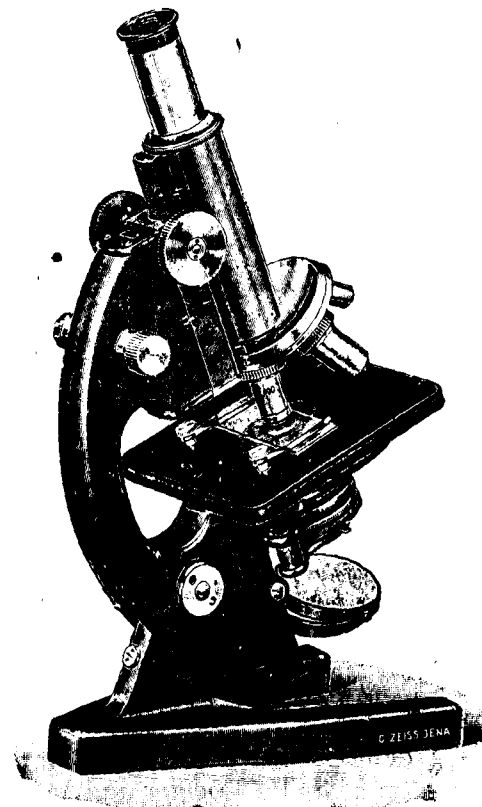
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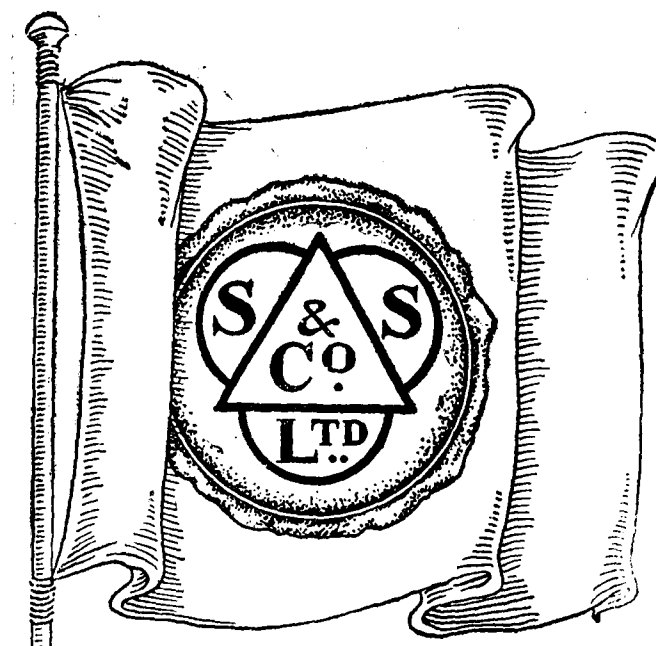
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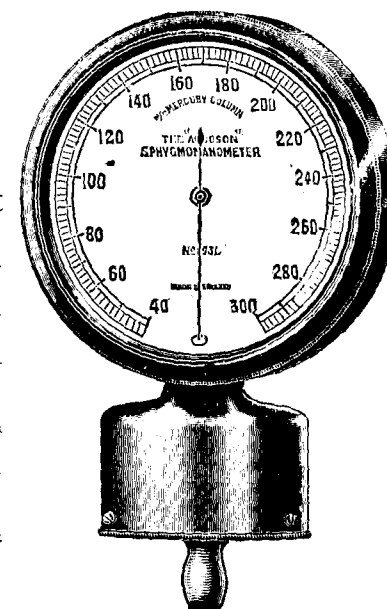
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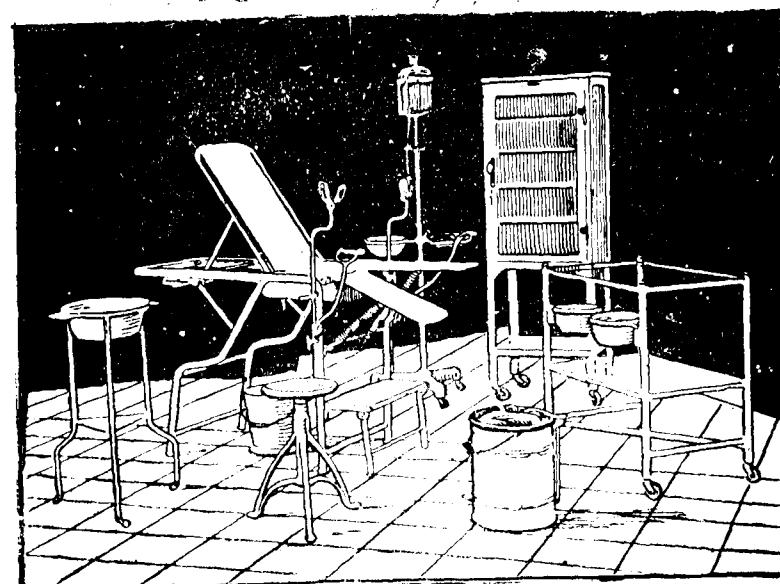
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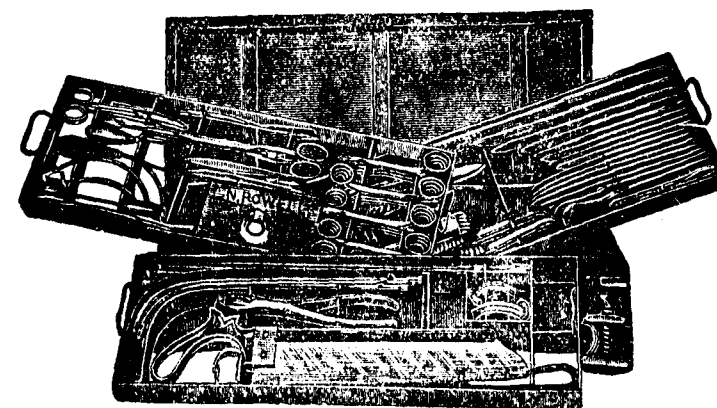
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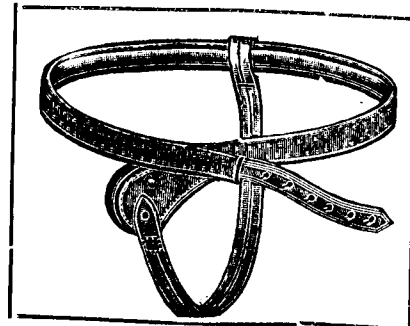
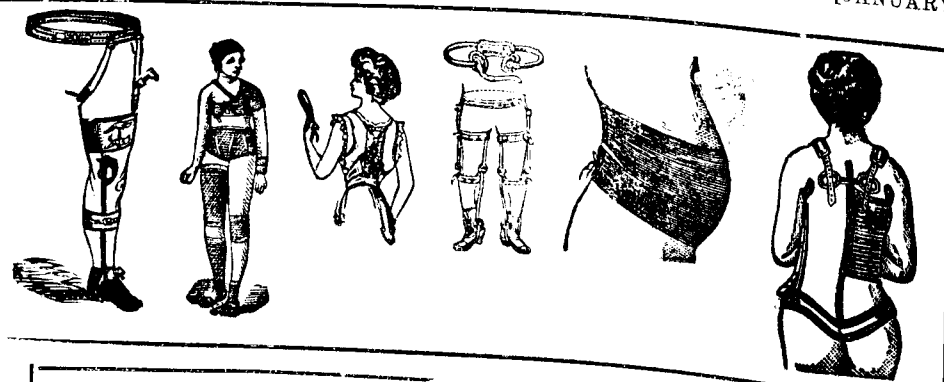
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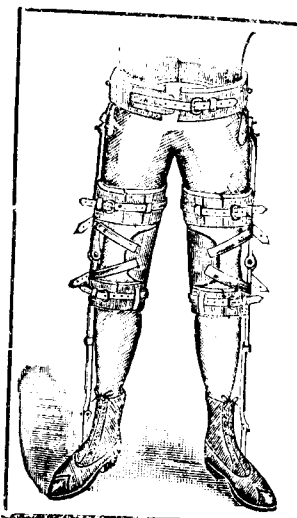
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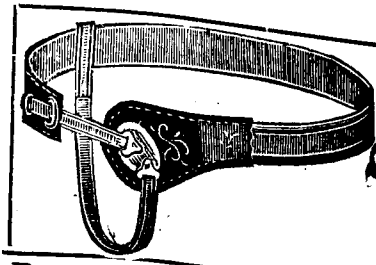
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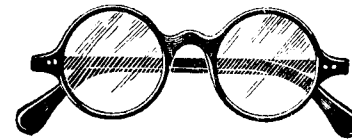
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Original articles

* LEPROSY, A MEMOIR.

BY

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(LATE MALARIA MEDICAL OFFICER, E. B. RY.)

Medical Officer in charge Leper Asylum Cuttack.

Introduction.—Leprosy has been recognised as a loathsome disease from time immemorial, in this country, and has been regarded as a special curse of God or rather as a fitting punishment, for some highly sinful acts. Identical beliefs are found in other regions of the world. In Greece and Rome, Lepers were compelled (in the middle Ages) to use a bell, so that they may warn the other healthy passersby on the road, of their approach. While such ridiculous methods of isolation have failed miserably in their object, they have, on the other hand, positively helped the spread of the disease, as will be seen later. In the Holy Bible (old Testament) Leviticus Chap. 13, Verse 2, gives a good, brief description of some of the Lesions of Leprosy:—

* Specially contributed to the Silver Jubilee issue (April 1929) of the Antiseptic.

"When a man shall have in the skin of his flesh, a rising, a scab, or bright spot and it be in the skin of his flesh, like the plague of Leprosy, then he shall be brought unto Aaron the Priest.....etc." Obviously, a rising is intended to mean a Leprous nodule or a boil, and scab is to be construed as "Parakeratosis" or scab covered broken down Leprous nodules and bright spot may mean either a depigmented or a Leucodermic patch. In the following verses we find mention of the steps that ought to be taken by the discerning priest in coming to a definite diagnosis. Thus it is evident that Leprosy has been in existence, since the dawn of human knowledge. Reference to Ayurvedic books reveals that the clinical features of Leprosy, have been studied in detail, by several ancient Hindu clinicians and several kinds of Leprosy have been described. The recognition that leprosy is a single disease with different clinical manifestations in different stages, is comparatively modern. As there are several skin diseases with clinical manifestations similar to those of leprosy at some stage or other, and as the microscope was not in existence, it is no wonder that the Hindu clinicians, have described several skin diseases, as varieties of leprosy. But these ancient Hindu clinicians have more than amply compensated for their shortcomings in Differential diagnosis, by the discovery of the chaulmoogra oil.

That we have proceeded no further, in our endeavours to evolve a "Therapia Sterilans magna" for leprosy, beyond refining the chaulmoogra, and its derivatives and altering the methods of administration in keeping with our modern methods of administration of drugs, will be evident from the fact, that oils of the chaulmoogra series, and their derivatives are still the only useful remedies we have, with the possible exception of Pot. Iodide, in our armamentarium, for fighting leprosy.

Etiology.—Leprosy belongs to the special group of specific Infective Granulomatous diseases, and is caused by the Mycobacterium Leprae. Like the other well-known members of this group (viz.,) Syphilis and Tuberculosis, the lesions of leprosy are characterised by the presence of Granulomata in them. There are certain common features of this specific group:—

- (1) They are all caused by a specific organism gaining entrance into the tissues.
- (2) The organisms cause a local lesion, to which they are confined, for a considerable time. (Depending upon the amount of natural resistance).
- (3) These diseases tend to generalise, as the natural resistance comes down.

- (4) The organisms tend to form the typical Granuloma around them in all types of lesions and hence remain unassailed by the natural defensive powers of the body.
- (5) These diseases are chronic in nature with little prospects of a natural cure; but liable to acute Exacerbations, accompanied by febrile symptoms and fresh lesions:
- (6) The poisons set free by the organisms have a deliterious effect on the nervous system.

The differences also are striking and are worth mentioning:—

In Syphilis, the Primary lesion is generally well-marked. In Tuberculosis, the onset is very insidious. In leprosy the onset is so insidious that it is difficult to ascertain the seat of the Primary focus, in the majority of cases. While in Tuberculosis and Syphilis the onset of nerve symptoms occurs in the later stages of the disease, in leprosy, nerve symptoms are the first in the majority of cases.

There is a close relationship between the causative organisms of Tuberculosis and Leprosy. Both of them belong to the group of Bacteria known as "Myco-Bacteria" (i. e.,) semi-fungoid and semi-bacterial in nature. Both are acid-fast, both are Pleomorphic. The only difference seems to be the failure to cultivate M-Leprae outside the human body.

Age and Sex.—No age or sex is exempt. But children are specially liable to be infected on account of the thinness of their skins and the tendency to scratch their noses—specially—those children that are infected with oxyuris vermicularis.

Climate.—This has no direct influence on Leprosy.

Civilization.—Leprosy is not found in either poles of civilization.—the highly civilized do not suffer; nor the isolated healthy aboriginal tribes. But it is the semi-aboriginal tribes that come into contact with the civilized and copy the ways of their new acquaintances, without understanding their significance—specially in matters of clothing, food and cleanliness etc., that suffer.

Economic factors.—Recent Research has shown that Leprosy is a disease of the under-fed, or improperly fed. Malnutrition plays a very prominent part in the productivity of leprosy.

Predisposing factors.—(1) Malnutrition. (2) Lack of cleanliness (3) other debilitating diseases—amongst which, syphilis, malaria,

Kala Azar, and Hook-worm are the most important. As the prognosis depends a great deal upon the presence or absence of a remediable predisposing cause, the importance of the predisposing cause in Leprosy, cannot be over-estimated. In fact the special Anti Leprosy treatment should be secondary to the remedying of the predisposing cause.

Transmission of Leprosy.—At the outset, it should be confessed, that we are not yet in a position to make a clear and decisive statement as to how the causative organisms are conveyed from one person to another. But in the majority of cases, the nasal mucus membrane seems to be the channel of infection. As the onset of the disease is so very insidious and the course so prolonged, that it is difficult to trace out the exact course of infection from the individual to another. Further, all attempts at cultivation of the mycobacterium *Leprae* outside the human body, have proved futile. The difficulty is further enhanced by the fact that no member of the animal kingdom except man is susceptible to Leprosy. All attempts at transmission of the disease to other mammals like monkeys rabbits etc. etc. have failed. Of course, there is an analogue to the Human leprosy, in rats. But rat-leprosy has not been known to be communicable to human beings, except in a single solitary instance reported from the Western Hemisphere. Human leprosy has not so far been transmitted to rats and hence the difficulty of undertaking Laboratory studies in the problem of transmission of leprosy. So far, the work on rat leprosy, has shown that rat leprosy is easily transmitted to rats, by intraperitoneal, or subcutaneous inoculations and even by rubbing the infective material into scratches on the skin. But does this enable us to understand the natural method of transmission? If the disease is so very easily communicable, then we should be able to find numerous leper rats. But that does not seem to be the case. Research workers know how difficult it is, to get a single leper rat.

Clinical and Epidemiological studies conducted so far point to the conclusion that the following are the chief factors that determine the transmission:—

(1) *Infectivity of the Transmitter.*—In acute leprosy with fever and rashes, the *M. Leprae*, are plentiful in the rashes and the serous exudate from the abraded epithelial surfaces. As the organisms are nearer to the skin surface such patients are indeed highly infective. Patients with Parakeratosis, specially in skin-types, are also infective, as the scales shed from the skin, may

contain *M. Leprae*. Skin cases who have nodules and ulcers in the nose, are highly infective—specially their nasal secretions; and when they sneeze or cough, numerous bacilli may be thrown out of their nasal and oral passages and droplet infection is possible.

(2) *Closeness and Length of contact*—The closer the contact, the more probable is the occurrence of infection—specially with the skin-type of cases. Remaining in the same house with an infectious leper is dangerous. Living in close contact with him is still more dangerous. But promiscuous mixing (i.e.) eating and drinking in the same utensil, wearing on the same clothes etc, is the most dangerous. From infective parents, young children easily acquire the infection, as there is a close and prolonged contact; and the skins of young children are thin. The occurrence of leprosy in children, who have infective parents, has given rise to the belief that leprosy may be transmitted by heredity. So far, *M. Leprae* have not been proved to be capable of passing to the ovum. The most careful examination of the spermatozoa of the most infective lepers, has not revealed the presence of *M. Leprae* in them. So it may safely be concluded that leprosy is not transmitted by heredity but close and prolonged contact with infective parents, seems to be the more probable explanation.

Pathology and morbid Anatomy.—Much of our knowledge concerning this part of the subject, is recent. The older classification of leprosy into clear-cut types, such as Maculoanesthetic, nodular, mixed, etc, had rather stood in our way of finding out the truth. The modern classification introduced by Dr. E. Muir, is more rational and has enabled us to appreciate the fact that the type and stage of a case depends upon the number of *M. Leprae* present and the amount of natural resistance. The greater the number of *M. Leprae* and the lesser the natural resistance, the greater is the probability of the case turning out to be a skin—B. type. The lesser the number of *M. Leprae* and the greater the natural resistance, the greater is the probability of the case becoming a Nerve—A type. The ratio of the number of bacilli to the amount of natural resistance is the determining factor, in the production of the different types and stages. This fundamental fact should be borne in mind in studying the Pathology and in planning out the treatment.

Different types of lesions are produced depending upon the ratio above mentioned. In early cases we find (i) Depigmented patches (ii) Erythematous patches (iii) Any of these (i) and (ii)

with anæsthesia or Hyperesthesia or both combined, in different parts. (iv) Raised Erythematous areas; (v) Parakeratosis etc; And in advanced cases:—(vi) Definite nodules of different kinds; (vii) Permanently anæsthetic areas (viii) Perforating ulcers (ix) Nerve abscesses (x) Absorption of small bones or Death and dropping of bones of the Digits etc etc. These and other lesions will be described in detail and their significance explained when dealing with the symptomatology.

Let us take a skin lesion in an early case—say for example—an Erythematous or a Depigmented patch. This is the first lesion in the majority of cases. In a depigmented patch, the natural pigment disappears from a patch of the skin. But there is only a partial loss of pigment and not a complete loss as in Leucoderma. This initial lesion, must have been caused by the entrance of the organisms, through an abrasion in the superficial epithelium or by the organisms causing a bacillary embolism of the capillary blood-vessels. A section of the affected skin shows microscopically, the presence of a typical granulomatous structure in the corium of the skin. The Epithelium is not primarily involved; the disease at first affects the corium and the more superficial layers are secondarily implicated. There is also found, a dilatation of the capillary blood vessels, some Oedema and considerable cellular infiltration, in the corium. The cells are of different kinds:—The outer most zone of a Granuloma consists of:—Young fibroblasts which on resolution form scar tissue; the middle zone consists of small round cells resembling lymphocytes; and the inner zone consists of large Epithelioid cells with vacuolated cytoplasm and vesicular nucleû—the so-called “Lepra cells”. Occasionally a few-giant cells, may be present. As a result of this infiltration, the papillae of the corium become flattened out and in time completely lost. The nutrition of the corium is impaired as the vascular papillae are all obliterated. This partly accounts for the loss of natural pigment in the affected skin. A detailed examination of the large Epithelioid cells, the so-called Lepra cells, shows that they are derived from the resting wandering cells or Histiocytes which are normally present in the corium; and which together with the stellate cells of Kupfer in the Liver, and the cells lining the sinuses of lymphglands and spleen, form the Reticulo Endothelial system. In appropriately stained sections, the M-leprae could be made out, inside these cells. But in anæsthetic patches and Depigmented and anæsthetic patches and in the erythematous patches of early nerve cases—the M-leprae could not be found by the ordinary Zeel-Neelson's method of staining (either a skin smear or a section).

Similarly in sections of the affected nerves also, no bacilli could be found by the Zeel-Neelson's stain. This is explained by Dr. E. Muir, hypothetically, to be due to the possible presence of a non-acid fast strain inside the nerve-sheaths. This explanation is quite rational and not at all improbable. The methods of staining at our disposal, are not probably suited to these non-acid fast strains. The acid fast strain of organisms which are abundantly found in skin type of cases, are very pleomorphic in nature. The ordinary vegetative forms are rod-like, straight or slightly curved take on a uniform rod stain and vary in size from 1 M to 8 M. The organisms tend to aggregate together like bundles of cigars. They are stained with difficulty, but when once stained, they tenaciously resist the action of powerful decolorising agents like strong mineral acids. Consequently m. leprae have been termed ‘acid fast’ and there are other similar organisms, for example (i) the Tubercle bacilli-human, bovine and avian strains (ii) the rat leprosy bacilli, (iii) the Smegma bacilli and (iv) certain Saprophytic mycobacteria recoverable from grass, straw, milk and butter.

In patients who are under treatment, or in those who are naturally reacting, resistant forms of bacilli are seen. These are coccoid and Diphtheroid in shape and some may be spore-like.

Lesions of the corium are usually divided into 3 types, according to the microscopical appearances present:—

(i) *Papillary Sub-type*.—The papillary layer of the corium, just beneath the basal Epithelium, is involved. Relatively few bacilli are found. The infection spreads radically parallel to the skin surface. Fibroblasts form fibrous tissue and the papillae as well as the Inter papillary spaces become obliterated. The Epithelium above, becomes considerably thinned out. When resolution is completed, only a thinned Epithelium and a corium without papillae and inter-papillary spaces but full of fibrous tissue, are found.

(ii) *Inter-follicular sub-type*.—In this form, the layers of the corium lying between the hair follicles are affected. This may be primary or a result of the downward extension of a papillary sub-type. The bacilli are relatively more numerous than in type (1) The natural folds of the skin are exaggerated and deeper than normal and the intervening areas of skin stand out prominently. This is due to the oedematous tissue causing an upward swelling of the corium, which is resisted by the tension of the Hair-follicles and sweat glands (B 2 type.)

(iii) *Sub-follicular. (B3 type)* In this form, a still deeper layer of the corium (viz.) that which is lying beneath the hair-follicles is affected. The natural folds of the skin are obliterated and the appendages of the skin—hair follicles, sweat glands etc, etc. are destroyed. When resolution occurs, the skin is thinned out, dry, hairless and resembles a crushed tissue paper.

It should be borne in mind that these types tend to merge the one into the other. The mode of spread from a primary focus depends upon the situation of the focus in the corium. If the superficial part of the corium drained by the superficial Lymphatic plexus is involved, a radical centrifugal spread occurs. But primary involvement of the deeper layers of the corium with corresponding implication of the deep lymphatic plexus, results in centripetal spread and nodule formation.

A section of a nodule shows abundant vegetative forms of *M. leprae*, some intra-cellular and some extracellular, lying in the Lymph spaces of the corium and the absence of the normal papillae.

In a chronic spreading skin lesion, usually 3 zones could be found by the naked eye (a) an outer flat depigmented area due to interference with the capillary blood supply, and hence to deficient supply of the pigment-forming amino-acids in the area involved (b) a middle raised and erythematous zone due to infiltration with vascular granulation tissue plus oedema and flattening out of the papillae; and (c) a central flattened, depigmented and scar like area—due to fibrosis and cicatrization.

Lesions of the mucus membrane (e. g.) nose—Histologically, these resemble the skin lesions just described. Most commonly they are found at the anterior end of the Inferior turbinate bone and the neighbourhood of the nasal septum.

In the deeper types of lesions both in skin and mucous membranes—the superficial Epithelium is liable to be destroyed either by direct injury or by fibrosis interfering with the capillary blood supply leading to impaired nutrition and ulcer formation. Such ulcers do not heal until all the Leprous tissues are shed and these ulcers should be clearly distinguished from perforating ulcers of A 2 Cases which are trophic in nature.

Nerve Lesions. Two types are described:—(i) Ascending and (ii) Metastatic. The first is due to the spreading from a primary lesion in the corium, usually of the papillary sub type into the sensory nerve-endings, and through them along the nerve trunks.

The second is due to capillary Embolism of the vasa Nervosum of the Perineurium. Further extension results from the passage of the organisms along the lymph channels in the connective tissue sheaths of the nerve-trunks. In both types, granulation tissue is formed,—leading to fibrosis (after organisation) constricting the axis cylinders. A continuous pressure on the axis cylinders, destroys them and produces several trophic lesions of the skin.

It is worth while to note here that a rather strange inter-relationship exists, between skin and nerve types—the greater the skin involvement, the lesser the nerve involvement and vice versa. When few bacilli are present in the body nerve lesions predominate. For instance,—at the beginning of the disease when there are relatively few bacilli and also at the end of the disease when again the organisms are decreasing in numbers. This inter relationship is not yet explicable possibly the hypothetical presence of two strains—one acid fast, having affinity for the skin and causing skin Lesions and the other non acid fast, having affinity for the nerves and causing nerve lesions—is the reason. Further, if this hypothesis be true, the non acid fast strain must be the less virulent and less resistant.

Lesions of special organs and tissues, may be due to either the formation of Granulomata with the consequent fibrosis interfering with the vascular supply or the implication of the nerves supplying the organs or tissues. The organisms are spread by the lymphatics from a neighbouring focus to the special organs or tissues.

In advanced skin cases (B3) the liver, the spleen and the lymphatic glands show numerous bacilli. (In rat leprosy in advanced stages bacilli are found in all the organs mentioned above). The lungs are also involved in a few cases. But in such cases, the diagnosis between Tubercle and Leprosy of the lung becomes difficult, as both the organisms are acid fast. It should be borne in mind that both Tubercle and leprosy of the lung may coexist in the same patient. Definite diagnosis is possible only by cultural methods. Inoculation of the sputum into a guinea-pig causes acute miliary Tubercle in the animal if *T. B.* are present but if only *M. Lepræ* are present the animal is not affected at all. Therapeutic differentiation is also possible in as much as leprosy of the lung clears up much more rapidly under treatment than Tubercle. Microscopic examination of a stained smear of the sputum may reveal the presence of numerous cigar bundle like bacilli if leprosy of the lung is present—but the

presence of T. B. also, cannot be ascertained by this. Only culture of the washed sputum or inoculation into a guinea-pig will settle it. T. B. are easily cultivated on Dorsett's Egg medium.

In the terminal stage of leprosy—due to chronic Sepsis—amyloid disease of the various abdominal viscera may develop. In B3 (skin) cases, granulomatous involvement of the Testis resulting in fibrosis may cause sterility. Lesions of the Female Internal Generative organs are uncommon.

Mental Symptoms:—The social ostracism to which the patients are subjected, may lead to the development of melancholia and other mental disorders.

Pathology of Reactions in Leprosy:—Leprotic reactions whether natural or due to Anti-leprosy treatment, are characterised by the occurrence of fever, Erythema or Rashes, formation of new lesions and swelling up of the existing lesions. Such reactions may also be brought about by other diseases like Kala Azar. Depending upon the stage at which these reactions are produced, they may be beneficial or the reverse. In the early stages of the disease when the natural resistance is low, reactions are harmful and tend to spread the disease; but in advanced cases on the decline, mild reactions tend to cause the destruction of the bacilli. Also, either natural reactions or the onset of other febrile diseases like Malaria or Kala-Azar, in advanced skin cases which are coming down, produce the same effect as the Anti Leprosy treatment. Now it will be evident that in early cases, reactions to be beneficial, must be mild and should be carefully controlled, while measures for increasing the natural resistance are employed *paripassu* with the use of Anti Leprosy remedies.

(To be Continued.)

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

BY

DR. KAKU. M. HIRANANDANI C.M.S. L.C.P.S. (BOM), C.R.X.I. (BAGSHDAD), P.G.M.R.E. (LIVERPOOL) L. M. (ROTUNDA), L.A.H. (DUBLIN). R.M.P.G.M.C. (LONDON, DUBLIN, INDIA.)
HYDERABAD, SIND.

What are X-rays?—X-rays are electromagnetic waves. By means of X-ray spectrometer, we can measure the wave lengths of the X-radiation which is emitted by an *Anticathode* by means of cathode rays. The ordinary light ray, does not have the power to *penetrate opaque* substances. The X-ray has this property.

How were X-rays found and by whom? It was in 1895 when Wilhelm Konrad Roentgen of Warzburg (Germany) made his great discovery of what he chose to term X-rays, and they are named after the discoverer as *Roentgen-rays*. At the time Professor Roentgen was making his experiments, he had available the following essentials for the production of X-Rays. *An air pump*, high tension electric current and *Fluorescent screen*, consisting of a deposit of barium-platino-cyanide on cardboard used by physicists in investigation of ultraviolet light. *Professor Roentgen details how he made the discovery*. He says he had covered up the *Hittorf tube*, with black paper, so as to exclude all light, and had the screen lying on a table few meters from where the covered tube was situated. He excited the tube to ascertain if all light was excluded. This was so, but to his intense surprise, *he found the distant screen shining brightly*. *He says he did not think at that time that he had made a discovery*. Subsequently he took photographs, and made this important announcement to the world, which has led to a very vast development and use of this therapy. *What does this lead us to? This shows us that discoveries are not made necessarily in big laboratories*. Large sums of money and unbounded facilities do not of necessity spell great discovery. Some of the most epoch-making contributions in the history of science, came from those who were without many facilities and scientific refinements.

Although it is of utmost importance to accumulate resources to support such, yet their absence or limitation need not prevent us from development of active intellect. What the true scientist values most, is the admiration and respect from the professional colleagues and fellow workers, who are able to understand his

* Specially contributed to the Silver Jubilee issue (April 1929) of the Antiseptic.

achievements, and the public for encouragement for further developments.

How do X-rays ionise the Cases?

X-rays ionise the gases not directly but by means of the *corpuscular radiation* excited in the gas by the rays. These *electrons* have high velocity, and in passing through the gas produce ionisation by collision with the molecules of it.

What is meant by electrons and ionisation and corpuscular Radiation?

Electrons—These are contained in the atoms of all substances. They are negatively charged bodies and are exceedingly minute. Their mass is about 1/18,000th of the mass of Hydrogen atom, and their radius is only 1/10,000th of that of an atom, *about the same* relation as the size of a pea to that of a cathedral.

Ionisation—Ions can be carried into the body by the electric current. The results that follow the application of constant current (galvanic) are *to be attributed to the behaviour of the ions as they conduct the electricity*. The introduction of drugs through the unbroken skin by the agency of galvanic current has been used as a method of treatment under the name of cataphoresis, electrolysis or ionic medication. Ionic medication consists in utilising the electrolytic action of continuous currents to convey various chemicals into the tissues of human body.

Secondary Corpuscular Radiation.

It is a very absorbable radiation which can be deflected by a magnetic field and consists of *negatively charged electrons*. These are called corpuscular rays and are absorbed within a C. M. of gas, and hence the ionisation they produce is very intense. The velocity of corpuscular radiation, which is excited when X-rays fall on a radiator, *is identical, with the velocity of the cathode rays*, used to excite the X-radiation. Since the masses of two electrons are identical, it follows that their energies must be the same. Hence X-ray is able to concentrate at any distance from its point of origin, the whole of its energy upon a single electron.

X-ray Its Present Field of Usefulness.

Both in medicine and surgery its use has been of immense value. *Radiography* from bone to brain is a great aid to diagnosis and treatment medically and surgically. Cholecystography by Gram's method (Sodium Tetraiodophenolphthalein). Roentgenographic diagnosis of urinary tract by injection of thorium and bromide solution by gravity or otherwise and pneumopyelography by injection of oxygen. Lipoidol for tumours and sinus.

pathology; barium for digestive tract diagnosis. Location of foreign bodies with X-rays. The value of X-rays in dentistry, for teeth and chronic infections; orthodiaography for the exact delineation of heart boundaries. Skin diseases and their treatment by X-Rays, pulmonary and Tubercular affections their diagnosis and treatment.

The Deep X-ray Apparatus and Therapy.

This is the most recent development in X-ray science. It is supposed to have originated from Erlangen and Frankfort. The apparatus mainly consists of a large mercury interrupter and two large induction coils. With the addition of indigenous devices *a very high secondary voltage is obtained*, which in return produces homogenous hard rays. There have been since many modifications and improvements in this sort of apparatus by various manufacturers. When I visited the Congress of Surgery in Berlin, Congress of Radiology at Nauheim, Erlangen and Frankfort Radiological Units, International Congress of Radiology, London and Medical Congress at Paris and Curie's laboratories, *I could see what vast progress this science has made recently*.

The Tubes Used.

These are specially constructed to stand the heavy currents. But the X-ray dose given for malignant diseases is very tiring to the patient. Though *some X-therapists give the treatment* at one sitting, and others *at interrupted sittings*, yet the treatment takes sufficiently long time to tire the patient, and requires constant attention of the therapist. To my mind it occurs if it would be possible to construct an X-ray tube with double cathodes, and *anticathodes, with an extra protecting glass wall around the vacuum chamber to act as a filter and as well as both protective and cooling device*, this might shorten the period of treatment.

Author's view on dose calculation and measurement:

Though attempts are being made to have still more accurate and simpler instruments for measurement and calculation of X-rays and their dosage, we have to continue what I should say *approximate calculation*, as the dose for various diseases is calculated out by means of certain tables. The figures in the tables of the originator are said to have been worked out from experimental observations on a particular X-ray tube. I had seen this method at Erlangen where this treatment is supposed to have originated. To me this appears not a very decisive factor to rely on accuracy. Because any X-ray tube's constancy *varies to a little or less degree, no matter what best type it may be, specially when such a large number of calculations have to be worked out*. In the near

future however when we have invented such a device as to be able to know from distance by a simple clock-like arrangement adjusted to tube which should show on one side dose measurement and on the other dose received by patient, our difficulty then will have over come, just like the principle of sphygmomanometer. As the mercury in the column rises with increased blood pressure, so the needle on the dial should show its rise, when more of X-ray dose is being given, to the patient. The dial of the needle should be so marked out as to show the percentages of the dose, or by simple arrangement of time calculation.

The laboratory findings. There is another factor of importance when giving deep X-ray treatment and that is laboratory diagnosis as regards the state of blood. Some changes do take place in blood before the treatment and after irradiation. This consists mainly of alteration in red and white blood corpuscles and their chloride constituents, sugar contents, potassium salts, alkalinity, coagulability and plasma. These have to be compared with the result of examination after irradiation. *This needs laboratory workers and funds to keep them. Is it worth taking all this trouble? Proper education and registration of such workers is undoubtedly needed in this country.* It is from experimental and research point of view and not from practical point of view in ordinary hospitals. How often do we get absolute results of blood count? It is straining to one's eyes and loss of time especially where there is a large number of patients. I must admit that in certain cases with marked anæmia and where blood transfusion is to be considered, such an examination is of paramount importance. But then the light thrown bacteriologically as compared with clinically—it is not very great, so far as giving of treatment is concerned. No matter what the degree of advancement of the disease is, the sufferer wants to be treated. (Here I refer to advanced malignant disease). This is the case when dealing with private patients, specially. I mention this point because of such routine in certain specialised hospitals. I do not say that blood count is of insignificant value.

Use of deep X-Ray therapy. It has been used with curative results chiefly in malignant diseases, morbid growths and certain other diseases. It has led to conservatism of surgery undoubtedly and has brought the surgeon closer to the radiologist and the clinician.

X-rays in Industry. X-rays in the examination of metals has been given a great impetus. How defects in casting overlooked by the usual method, are easily seen in the radiograph. X-ray suggests itself in various ways industrially. Any part of manufacturing machinery can be radiographed with definition. There

will be a widely increasing application of the X-rays industrially, there can be no doubt.

X-rays in Biology, Zoology, Museums and Natural History.

There is an abundance of material available for X-ray work that will prove of inestimable value to the scientific world for various places of research. The use of X-rays in the study of museums from medico-legal point of view or otherwise is a great advancement of knowledge in this science not only because it pertains to the history of ancient or modern mankind, but also because it pertains to many other subjects such as animal life, insects, fishes, reptiles, seed-pods, flowers and also geological formations.

For many purposes physiological and anatomical standard of development is superior to mere age standard and the radiologist is the authority for the purposes of expert opinion and diagnosis. The following few paragraphs will show the importance.

Diaphysis and Epiphyses.

These are the terms used in the bone development. The term diaphysis is applied to the shaft of the bone and the epiphyses to the extremities of the bone usually developed from secondary centres called diaphysis.

Frontal bone.—Ossification by 2 centres 7th week; at birth the two symmetrical halves are separated by the metopic suture. This is closed by the 6th year.

Frontal sinuses.—Start to appear about 2nd year; definitely recognised 7th year; maximum development at puberty.

Fontanelles.—Close 2 years after birth.

Hyoid Bone-Body.—One centre end of fetal life; great cornua—fuses with the body in middle life; lesser cornua—at a more advanced period of middle life.

N.B.—The ossified Stylo-Hyoid ligament should not be mistaken for a foreign body.

Inferior maxillary Bone.—The development of the lower jaw is intimately associated with Meckls cartilage—the cartilagenous bar of mandibular arch. Meckls cartilages are two, which are connected to the cranial base. Ossification commences 6—7th week of fetal life. The part of body between the symphysis and the mental foramen is directly developed from the fore part of the Meckls cartilage; upper part of the ramus and its processes, have no connection with Meckls cartilage. *Condyles and coronoid processes.*—They are each developed from a separate centre. These several centres are all united by the 4th month. At birth, the lower jaw consists of two lateral halves united at symphysis by

fibrous tissue. Osseous union is complete by 2nd year. Angle at birth 150 degrees; puberty 110 degrees, old age 130 degrees.

Parietal Bones—Ossification by two nuclei over the parietal eminence 6–7 weeks of intra-uterine life. The parietal foramen is not unfrequently apparent even at birth. Fontanelles close two years after birth.

Occipital Bone—The major part of the bone ossifies in cartilage: Basilar part—6th week foetal life; extension of this forms Foramen Magnum and the condyles. Union with condylic parts is complete by the 4–5th year. The condylic, lateral or exoccipital parts—Ossification 2nd month of foetal life. The exoccipital is usually completely fused by the 3rd year with the squama. At birth—The occipital consists of four parts, the interparietal and supra-occipital combined, the basio-occipital and the exoccipital one on either side.

Temporal Bones—Ossification commences in the ear capsule in the 5th month, and proceeds so rapidly that by the end of 6th month the individual centres are more or less fused. *Mastoid process*—It only assumes its form by the 2nd year; at puberty its cancellous tissue becomes permeated with air cells.

Malar Bones—The malar ossifies in membrane mostly from 3 centres, appearing as early as the 8th week, and confluent by the 5th month of foetal life.

Nasal Bones—Ossification from a single centre, end of 2nd month; after birth it assumes the form of nasal cartilage.

Superior maxilla—The centres from which the bone ossifies are not preceded by a cartilaginous stage. Their number is uncertain as early fusion occurs between them. They first make their appearance in the 2nd month of intrauterine life. By the 6th month they are so united that their independent character is obscured. (5 centres are generally described.)

The innominate Bones.—Ossification commences in the ilium about the 9th week of intrauterine life; ischium-centre appears 4th month; pubis, separate centre 5–6th month. At birth, bones entering into the formation of innominate bones namely *Ilium*, *Ischium*, *Pubis* are well defined. The rami of the ischium and Pubis unite about 10th year. Acetabulum—Ossification, complete by the 16th year. The sacrovertebral angle at birth is faintly marked, but with the development of muscles and the bone, there is a corresponding increase in the sacrovertebral angle due to the development of forward lumbar curve from corresponding increase in weight and development.

Sex differences.—The cavity of the female pelvis is more roomy, and ischial spines not so much inturned. The pelvic arch is wide. In male the arch is narrow forming an angle of from 65–70 degrees. The sacrosciatic notch in the female is wide, sacrovertebral angle more pronounced, inlet and outlet large.

Hand.—Metacarpals.—8th week Phalanges-centres of ossification appear 4–5 years, join from 19–20 years.

Carpal-Bones.—Trapezium 5th year; trapezoid 8th year; os magnum 1st year, unsiform 1st year; scaphoid 6th year; semilunar 5th year, cuniform 3rd year; pisiform 8–12 years.

Forearm.—Radius—Lower end 2nd year, shaft 8th week; upper end and head 5–6th year. Ulna olecranon 10th year; shaft 8th week; lower end 4–5th year. The olecranon process may have two centres, point for diagnosis for fractures, as these two centres may appear ununited.

Elbow Joint—Capitulum 3rd year; trochlea 11th year; internal condyle 5th year, has distinct epiphysis which unites 18th year; external condyle 13th year: capitulum, trochlea, and external condyle join to form epiphysis which unites 16–17 year.

Arm.—Humerus—Head, two centres 6 months to 1 year; greater tuberosity 3rd year: lesser tuberosity, 5th year; shaft 8th week.

Foot—Oscalcis 6th month; epiphysis appears 10th year and unites at puberty; astragalus 7th month; cuboid 9th month; scaphoid 4th year, external cuniform 1st year, internal cuniform 3rd year, middle cuniform 4th year. Metatarsals generally 6–7 weeks; metatarsal shafts—epiphysis appear between 3–8th year and unite at puberty.

Fibula—Head—3–4 years; joins 24 year (exception); shaft 8th week; lower end 2nd year; joins 21st year.

Tibia—Head, at birth; joins, 21st year; shaft 7th week, lower end 2nd year—joins puberty; ext-malleolus—separate centre—internal malleolus from the shaft of Tibia; Tuberosity, 11th year.

Patella—It begins 3rd year and is complete at puberty.

Femur—Head—One centre 1st year, unites with neck 18th year; lesser trochanter—13th year; unites with shaft 15–17th years; greater trochanter—4th year unites with shaft 17–18th year. Neck—Ossified by extension from shaft and unites with the shaft from 17–18th year. Shaft femur, 7th weeks; lower end of femur—one centre at birth; (important for calculating the age of the foetus) unites 19–20th year.

The Vertebrae.—The centres for bodies first appear for lower thoracic vertebrae 10th week; (an oval nucleus). From these

nuclei the bodies are developed, the process extending appears in each body up and down the column, until, by the 5th month all the centres possess, ossific deposits except coccyx; epiphyses or secondary centres make appearance at puberty.

Atlas.—Two centres, 7th week; fusion 3rd year.

Axis.—Ossifies from 5 primitive centres, 5th and 7th month. The odontoid process develops from a separate centre which appears 3-5th year; fusion between 8-12th year.

Sacrum.—Each of the sacral segment is ossified from 3 centres. Spinal canal not closed till 7-10th year; ossification of sacral region is slower.

Coccygeal.—They are cartilaginous at birth, each having a separate centre. The first appears from the 1st-4th year; the second from 6th-10th year; third and fourth segments appear about puberty. Fusion of the various segments begins below and proceeds upwards, but is liable to great individual variation. Union of segments 4th with the 3rd, childhood; 3rd with the second, puberty; 2nd with the first 20-25th year.

Sternum.—It begins to ossify about 6th month of faetal life. The body formed by the fusion of four segments is ossified from independent centres which appear 6th month of intrauterine life.

Ribs.—Ossification begins in the cartilaginous ribs about 6th week. By the third month it has reached the permanent costal cartilage, 6th and 7th ribs are the earliest to ossify; 1st rib being the last to ossify.

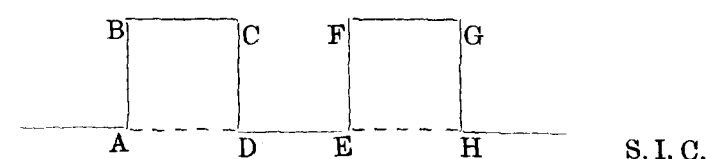
Clavicle.—Commences to ossify before any other bone in the body as early as 5-6th week of faetal life. Sternal end—Epiphysis ossifies about 20th year and fuses about 25th year; shaft, primary centre appears about 5-6th month of faetal life.

Scapula.—Body, primary centre appears about 8th week of faetal life. Coracoid process—Secondary centre appears end of 1st year and fuses about 18th year; Acromion end-centres appear 16-17th year and fusion 20th year; Glenoid Fossa—appears about 16-17th year and fusion 18-20th year. Vertebral border and inferior angle—appear 16-17th year and fusion 20-25th year.

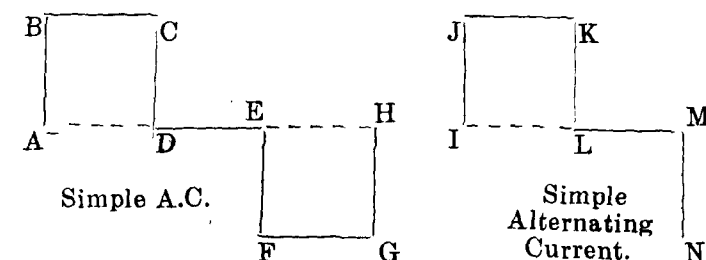
Different Currents

Constant Current.—Its strength does not vary and its direction of flow does not change. Constant, galvanic or direct current, are other names for it. C. C. G. C. D. C.

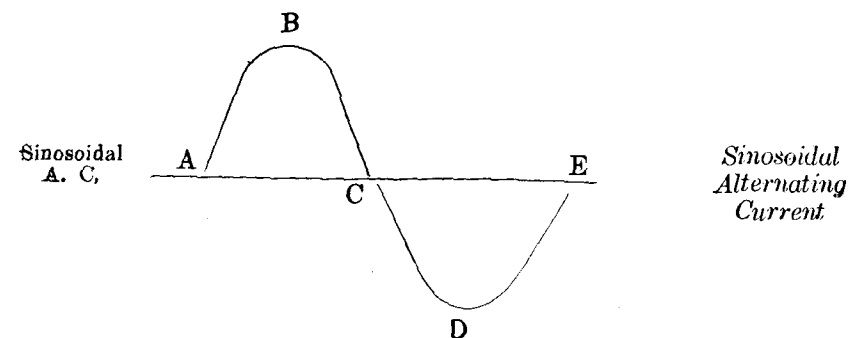
Simple Interrupted Current.—The current always flows in the same direction, but the flow is *intermittent* not continuous. The periods of current flow, and periods of no flow, are of the same duration.



Simple Alternating Current.—This current differs from S. I. current, in that it flows during successive periods in the opposite direction.



Sinosoidal Alternating Current.—The sinosoidal current is an alternating current; but it differs from the simple alternating current in that its rise from zero to maximum and its fall from maximum to zero, are gradual and not sudden.



Faradic Current.—This current is obtained from the induction coil. The currents from the primary and secondary are interrupted; the secondary faradic current is in addition an alternating current. (F. C.).

High Frequency Current.—It is that current which periodically reverses the direction of its flow at an exceedingly high rate—about a million times a second (H. F. C.).

Medical Diathermy.—In it there is production of heat within physiological limits, and therefore the electrodes used are comparatively large according to the area or the lesion to be treated,

thus differing from the surgical diathermy, in which the active electrode is very small. The currents in high frequency are of soft impulse *nature*.

Uses of medical diathermy.—Metabolic derangements, certain circulatory disturbances, nerve lesions, muscle lesions, arthritis, arterio sclerosis, ulceration, neurasthenia—certain digestive disorders, neuralgic and myalgic affections etc.

Ionic Medication—This is the term used for that sort of treatment in which an electrical current is used for the purpose of introducing ions of soluble medical substances into the body. The method of introduction of drugs or more correctly the ions, by the electrical current has special advantages. The current passes into every part of the tissue that is to be treated and the ions travel along the same path. Another advantage of the method is, that the ions are introduced only into the region where they are wanted. It has this limitation—only the more superficial tissues receive them in numbers sufficient for therapeutic action. The deeper the part that requires treatment, the smaller the number of ions it receives. The depth to which an ion will penetrate depends, on the duration of the flow of the current, electromotive force and on the ion. Ions composed of low atomic weight, will penetrate farther, than those of which the component elements have high atomic weight. The time of current of flow and the electromotive force, being the same for each ion.

(To be Continued.)

CLINICAL LECTURE*

ON

SURGICAL TREATMENT OF HYDROCELE.

BY

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The operation of Hydrocele is one of the simplest and easiest in Surgery. You have seen enough and done a large number yourselves too: but as it is one of the commonest diseases prevalent here I should like to give you some practical hints on this operation.

There are several methods and modifications of this operation, but of these excision and eversion are the principal. Excision of the parietal part of the sac was introduced by Von Bergmann in 1885, and the method of eversion by J. J. Pratt in 1898. Since then there has been no material improvement of the technique. However, the methods on the whole are fairly successful. Pauchet of late has introduced a modification; he makes the incision not on the scrotum, which is difficult to disinfect and dress—but in the inguinal region beneath and close to that for hernia (*Practical Surgery*, Vol. 1). I did several cases by his method, but could not see any special advantage over the others.

Some surgeons after isolating the sac from the scrotum push the hydrocele out of the wound *before opening the Sac*; others *open the sac first* and then turn the hydrocele sac *inside out*. Both the methods have advantages and disadvantages in their own way, which I shall explain later on.

A few years ago I went to Calcutta and had the privilege of attending the operations of Sir Frank Connor. One day I was rather disappointed to find that there was only a case of hydrocele for operation, and I was just going to leave the room when the Surgeon came in. He performed the operation with such ease and grace that I was glad I had stayed. Does not this incident prove that we are *never too old to learn*? The technique I saw was quite simple and effective.

Till 1914 we did all our operations under a general anaesthetic, but when the Great War broke out, there was a great rush for

* Specially sent to the Antiseptic for publication.

operations especially hydroceles on account of Nepalese soldiers' going to the front, and we had to do about 20 to 25 operations daily. I tried to simplify the operation by doing it under local anaesthesia. At first a strong solution in small quantity was used only at the site of operation; later on by experiments we came to the conclusion that weaker and weaker solution was quite as efficacious, and so we came down to $\frac{1}{2}$ p. c. solution, and also to infiltration method of the present day. At present we use Novocaine (procaine) solution to which 2 to 5 drops of adrenalin are added and find by experience that it seems to be the local anaesthetic of choice. We use $\frac{1}{2}$ p. c. solution from 5 to 10 c. c. for a small hydrocele for one side—only *in the line of incision*. But ever since I read Braun on 'Local Anesthesia', I have followed his technique in the case of only big or double hydroceles. With his infiltration method by means of diffusion, the conduction of nerves is interrupted causing thereby anaesthesia of the area supplied by the nerve. Braun advises *circuminjection* of penis and scrotum for operations of hydrocele (vide Translation by M. L. Harris, 1924, 6th edition, pp. 336-339). In nervous subjects I always inject $\frac{1}{4}$ gr. of morphia with $\frac{1}{150}$ gr. of atropin half an hour before the operation.

Operation.—The main steps of operation are as follow:—

- (1) Line of incision.
- (2) Dissection and isolation of the sac.
- (3) Tapping of the sac.
- (4) Opening and eversion of the sac.
- (5) Suturing of the edges of the sac.
- (6) Replacement of the testis.
- (7) Closing of the wound.

The scrotum is covered on all sides with sterilized towels and held in position by clips. I usually stand to the right of the patient, and when I have to deal with hydroceles of both sides I prefer to do the smaller one first; but if both are equal, I take up the left one first, because if you do the larger or right-sided hydrocele first, you may find some inconvenience in doing the other; but I do not lay any special stress on this selection; you will yourself find out the best course for you.

Before you settle the operation, you must carefully examine the hydrocele to be sure that *there is no inflammation* of the

scrotum, sac, cord or testis; you should also consider the presence of syphilis gonorrhoea or tuberculosis.

I. If the hydrocele is not quite tense, one of the assistants should retract the skin of the scrotum in such a way that the tumour becomes tense and the skin in front becomes smooth; this helps to make a clean straight incision. The incision is made on the upper and anterior aspect—a *clean smooth* surface, least traversed by veins,—about an inch and a half to two inches away from the median raphe according to the size of the tumour, i.e., it comes nearly to a line midway between the raphe and the *visible* external border of the tumour. As for the length you can judge according to the size, but do not make it either too long or too small—it is better *not to squeeze* a big testis through a narrow aperture causing great distress to the patient and damage to the tissues. If you find the opening too small later on, you can enlarge it with knife or scissors. Use a very sharp knife so as to sever the skin and dartos *by one stroke*, as the latter is adherent to the skin intimately; though the subsequent layers are loosely connected. But there is exception to the rule, specially in the case of recruits who in order to reduce the size of the hydrocele apply too much heat or fomentation on the affected part resulting in adhesion and thickening of the coverings.

II. Next to dartos come the external spermatic, cremasteric and infundibuliform fascia and last of all the parietal tunica vaginalis. Unless the scrotum is made *tense* by suitable pressure and the knife is a very sharp one, it is quite difficult to divide the layers cleanly; sometimes they require fixing on opposite sides with toothed dissecting forceps. As soon as the surgeon picks up a portion of the fascia at a certain level, the assistant at once catches the same tissue *at exactly the same level* parallel with the surgeon's forceps, and so on, *from above downwards* and layer by layer upto the level of the tunica, which can be recognised by its usually light-blue colour and translucent texture. "It is very important to get right down to the sac," says Treves, "for it is easy to make the mistake of peeling off tissues too soon". You can easily recognise the cremasteric fascia which very often consists of "scattered bundles of muscular fibres connected together into a continuous covering", just like a muscle. You should divide in between the fibres; next you come on the infundibular fascia and next to it comes the tunica. It does not matter much if you open the tunica, because you can close it with a pair of forceps at once; but instead of that, if you take any other layer for the tunica and try to separate or divide it, you will cause unnecessary laceration and bleeding. In this

procedure the wound should *not be funnel-shaped*, but square in all directions. At the same time you must take care to see that your *line of division* of the subsequent layers be on *one and the same line*, because sometimes on account of wrong manipulation, the testis is turned on its axis and the posterior surface comes in front; so that if you incise without scrutinising examination you may damage the vessels and even the vas on the posterior aspect, or at the best open near the epididymis. If you do so, you must at once close the wound with fine catgut and then open at the right place. But in order to avoid pit-falls you can make my "needle test", which you have seen me doing many a time; but for them who have not seen the procedure, it will suffice if I say to you, "Just prick the tunica at one place or other till a fine jet will appear; but if blood comes or nothing come at all, or you notice a *thin bulging* of the layer with fluid, you know you are not in the right place or the tunica proper". This test will also help you to diagnose whether it is a case of hæmatocele if thick chocolate-coloured fluid will ooze out. You may remember one case which I did a few months ago—a hæmatocele, which I diagnosed by the needle-test not only as a case of hæmatocele but also of the total absence of testis beforehand and then performed castration without opening the sac and after the operation demonstrated the case to you by dividing the sac.

Next, you should separate the tunica *cleanly* with a pair of *closed* blunt-pointed curved scissors by its concave surface or by gauze dissection on all sides. Then you cover the exposed surface of the scrotum by bringing a piece of gauze all round upto the margin of the incision, and then apply 4 pairs of tissue-forceps at 4 corners of the wound together with the gauze covering, and let your assistant hold them with two hands. (Fig. 2).

III. Tapping is only necessary when there is too much fluid; you can do this with a trocar and cannula and the fluid can be received in a sterilized tray. This is done only to *lessen the bulk* of the swelling, so that you do not require a bigger opening for bringing out the testis. (Fig. 3).

IV. *Opening and eversion of the sac*: Now, catch hold of the fold of tunica on each side of the puncture or if not tapped—at a suitable spot, and incise it with a knife for about half an inch and at once apply a pair of Kocker's forceps to the cut margin nearest to you and let your assistant do the same on the other side. Holding on the forceps with the left hand retract the wound a little and note the position of the testis and distance of the epididymis, and then open out the sac longitudinally above and below with blunt-pointed scissors avoiding vessels as far as

[To Face page 24].



Photos illustrating Hydrocele operations.

By

Suresh Chandra Das Gupta L. M. S.

possible and other structures especially epididymis and was by *actually looking* through the almost transparent sac *inside out*. Do not encroach within $\frac{1}{3}$ in. of the margin of the epididymis or testis proper. Note that "epididymis is closely applied to the lateral aspect of" the posterior border of the testis (Beesly and Johnston); but its position is not always the same on account of malformation or extreme distention by the fluid; sometimes it goes up, remains posteriorly, or even approach the anterior surface; therefore the *position of the testicle should be carefully ascertained before opening the sac*. Now, the scrotum is *squeezed from beneath* under the cover of towels *pushing out* the testis which comes off inside out: by this act the eversion of the sac is procured. *Longuet Doyen and Jaboulay follow a similar method*; but the testicle, instead of being pushed out, was lifted from the scrotum. I think, the former method is more clean and requires less handling than the latter. Andrews devised the "bottle operation" (Keen's Surgery, vol. iv). "The unopened tunic (with the testicle) is separated from the scrotum and dislocated through the scrotal wound". A small incision is made near the summit and the testes is squeezed through the opening. (De Costa). [Fig. 4.]

V. *Suture of the Sac*: Now grasp the everted testes gently with a sterilized gauze and pull out carefully and then push down the fold of parietal tunica by gauze compress as far as possible beneath the testes and afterwards bring the lower end of the testicle *upwards and forwards*. Now, one or two catgut stitches here are often sufficient, but Jaboulay and Winklemann apply a continuous suture "from end to end, the two halves folded back till they meet behind the epididymis and cord" (Thomson & Miles). In this suture great care should be taken that the cut margins are *not drawn too tightly*, otherwise there will be interference with the blood supply of the testicle, and gangrene may result. Usually I do not disturb the parts in the least, but fix the middle portion of the edge of the inverted tunica on either side with catgut by Halsted suture after the U-fashion by means of a needle-holder with the subcutaneous tissue *as far down as possible*, so that the cut margins may not come up and enclose the testes again—taking care not to injure or include the structures or vessels of the cord beneath. And if after the replacement of the testis within the scrotum you find that the testis is overlapped by the parietal tunica, then either apply suture further deeply with the help of your assistant who draws up the margins of the scrotal wound, or suture the cut edges of the tunica behind. Lastly all the bleeding points are carefully secured. (Fig. 5).

VI. *Replacement of the Testes*: Let your assistant hold the pairs of forceps on the opposite side and you hold those of your side and retract them and then *feel the cavity*; if the space does not suffice, make necessary room with your finger very gently, and hold the testes with a gauze and depress the upper end, or if not, the lower end, and then introduce it with as much gentleness as possible. This is the most painful part of the whole procedure, and usually the *pain is reflex and felt in the loins*. Avoid injury to the testes by using as little force as possible. If the space be not sufficient still, make further room or enlarge the wound and then replace the testes taking care *not to twist the cord*. (Fig. 6).

VII. *Closing of the wound*: First remove all the forceps and gauze compresses and then grasp the two extremities of the incision with two pairs of tissue-forceps on either side and stretch the wound gently to bring the edges of the wound in apposition. Next apply Tinct. Iodine to the margins of the skin and close the wound with button-hole or Ford's suture if the hydrocele is small, otherwise apply *interrupted suture* with silk-worm gut. Finally paint Tr. Iodine and Benzoin Co. over the suture line. No drainage is required in most cases, but if there is any chance of haemorrhage put a drainage at the most dependent part. Apply a bandage over the scrotum and *keep it suspended* to the waist-band with the thighs brought in contact. I use the scrotal bandage in the following manner: The bandage is first fastened to the waist and then a few *longitudinal* turns are applied over the scrotum and then a few circular turns are applied in *transverse* manner from above downwards and then tied just above the middle of the scrotum—below the root of the penis. (Fig. 7)

Note: The eversion method is very simple, easy and rapid; with little practice you can perform it in less than ten minutes and quite easily.

A word about excision: If the sac is very thick and voluminous, it is better to perform excision, as there is great chance of swelling or sloughing of the sac. In order to perform excision bring out the whole sac with the testes contained in it unopened after separation of the sac to the entire depth from its coverings until its connection with the testes is reached. Next open the sac for the entire length and trim off the sac close to the testicle taking care not to encroach within $\frac{1}{3}$ inch of testes or epididymis. Sometimes there is much bleeding from the cut margins and you should take every precaution to arrest the bleeding completely; even a small twig left untied may cause awful trouble. In one of my early cases eight hours after the operation the scrotum became distended with blood to the size of a child's head and the penis was buried; I had

to open the suture and remove the clots and tie two small spurting branches. So, it is a wise precaution to leave a drainage-tube at the lowest part through a "stab incision if high operation is adopted" (Carson's Operative Surgery, vol. II). It should be left for 24 to 48 hours according to necessity.

As regards infantile and congenital types treat it in the ordinary way and if necessary scrape the walls of the tunica and paint tinct iodine—taking care not to go beyond the internal ring by keeping a steady pressure on the spot, and apply a pad over the inguinal canal and then a pressure spica bandage *from above downwards*. In case of an inflamed hydrocele I do not waste time with poultices or other palliative measures but operate very early with acute signs of inflammation, *e.g.*, pain and swelling and especially coppery redness and oedema of the skin. If there be any doubt, tap the hydrocele and if the fluid be turbid, open at once; even if there be no pus, you will find flakes of yellow gelatinous masses adherent to the tunica; remove with scissors or peel off the softened tunica and attend to haemostasis carefully. Keep the wound either fully open or leave a drainage after applying a few sutures at the upper part of the wound. Daily dressing is necessary for septic cases.

The stitches are usually removed on the eighth day, and dressed with tinct. benzoin co. The patient is not allowed to leave his bed for a week, and join active work for a fortnight. Remember, that it is a great discredit to the surgeon if the swelling does not subside after the healing of the wound. Sometimes iodides are useful in chronic thickening.

Cases & Comments

A CASE OF NEGLECTED WHITLOW WITH GAS GANGRENE OF HAND.

BY

KAMALA MICHAEL,

House Surgeon, Government Victoria Hospital,
Triplicane, Madras.

(With the kind permission of Dr. E. R. Maduram, F.R.C.S.)

A Hindu woman, aged 54 years was admitted into hospital under the care of Dr. Maduram F.R.C.S., on 11-11 '29 giving a history of having had a whitlow on the right middle finger for 10 days, which extended into the hand.

CONDITION ON ADMISSION.

General.—Patient was semi-conscious (toxaemia?) Heart normal. Urine contained a trace of albumen, no sugar.

Local.—The dressings she came in with, were soaked with pus and there was a very foul odour emanating from it. On opening the dressings, the middle finger of the right hand was found to be enormously swollen and angry-looking, the terminal phalanx had a deep incision splitting it into two halves. There were also two incisions at the web on either side of the middle finger which showed greyish, friable gangrenous sloughs and through which escaped very offensive pus mixed with gas on pressing the palm or dorsum of hand. Both palm and dorsum of hand were swollen, red and crepitant. The swelling extended for about two inches proximal to the wrist joint.

Treatment.—Under chloroform, after painting the hand freely with Tr. Iodine, the terminal phalanx was snipped off, as on closer examination, the bone was found to be exposed and carious, the nail was loose and soft tissues extensively sloughing. The two incisions on either side of the finger through the web were enlarged and extended into the palm and sloughs were cut away. Two fresh incisions were made over the dorsum of hand and dorsum of the finger. All wounds were flushed out with saline, haemorrhage controlled by pressure and dressed with gauze soaked in eusol. During the day, the hand was twice immersed in Condy's bath and dressed with eusol gauze.

The next morning, condition of the hand was pretty much the same. In addition, an indurated brawny swelling was noticed over the thenar eminence and over the dorsum between the thumb and index finger. There was well-marked crepitant feel over this area and on pressure over it very foul smelling pus with bubbles of gas escaped through the wounds at the base of the middle finger. A deep incision was then made in the cleft between thumb and index finger, extending into the palm and dorsum, and the same local treatment was continued during the rest of the day. At 3 P.M. an injection of 10cc of Anti-gas gangrene serum (Behring) was injected into the abdominal wall.

13-11-'29. Another 10cc of Anti-gas gangrene serum administered—Local treatment with baths and antiseptic dressings continued.

14-11-'29. Condition of hand very much improved, very little gas left—Another 10cc of the same serum was administered. Local treatment continued.

15-11-'29. Condition of the hand satisfactory. All swelling subsiding—sloughs separating and wounds looking cleaner than before. No crepitant feel anywhere. Only the tip of the middle finger looked bluish.

18-11-'29.—The stump of the middle finger was definitely gangrenous, blackish in colour, friable and very offensive. The finger was disarticulated at the meta-carpo-phalangeal joint, and the wound was left open to granulate.

7-12-'29.—All wounds clean and granulating.

14-12-'29. The stump of the amputated finger is quite healed and dry. There is only a small superficial ulcer at the base of the stump on the palmar side.

17-12-'29.—Wounds are all healed.

18-12-'29.—Patient discharged from the hospital.

Remarks.—It is a common thing for a neglected whitlow of finger to develop into cellulitis of hand and forearm with palmar abscess etc., but it is rather rare to get gas gangrene of the hand as a complication of neglected whitlow. The other remarkable feature of this case is the rapid improvement under the administration of anti-gas-gangrene serum.

A CASE OF AZOTAEMIC NEPHRITIS.

BY

KALIGATI BANERJEE M. B.

Suri P. O. Birbhum, Bengal.

It is an eternal question—whether the eggs came first or the hen. The scene of Post-mortem granular kidney when placed side by side with the heart affected—raises the question. The following case is of interest because it can't be settled whether the heart was affected first or the kidney.

The Patient was a Hindu male, aged 51. During the last epidemic of Beriberi in the district, his legs were found swollen. He was then treated as a case of Beriberi. After a month, he got diarrhoea, which was intractable to any treatment. He passed from one system of treatment to another till he found one night that he had much shortness of breath. This shortness of breath increas-

ed in intensity till he found that sleep was impossible. He had night-starts and diminution in quantity of urine. This added to his troubles and he had not a wink of sleep due to difficulty of breathing. I was called in to see him and his condition was as follows:

Oedema of the feet ++ Puffiness of face.

Resp--48, Pulse 130, B. P.—1 40 m. m. of Hg. (Systolic)
1 40 m. m. (Diastolic)

Liver +++—extending up to the level of umbilicus.

Tongue—coated and dry. Anaemia—marked.

Heart—much dilated. 1st sound and 2nd Sound almost equal in intensity in Mitral Area.

II sound much accentuated in the aortic area.

There was a trace of albumen in urine and he was on the following line of treatment:

(1)	Pot. acetat—	gs xx
	Sodi citras—	gs xx
	Diuretin—	gs v
	Ext—Punarvana—(B.C.)	3i
	Pot. Iodide—	gs iv
	Digifortis—	m x
	Urea—	gs xx
	Sodi Sulph }	aa 3ii
	Mag Sulph }	
	Syp glucose—	3i
	Inf Scopari ad—	3i

three times daily.

(2) Tabloid trinitrini ($\frac{1}{100}$ gr.)—when Paroxysm of asthma like fit occurs at occasions.

(3) Anabolin tablet (Harrover)—B. D. after food—for 6 days.

(4) A diet—as simple and bland as possible.

This diminished his symptoms altogether and he was relieved and he was sent to Calcutta for clinical investigation.

(1) Urine:—Quantity—8 oz

Specificgravity—1002.

Reaction—acid

Albumin—trace

Casts:—Granular—very few

Hyaline—very few

Pus cells—a few

Renal cells—a few

Squamous epithelial cells—a few

Acid Sodium urate—a few.

Urea Concentration test:—1st Sample (Before urea)

Percentage of urea—0.25 %

2nd Sample (1 hour after urea)—1.1 %

3rd Sample (2 hours after urea)—1.5 %

This shows much damage of the Kidney. Blood urea—0.22 %

Non-Protein nitrogen—0.56 %

Creatinine—0.014 %

This figure approximates the normal and thus the Prognosis of the case was favourable.

General Blood Exam:—HB—45 % W. B. C. 7800 per cc.

R.B.C.—3200000 Polymorpho—73 %

Small Mono—19 %

Large Mono—1 %

Eosinophile—7 %

Radiology of heart—Skiagraph shewed Postero-anterior view of chest (Vertical position.)

The following points are to be noted

(1) *Huge dilatation and hypertrophy of heart.*

(2) *The marked hampering of diaphragmatic movements.*

(3) *Massive enlargement of mediastinal glands and branching root shadows including lung substance.*

(4) *No Lesion in lung substance.*

(5) *No dilatation or thickening of aortic arch.*

The patient is still on alkaline mixture and occasional salines and keeping on nicely. Who will answer—was the Kidney first affected or Heart? Or the vicious circle went on together. The patient was a voracious meat-taker—never had had Syphilis.

I am thankful to Dr. D. Mitra, M. B. Calcutta Bacteriological Institute, 36 Simple Street, who has carefully done the examinations for me.

ECBOLIC EFFECT OF QUININE.

BY

KRISHNALAL VITHALDAS ADALJA, M. B. B. S.
Nairobi.

Very different views are held by medical men about the ecbolic effect of Quinine. Some regard the drug to be capable of being given quite safely during pregnancy whereas others believe that it cannot be so given. One of my chiefs at the 'King Edward Memorial Hospital' (Bombay) used to teach that ecbolic effect of Quinine was an absolute unreality while another at the same hospital advised all sorts of precautions.

However, judging from the fact that Quinine, and castor oil are the recognised methods of producing abortion and that it is used to enhance labour pains (I have used it with success) it does appear that Quinine can effect uterine contractions; and my clinical experience more or less supports it. I have found that though some pregnant women can tolerate Quinine, in some uterine contractions set in and abortion or miscarriage results.

Having come across a case or two where administration of Quinine resulted in the onset of premature labour I set out to try various suggestions of my teachers. Two of them appear worthy of note.

- (1) Administration of small doses of Quinine.
- (2) Giving Bromide side by side or previous to each dose of Quinine.

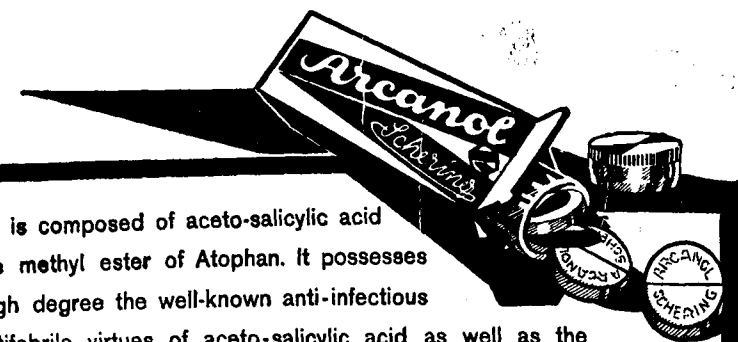
The first suggestion did not seem to give good result as small doses failed to check the malarial attacks in time. Temperature if high and continued can by itself adversely affect the course of pregnancy and should be soon brought under control.

Working on the second suggestion I could get very satisfactory results. At first I used to give grs. x of Pot. Brom. half to one hour before each dose of Quinine but I soon found that Bromide if given with the mixture worked equally satisfactorily. The following is the routine line of treatment that I follow for my malarial female patients who are carrying.

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Pot. Brom. grs. x

Tr. Belladonna ms x

Aqua ad. $\mathfrak{z}\text{i}$

Such 3 into 4 parts each every fourth hour.

Liquid Paraffin $\mathfrak{z}\text{iv}$

at bed time.

In some cases when owing to fastidiousness of the patients administration of Quinine by mouth is difficult and at times impossible or when rapid action is required the drug has to be given by injection. This also can be safely done if care is taken to give a dose of mixture containing grs. xx of pot. Brom. and ms xv of Tr. Belladonna half to one hour before injection. Following case illustrates the truth of the above statement.

I was consulted in July 1928 by a lady in the 5th month of pregnancy for the daily attacks of fever which came on with rigors and passed off with perspiration. Spleen was found to be enlarged. She was put on Quinine mixture with Bromide and Belladonna but it failed to check the attacks and the patient requested the injection. (Here injection line of treatment is much in vogue and patients themselves prefer it to swallowing the bitter medicine). I explained to her the risk but she insisted on it in spite. I gave her a dose of Bromide with Belladonna as suggested above and half an hour later injected Quinine in $7\frac{1}{2}$ gr. dose by intramuscular route. The fever stopped and she carried to full term.

By this time I have treated fairly good number of cases and I am inclined to believe that Quinine administration according to the above method is quite safe.

(Recently plasmoquin and plesochin have been reported to be quite safe and effective in the treatment of malaria in pregnancy, I have tried one of them (Plasmoquin) in a case with success and intend to try it in future.)

A CYST OF BARTHOLIN'S GLAND.

BY

GEORGE PHILIP, L. M. P.

Medical officer, Sulur.

I was called upon to see a case of a Hindu lady aged about 45 years for an abnormal growth on her genitals.

Past history. Nothing suggestive or distinct to show that the cyst was a retention cyst of inflammatory origin, or due to mechanical obstruction except the patient's history of

having gonorrhea. She had also leucodermatous patches on her genitals. On examination it was found that the tumor was oval and soft. It commenced near the ascending ramus of the ischium, and involved the labium minus, part of the labium majus, and the upper part of the vulva. It was of the size of a hen's egg, and the skin covering it was loose. The growth could be grasped between the finger passed into the vagina and the thumb placed externally. The cyst was also slightly inflamed at its upper part possibly due to gonorrheal infection.

Operation. Local infiltration anaesthesia with novacaine and adrenalin was used. A linear incision was made over the swelling and the skin and mucous membrane covering the cyst were dissected out. It was then shelled out of its bed after the blood vessels were divided between clamp forceps. The bleeding points were secured by ligatures and the wound closed by deep sutures and sterilised dressings put on. The contents of the cyst were jelly like in consistence. The wound healed by first intention and sutures removed on the eighth day. But a fortnight after the patient had left my notice, she came to me with swelling of her face and legs. Urine contained traces of albumin. The patient attributed this to an oil bath which she took a week after her passing from my notice, which she thought rather too early. The swelling disappeared after a rigid milk and barley water diet, and the administration of simple diuretics.

Will any of the readers of your valuable Journal kindly suggest any reason for this temporary albuminaria? Has the removal of the cyst anything to do with such a condition?

My thanks are due to Lt. Col. F. C. Rogers, I. M. S., my D. M. O., who gave me permission to publish the notes of this case.

THERAPEUTIC NOTES ON OVARIAN SUBSTANCE

BY

J. C. BAGCHI L.M.F.

Medical Officer, Durgaganj Ch. Dispensary, Purnea.

In the month of May 1929 I saw a woman of about 30 who was ill with Dyspepsia, Palpitation of the heart, Insomnia, Dysmenorrhoea and Anorexia. These ailments, she was suffering from for the past 10 months. The woman is a multipara one.

Many remedies were tried. At last she consulted me. I examined her and found all these complaints true. She had been

suffering from another complaint which was seen in the month of February 1929. She became unconscious in each menstrual period for the 3 successive days. Her unconsciousness lasted only for 5 minutes. This happened once in a day for the period.

I prescribed the following medicines and advised her husband to procure them at once:—

- (1) Peacocks' Bromidia One Phial.
- (2) Sultan Drug Co's Cactina Pillets One Phial
- (3) Taka-Diastase Tablets 3 grs each (P. D. Co's) One Phial
- (4) Ovarian Substance (Desiccated) 5 grs Tablets—Parke -- Davis Co's One Phial.

After a month I enquired her husband, about the case. He said she was given only the ovarian substance and non else. It is strange to say that by one Phial of this medicine she has been perfectly cured and her other complaints which were mentioned above had all disappeared. I advised her to take 2 more phials and to continue the drug.

ANTITHYROIDIN IN A TYPICAL CASE OF EXOPHTHALMIC GOITRE

BY

DR. DALIP CHAND BAHL, L.S.M.F.

Physician & Surgeon, Ambala Cantt

In the month of April 1929, a patient aged 42, Vakil by profession, came to me from Barnala (Patiala State) for consultation.

He related his symptoms as follows:

- (1) Palpitation.
- (2) Diarrhoea (wasting).
- (3) Tremors of the whole body.
- (4) Slight fever.
- (5) Hacking cough.
- (6) Debility.
- (7) Enlargement of the Thyroid gland.

History:—Three years ago he was inoculated for Plague, and soon after the inoculation, went on a horse back for several miles and got thirsty. When he reached some

village he drank one glass of Lassi (curd), which he vomitted. Since then he is having all the symptoms. He was diagnosed and treated as a case of T. B. by the doctors whom he had consulted, to no effect, except that his pulse rate was lowered by 7 Emetine Injections,

On my examination, I found Lungs were quite clear; Heart was very rapid without any murmur; Pulse rate 125 P.M., with T° 98°F (Before emetine injection it was 200 P.M.)

Eyes were protruding though not very much. Thyroid gland was enlarged.

Blood examination showed no parasite. Sputum and faeces were examined for T. B. but the result was negative. I dignosed the case as Exophthalmic Goitre.

I prescribed the following:—

R_x

(1) Ferri Phospha gr. x.

Sig.

B. D. S.

(2) Antithyriodin Merck.

4 tablets daily.

The results obtained were wonderful. Diarrhoea, Fever, and Cough disappeared altogether. Palpitation is very much decreased. He is very much improved in his general health. He can now speak in the court for two hours while he could not do so even for ten minutes. Tremor is still present. Enlargement of the gland is becoming less.

My purpose in sending this case to your Journal is to request my fellow brethren to let me know through this Journal the treatment and results, of a similar case, they may have treated.

CHOICE OF CATARACT OPERATION

BY

DR. RAGHUBIR SARAN AGARWAL,

Ram Eye Hospital, Buland Sahr.

Extraction with Iridectomy:—

1. Who occasionally operate.
2. Unskilled hands.
3. Increased Tension.
4. Cataract unripe.

5. Cataract very large.
6. Patient badly behaved.
7. Iris does not react readily to a mydriatic.
8. In lower classes, i.e., not in more intelligent patients.

Extraction without Iridectomy:—

1. Experts.
2. Tension normal or minus.
3. Cataract ripe.
4. Cataract large.
5. Iris acts well.
6. Very intelligent Patients.

Generally in this operation there is prolapse of iris. It can be checked by instillation of eserine immediately after the delivery of lens. Bromides and chloral hydras may be given for a sedative effect.

Preliminary Iridectomy:

1. One eyed patient.
2. Complications exist.
 - a. Iritis.
 - b. Vitreous opacities.
 - c. Iritic adhesions.
 - d. High myopia.
3. Lenses whose maturity is in doubt.

A portion of the upper segment of the iris should be excised through a corneal incision made preferably with a narrow keratome. The extraction of lens can be undertaken four or five weeks later.

THE AFTER-TREATMENT OF CATARACT OPERATION SHOWING NO COMPLICATIONS.

1. Patient is to remain in bed for three or four days.
2. The head should be raised about 15 degrees.
3. Rest and cleanliness are the important factors in the after treatment.
4. A good sleep the first night is imperative and must be had even if drugs are required.

5. The arm on the operated side should be hobbled for a few nights by using a bandage to form a clove hitch over the hand, while the other end is fastened to the foot of the bed. Many a good operation has been spoiled by accidental blows or rubs delivered unconsciously by the patient while sleeping.

6. Room moderately darkened.

7. *First Dressing*:—

a. 24 hours after the operation. The surgeon himself or a trained assistant, removes the dressing, previously warning the patient not to open or to forcibly close the eyelids during the procedure.

b. Stain on the dressing should be noticed.

1. If dark and dry—all is well, and the dressing applied without the eye lids being opened.

2. If amber-coloured and moist—trouble may be forming and the eye bathed with warm sterilized water; all secretion removed and eye inspected.

c. If much hyperæmia—

Cotton soaked in hot boric solution placed for a few minutes and the eye dried by placing cotton at the inner cauthus. Then atropin (1 per cent. strength) followed by a few drops of 2% mercurochrome instilled in inner cauthus while the eyelids are slightly opened.

d. Light dressing.

8. Eye should be dressed daily.

9. Both eyes are to be covered for four or five days.

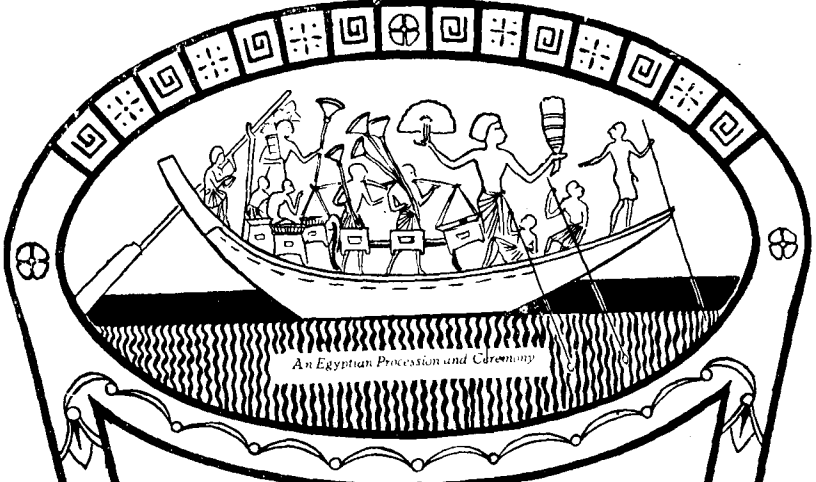
10. Diet light and nutritious, and no solid food permitted for 4 or 5 days.

11. Patients accustomed to alcohol, tobacco, opium, should be given in reduced amounts.

12. In several weeks following operation glare and near work avoided.

13. For 2 weeks following operation atropin drops 1/4% used to keep the pupil dilated.

14. Cataract glasses in 6 or 8 weeks.



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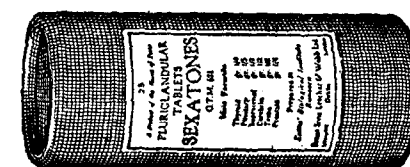
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[No. 1

RELATIVE VALUE OF GLAUCOMA OPERATION.

Glaucoma is one of the most complex types of eye diseases which is encountered in daily practice.

In its acute form it presents features that should be recognised by the general physician, while too frequently it escapes the attention of even the specialist in its early and simple form. It is important that cases of glaucoma should be diagnosed at its earliest onset when proper treatment may be of some help in checking its advance.

Glaucoma is an abnormal condition, whose most important and essential feature is increased interocular pressure or hypertension of the eye ball.

The treatment of glaucoma whether surgical or medical are all directed towards the increased intra ocular pressure and are intended to promote drainage from the eye. True it is, that in selected cases of glaucoma, miotics and other medical measures have been sufficient to preserve useful vision during the life time of a patient. Equally true is the fact that many have lost their vision because of the withholding of surgery, medical measures having failed. Though it is in the range of possibilities in the near future that we may find some non-surgical treatment or methods of controlling intraocular pressure yet for the present

and the immediate future, however, surgery will continue to play an important part in the preservation of the visual fields and the control of tension in a large number of cases. The operative procedures practised for the relief of glaucoma are as numerous as the methods of cataract extractions.

The operation of choice in acute glaucoma when an operation is indicated is the broad classical iridectomy. It has proved to be efficient in certain percentage of cases and has also carried patients through five or more years of useful vision with little change in the visual field.

But the percentage of failures in this operation prompted further study in the development of better types of operations, e.g. Anterior sclerectomy (Lagrange) Elliots' Sclero-corneal trephining operation, iridotaxis, Cyclo-dialysis, and many others formulated on the same principles. These operations have given us an increase in the percentage of satisfactory results. In choosing an operation one should bear in mind, that he should be prepared to perform well, the type of operation, which in the opinion of experienced surgeons yields the best results. It is the duty of the operator to give his patient the benefit of the best type of operation indicated in his case, and the surgeon should try his level best to perfect his technique in the newer methods of operations, when there is a sufficient ground to show that they offer a decidedly higher rate of success. It may be said however, in a general way that iridectomy and cyclodialysis appears to be less successful than the Elliot's Sclero-corneal Trephining, Anterior Sclerectomy and iris inclusion.

Sclero-corneal Trephining is applicable to a larger number of cases of glaucoma, especially in eyes of high tension and when properly performed gives very good results.

Dr. Wilmer in his recent Oxford address suggests that the best method of procedure is to select anterior sclerectomy for cases of moderate tension, under 35 mm of mercury and sclero-corneal trephining for cases of tension higher than 35 mm of mercury. A good idea of the relative value of the several types of operations may be obtained, by observing carefully the later results which they yield with reference to the control of ocular tension, visual acuity, condition of the field of vision, condition of the anterior optic segment which may be determined by the slit lamp microscopy and the comfort of patients.

As has already been said Broad Classical iridectomy has a definite value in a limited number of cases, when properly pre-

formed. It may be said that it is one of the operations of choice, in acute glaucoma when operation at all is indicated. In secondary glaucoma, which some times follow immature cataract, where lens extraction is indicated in the near future, the best surgical procedure will be a broad classical iridectomy.

The disadvantages of this operation are :—

In a large percentage of cases it fails to control tension and preserve the visual field.

In some cases there is rapid loss of vision when the field is contracted to small central island, or where there is Bjerrum's scotoma which has encroached on the macula.

The inconvenience of too much of light passing into the eye through a large coloboma.

Vitreous loss and lens expulsion in a few cases where the tension is very high.

Elliot's Sclero-corneal Trephining :—

This operation has universally furnished good results. This operation demands a precise technique and careful after treatment for at least a week to ensure good results. This operation gives the surgeon an assurance that the visual field and tension are apt to remain under control though the patient may fail to present before the surgeon for a few years. To get at good results there are certain phases of the operation which must engage the surgeon's attention.

First and foremost to effect a good thick conjunctival flap, injection of 2% Novocaine under the conjunctiva over the proposed site of the trephine hole must be made, this procedure ensures an easy and careful dissection of the capsule and conjunctiva.

Cornea should be split, for proper protection of the flap is secured thereby, and it gives sufficient room to place the trephine hole well within the anterior chamber.

To procure good and lasting drainage the trephine opening should be placed well forward, and such a position effectively protects vitreous prolapse.

The trephine head should be directed forwards, towards the centre of the hole while working it through.

The accompanying iridectomy should be small and placed in the extreme periphery. The iris usually bulges through the hole and when this presents it should be grasped before the aqueous flows out.

When the tension is very high only the minutest nick should be made in the iris so as to allow the aqueous to flow out slowly and with the iris still held in the grip of the forceps, the iridectomy should be completed more deliberately after some of the aqueous has escaped. This step when followed carefully prevents vitreous loss in eyes of high tension.

No instrument should be introduced into the trephine hole after the aqueous has escaped as otherwise vitreous is sure to come out. Reposition of the iris should never be done with the repositor, but the iris may be gently washed in to place by a metal tipped irrigator filled with normal saline.

Conjunctival wound should be sutured with a continuous stitch.

Atropine 2 per cent solution, petroleum or castor oil, must be instilled before the eye is closed and must be followed daily until all the evidence of iritis has disappeared. The contra-indications for this operations are very few. A broad basal iridectomy should be given a preference in acute Glaucoma, as also in secondary Glaucoma when extraction of an immature cataract is imminent.

The advantages of this operation are many. Results of various operations in different places show uniformly high percentage of good results. The small coloboma gives the patient more comfortable vision.

It is applicable to larger number of patients than any other form of operation.

Cyclodialysis. This operation has got a definite value in controlling the tension in some cases of Glaucoma secondary to immature cataract. This is also useful in some cases secondary to lens extractions. In a few cases of the terminal stages of Glaucoma simplex it has proved of value. It is the most painful of Glaucoma operations and as such cannot be done in acute cases. Though this operation cannot be recommended as a routine to be followed yet it may be found useful in cases where other forms are contra-indicated.

The operation of iris inclusion, though it has given good results under a few surgeons yet one cannot feel justified in doing this operation to any great extent until it is definitely established by other workers on the field that iris inclusion will yield as high a percentage of good results as is obtainable by Elliotts' and Lagranges' operation.

Lagranges' Anterior Sclerectomy:—This operation is practised by many surgeons all over the world and the results are quite as

good as the trephine operation if not better. Filtration is thoroughly established in this operation though it is thought that trephining is safer in eyes with high tension.

Posterior Sclerectomy:—This operation is useful in tiding a patient over a serious crisis, pending the performance of an operation which is more lasting in its results.

This procedure is of use in Acute fulminating glaucoma which medical treatment cannot control, and loss of useful eye is threatend. This operation can only be practised as a temporary measure pending another operation of more radical nature.

Oclusion of central vein which is complicated usually by intra-ocular pressure, may be relieved by this operation. But in all these cases one cannot restore vision, though the acute symptoms may be effectively controlled and eyes preserved.

Paracentesis of the anterior chamber, like Posterior Sclerectomy, is only a preliminary measure of a great value:—V. C. S.

Medical News and Notes

REVIEW OF MEDICAL PROGRESS IN FRANCE DURING 1928-1929.

BY

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

DISEASES OF THE DIGESTIVE SYSTEM.

Dysenteries.—Bacillary dysentery has always existed in France and its treatment is, as elsewhere, based on the use of the antidysenteric serum hypodermically. It also gives good results when administered per rectum (a. d. serum 50 c.c., laudanum xx drops, Water F 5 grammes,—twice a day) and orally (a. d. serum 60 cc., syrup simple 60 cc.—twice a day) (1).

Cases of amœbic dysentery are common since numerous exotic soldiers have been introduced in France by the War. Emetine is always the order of the day, but several arsenical compounds give easily and quickly great improvements (Stovarsol or Treparsol tabloids, 2—4 a day).

The same products are also very efficacious against the diarrhoea due to other protozoa. They will be also used with success against all sorts of acute diarrhoea of indefinite causes (2).

(1) Montel—Bull. Soc. Path. Exotique 1928, January.

(2) Marchoux—Paris Medical 1928, March.

Cholera. The works of d' Herelle—treatment and prophylaxis by bacteriophage—and his British and Indian fellow-labourers have been very much distinguished in France. They are well known here—let us say only that the French colony of Indo-China which has been severely struck by a large epidemic in 1926-27 has noted the methods of d'Herelle in his scheme of anti-epidemic defence beside the large use of vaccines taken orally (bilivaccine) or hypodermically (vaccine of the Pasteur Institute, -Le Moiquic's lipo-vaccines).

Liver. The drainage of the bile ducts provoked by medical instillations made at the end of a sound reaching the duodenum, under the control of the X-rays can be done only by specialists. For the routine, cachets containing bile salts, extract of condurungo Keichenbach, extract of boldu, (Peumus Boldus), Epsom salt will answer well this purpose (to be taken with a hot decoction 2 or 3 hours after meal (3) Moreover the active principle of the boldu has been isolated and it is found in the trade under the name of boldine.

Ascitis.—The ascitis due to the atrophic cirrhosis of the liver (but not that due to heart diseases) can be cured by administering orally large doses of calcium chloride (10-15 grammes a day) for several weeks—During the treatment, allow salt-free diet) and verify the good working of the Kidneys (4).

DISEASES OF THE RESPIRATORY SYSTEM.

Tuberculosis has given way to numerous works of which the general meaning is known too well, so that it may not be necessary to insist upon. The direct hereditary transmission of this disease is unfortunately an unquestionable fact. The normal T.B. (acid-fast) existing in the mother can go through the placenta and infect the foetus. But, in most cases, the transplacental infection is made by ultravirus forms which can resume the typical one in the new born child (5).

These new notions must not make us give up the method of separating at once the infant born from a tuberculous mother and the preventive vaccination by B. C. G. (i. e. T. B. modified by Calmet and Guérin, who had it grown on media containing bile. The results of this method of prevention are still under study, but it proves to be very favourable (6).

(3) A. Bernard—Paris Medical 1928 No. 41.

(4) Blum et. Carlier—La Presse Medicale 1928 No. 3 See also: LaberNadie XVIth Indian Science Congress.

(5) Kalmette, valtis, Lacomme—Annales Institut Pasteur 1928 No. 10.

(6) See, Specially, the works of Prof. Ukil (Calcutta) pupil of Prof. Calmette.

The gold therapy by sanocrysine gives interesting therapeutic results in pulmonary tuberculosis, e. g. out of 100 cases, 47 improvements (7).

The T. B. extracts, specially the methylic antigens of the Pasteur Institute of Paris, carefully used, give improvements. (8) In any case, their excellent effects are unquestionable in external tuberculosis (9).

It is not safe to treat with novarsenobenzol tuberculous patients suffering from syphilis (10).

Pneumonia.—The curative value of the anti-pneumococcic serum against settled pneumonia is well known, but it is better to prevent than to cure: the vaccine of Weill and Dufourt given to children suffering from measles, scarletina, whooping cough (11) acts generally as prophylactic dose.

The pneumococcus is, it is known, dissolved *in vitro* by the bile salts.—Attempts made on patients by administering sodium-taurocholate F grammes 50, Epsom salt 2 grammes, normal saline 90 grammes,—a few cc. in intravenous injection every day (12) will show favourable results against pneumonia.

HEART DISEASES.

Oubaine in intravenous injections ($\frac{1}{4}$ milligramme a day) for 2 or 3 days give good results in case of insufficiency of heart (weakness of the ventricles) (13).

Quinidine (tabloids) is valuable against the extra systolic arrhythmia and the paroxysmal tachycardia, and it is to be ordered in the interval of the crisis (14).

(7) Bernard, Valtis, Mayer—Gazette Medical de France 1928, May.

(8) Negre, Boquet Valtis—Presse Medical 1928, No. 42.

(9) Labernadie—XVIth Indian Science Congress and Indian Medical Gazette 1929 December.

(10) Marchand—Bull. Soc. Medic. Hop. Paris—1921, No. 11.

(11) Licard—These Lyon 1928.

(12) Barjot—Académie de Médecine 1928 August.

(13) Vaquez et. Lutembacher—Presse Medical February 1928.

(14) Lian et. Blondel—Journal Medical France's July 1928.

Gleanings from Medical Press

SURGERY.

Cystic purpura; Vesical hemorrhagic purpura.--Cases reported by A. Montenegro, G. Villar, A. Colodrero, Pedro di Lella (*Urological Society from Buenos Ayres. Revista de especialidades July 1919*).

The first case, male, 23 years, haematurias with relapses; purpuric patches on skin.

The second case, male 17 years, fever 39° C, pulse 140. Intense haematuria. Duration 3 weeks.

Diagnosis made by cystoscopy showing the characteristic lesions of purpuric patches, described first in 1914 by Bruni from Naples.

Treatment symptomatic, as nothing is known on the origin of this disease. Recovery on both cases.—*F. De M.*

On a case of internal unilateral ophthalmoplegia, the only symptom of cerebral syphilis. Falenkel et Calmettes *Arch. d'ophtalmologia September, 1929*.

More frequent than it is supposed, the cases of isolated internal ophthalmoplegia recognise generally a luetic origin, excepting when there are ocular or orbital traumatism. In this case one must consider the traumatic syndrom of the anterior segment and even when traumatic Argyll Robertson is present, the possibility of a peripheric mechanism with a slight traumatic syndrom of the anterior—segment must not be forgotten.

Syphilis should be investigated in these cases. The interest of this case resides on having been the only symptom of a cerebral syphilis and lasting during 3½ years. Strong amelioration after the specific treatment.

The explanation of the dissociation of paralysis of the III pair is given by the different vascularisation of their nuclear origins so completely demonstrated by d' Astros & Shimamura.—*F. De M.*

Note on Spinal Anaesthesia. Pannet, C. A., *The Lancet* 1194, July 6, 1929.

During life the dural sac is held fully distended so that its internal volume cannot be increased. However much

fluid is withdrawn the capacity of the sac remains the same. The place of evacuated cerebrospinal fluid is taken by an increase in the size of the numerous thin-walled vessels in the spinal and cranial cavities. There are no large vessels in the cauda equina. When fluid is injected above the cauda equina its path downwards is blocked because the sac there is distended to its fullest capacity, there being no thin-walled vessels to diminish in size to make room for introduced fluid. The fluid must travel towards the cranium, and the extent to which it will do so depends on the amount injected.

The author has devised a method of administering spinal anaesthesia based upon these physical considerations, and find it satisfactory, even in operations, on the upper abdomen. He withdraws 8 c.c. of cerebrospinal fluid. To this he adds 1 c.c. of 15 percent novocaine in distilled water. The mixture is slowly injected, the patient turned on his side, and the head of the table lowered 5° to 10°. The injection being made between the 2nd and 3rd lumbar spaces, the 3rd and 4th lumbar nerves are anaesthetized. Fifty milligrams of ephedrine are injected hypodermically immediately after the patient is turned on his back. *Canadian Medical Association Journal*.

Practical Proctological Pointers.—True hemorrhoids have their origin in the rectum above the ano-rectal line, so are covered with mucous membrane, not with skin.

Do not attempt to replace a hemorrhoid that is covered with skin. Such tumors do not belong inside and would not stay if it were possible to place them there.

A painful tumour or "pile" developing quickly at the verge of the anus and covered with mucocutaneous tissue is nearly always thrombotic in origin. Such tumors cannot be replaced. They are quickly cured by enucleation of the clot and sac.

All hemorrhoids do not protrude on defecation. When small they may prolapse only sufficiently to produce a sensation of fullness or a partial obstruction with constipation.

A redundant and relaxed rectal mucosa may also prolapse sufficiently to obstruct the anal opening, thus giving rise to constipation and fecal accumulation.

"Itching piles" is a misnomer. True hemorrhoids do not itch; and anal itching and hemorrhoids seldom exist in the same patient.

True pruritus ani is usually due to intestinal putrefaction or fermentation engrafted on some minor local pathology. That is why ointments do not cure such conditions.

Pain during and after defecation is very suggestive of rectal, fissure.

Don't forget that a thorough rectal and anal examination will often disclose the cause of those obscure backaches with pain radiating down the back of the thighs.

Don't overlook inflamed crypts, unhealed fistulæ and other rectal pathology as foci of infection.

When mucus and blood appear in the stools, do not hastily diagnose colitis, or bleeding piles. Make an examination, you may find a cancer.

No physical examination is complete without an examination of the rectum.

Do not underestimate the hot Sitz as a palliative for various types of rectal and anal pain and inflammation.—*Illinois Medical Journal*.

Syphilo-dermo Urologic Maxims:—Men prate of brains yet fall for shape.

The man of sexual virility is the man who makes the world go round.

It is curious that sex, the most important thing in life, is treated with levity.

The chronic "tender face after shaving" is often due to a pure seborrhoeal sycosis.

To remove hairy moles from the face it is first necessary to destroy all of the hairs by electrolysis.

Glycerite of starch and ichthyol, equal parts, makes a satisfactory soft varnish when a non-greasy base is desired.

Do not overlook the fact that a perineorrhaphy may enable a wife to win her husband back from the other woman.

Get into the habit of systematically and routinely examining the teeth and the gums before looking at the buccal mucosa.

Multiple grouped nodules surrounding hair follicles and aching on exposure to cold are very probably leiomyomata.

Physical love may not be held in high esteem by exponents of righteousness, but few marriages are successful without it.

A supposed verrucous mole of the lower thorax or abdomen, if in line with the nipple, is very probably an accessory nipple.



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As scaliness of the elbows and knees may be caused by a congenital xeroderma, it is not a pathognomic sign of psoriasis.

A single, persistent itching papule of the glans penis in a patient past middle life should be curetted and examined for epitheliomatous tissue.

The father who does not gain the confidence of his sons and discuss with them the phenomena of sex, is derelict in one of his prime duties.

A long, persistent, unvarying lumpiness or linear (frequently arciform) nodulation of the skin around joints should suggest the diagnosis of erythema perstans.

A history of treatment for syphilis is no guarantee that the patient had syphilis; go back of the diagnosis and find out who made it and how it was made.

As morphoea rarely develops in persons past middle life, a single morphoea-like plaque in an elderly person is pretty certainly a morphoeiform epithelioma.

Of the chronic universal or nearly universal dermatoses, the several forms of parapsoriasis seem to be least frequently diagnosed by the general practitioner.

The drying effect produced by the continued use of an antipruritic lotion can be best counteracted by the use of a simple unguent during the first one or two days of every week.

Even in a slender woman, lineae atrophicae of the abdomen are by no means pathognomic of a previous pregnancy, or even abdominal tumour, as they very occasionally occur spontaneously.

When a man comes to you seeking aid for waning sexual capacity, it is but right that you either investigate his case carefully or refer him to someone who will. Frequently a case of this character may be helped to a marked degree through proper advice and suitable treatment. The worry and introspection that result from a consciousness of failing sexual power, especially in a young man, may bring about a grave state of health. Pay serious attention to a case of this sort. Suppose that you were the patient.

When a young man comes sneaking into your office at the end of office hours, and after much stuttering and stammering, finally conveys to you the information that he contemplates marriages

and seeks advice on the physical facts of the relation—drop all else and take him in hand. You already have his confidence or he would not have sought you. Treat his errand with seriousness. Give him the advice he needs. It may be the very advice that will keep him out of the divorce court in later years.—*Urologic and Cutaneous Review*.

Blind Spots in patients with intracranial tumors.—Loyal Davis, Chicago (Journal A. M. A., March 9, 1929), studied 105 intracranial tumors. Of these, seventy-two were verified by microscopic sections. The remainder were known to be tumors but were unverified for one reason or another. In addition, the blind spots of fifty normal persons were plotted. Some of the latter had refractive errors, such as myopia and astigmatism, which aided in establishing the size and shape of an average normal blind spot. In the cases of tumor, the blind spots were charted and replotted several times prior to the operation before a photograph was made for the hospital records. In each instance, including those cases of pituitary tumor without the presence of increased intracranial pressure, the blind spots were definitely enlarged above those of a group of normal persons. In all but five of the patients, the tumor was attacked by a surgical procedure designed to remove it. In those instances in which an attempt at removal of the tumor was surgically unwise, a decompression was effected through the operative field. In the five cases mentioned, a primary subtemporal decompression was performed. This was done because the observations of ventriculography indicated that the tumor was surgically unapproachable. Following the operation, the blind spots were again plotted several times before the patient left the hospital, and in every case a definite decrease in size proportionate to the relief from increased intracranial pressure was found. This procedure continues to be an important part of the follow-up examination of our patients. As a result, a complete photographic record of the course of progression and regression in the size of blind spots is a part of each patient's chart. Davis concludes that in enlargement of the blind spots due to increased intracranial pressure, the layer of rods and cones is pushed laterally by the edematous optic nerve papilla. The blind spots of patients with intracranial tumors may be recorded accurately and simply before and after operation. Records of the size of the blind spot are of greater value in determining and following measurements of the height of swelling of the optic nerve heads.—*Oklahoma State Medical Association Journal*.

A Radical Cure for Hydrocele.—B. L. SHARMA (*Indian Medical Gazette*, October, 1929, p. 571) describes a radical cure for hydrocele by means of quinine injections. Cases of hydrocele, varying in size and duration, have been successfully treated during the past two years by this method, and in no case has there been any re-accumulation of fluid. The method, which is said to be very simple, painless, and without any bad after-effects, takes only a few minutes to perform, so that patients can be sent home soon afterwards to resume their ordinary occupations. The requisites for the procedure are: a 10 c. cm. syringe with a needle $2\frac{1}{2}$ inches long; a hydrocele trocar and cannula; and 10 c. cm. of a sterilized solution containing 20 grains of quinine bi-hydrochloride and 1 grain of salicylic acid. The scrotum is well cleansed and painted with tincture of iodine, while the patient is seated. The hydrocele is tapped with the trocar and cannula, the fluid thoroughly drained, and the cannula left *in situ*. The syringe is filled with the quinine and acid solution, which should be slightly warm, and this is introduced into the sac by inserting the needle into the cannula. The needle and cannula are removed, the puncture is rubbed well and painted with tincture of benzoin. The patient should wear a suspensory bandage for some days. Owing to the slow absorption of the solution the scrotum remains larger than normal for about fifteen days, but without any pain or inconvenience; it then becomes reduced to its normal size.—*B.M.J.*

Treatment of Furunculosis.—Byron N. Lingeman (*Journal of the Indiana State Medical Association*), uses Kerrison's plan of cleansing the canal, during the initial stage, with 95 per cent. alcohol followed by a pledget of cotton saturated in 1 to 100 carbolic acid which is allowed to remain for a minute. Then he packs the canal rather firmly with gauze saturated with 10 per cent. ichthyol solution. Alcoholic solutions are very good because they tend to shrink the tissues, act as a germicide and do not macerate the skin.

The question as to when to open these furunculi is a debated one. The author does not get very much relief in early incision. A good many cases get well without any incision at all. Incision is very painful unless the boil has ripened, and requires a general anesthetic, gas preferred, which is not always available. He prefers to wait until they ripen.

While the furuncle is ripening, the use of dry heat together with large doses of aspirin and phenacetin help to make the patient more comfortable. In severe cases codeine or morphine.

should be given if necessary for sleep. A solution of aluminium and lead acetate ten per cent., or Burrow's solution applied hot is used in the Vienna Clinic. Many other treatments have been advocated, such as diathermy, ultraviolet rays, infra-red light, ionization of tin in the meatus, etc.

After the boil has opened the canal should be kept clean with dry cotton on an applicator and alcohol drops instilled two or three times a day. In the chronic cases the general health of the individual should be investigated, his urine and blood examined for sugar, his diet and bowels regulated. Vaccines help in some cases but the trouble is most people think that every boil will be the last one and do not like the idea of vaccines. The patient should be advised against using soap and water in their ears, and absolutely against picking their ears. All foci of infection should be removed and the patient put in the best physical condition possible:—*American Medicine*.

Fractures at the Ankle.—F. J. COTTON and R. BERG (*New England Journ of Med.*, October 17th, 1929, p. 753) consider that classification of the major ankle injuries, not as fractures but as dislocations complicated by fractures, gives a much simpler basis for treatment than do the various classifications founded on the mechanism of production or on anatomico-pathological details. Since, in nearly every case, efficient correction of the displacement (disregarding the bone lesion) is all that is necessary for the best possible results, the following classification is suggested: (1) outward dislocation, or Pott's fracture; (2) inward dislocation, or reversed Pott's fracture; (3) backward dislocation, or Cotton's fracture; and (4) upward luxation, a somewhat neglected though important class of major injury, which the authors discuss in detail. A plaster cast should be applied in any of the first three classes until union is solid, usually for six weeks in classes 1 and 2, and for seven to ten weeks in class 3. Further treatment with strapping and a built-up Thomas heel should then be applied. Cases in classes 1 and 2 should be practically normal in three months, but those in class 3 usually require three or four weeks longer. In order to avoid muscle atrophy with consequent pronation of the foot, early or late exercises are in order. The injury in class 4 cases is a compression fracture of the lower end of the tibia, with the fibula generally remaining intact. It is a comminuted, semi-impacted type of fracture, rarely complicated by fracture of the os calcis, more rarely by that of the astragalus, and is not often compound. The diagnosis, which is confirmed by

x-ray pictures, is often made without these by the abnormally high level of the internal malleolus in relation to the external one. This class of fracture requires more time to secure a weight-bearing joint than do the other classes, and good results need not be expected for six months. The usual methods of treatment by fixation with a tibial plaster boot usually give very crippling results. The best treatment consists in pulling the foot down, reshaping the fragmented tibia as much as possible, and holding the foot down by traction with a Sinclair skate, a boot, or by skeletal traction with tongs attached to the os calcis. Open operation is justifiable and sometimes wise. Early fixation is followed by an ambulatory brace after union is firm. Minor injuries, such as strains, with or without ligament damage, tears of the ligaments, and fractures of the fibula at a higher level, should receive the same treatment as class 1 cases. In diastasis, careful inspection of radiograms shows a widening of the mortise. Various operations have been devised for this condition; but in fresh cases the deformity can be reduced by downward traction on the foot, combined with compression about the malleoli, the foot being held in the varus position.—*B.M.J.*

The Care of the Surgical Diabetic. Ohler, W. R., *New Eng. M. J.* 201: 259, Aug. 8, 1929.

Generally, a surgical diabetic is a severe diabetic. The presence of sugar or diacetic acid is no contra-indication to surgical procedures. The presence of pus always increases the severity of diabetes. A case of general septicæmia may be kept sugar free with insulin but insulin is of no help in halting the spread of the infection. Every septic wound in a diabetic should be seen every day by the visiting surgeon. The carefully bandaged, mildly gangrenous toe may give rise to a septic foot and leg within twenty-four or forty eight hours. Beginning coma in a non-surgical diabetic may present the symptoms of an acute surgical condition in the abdomen. In diabetic coma the skin is always dry and the patient nearly always has nausea and vomiting and a leucocytosis. The most important single service in the proper care of the surgical diabetic is to supply the patient with a competent special nurse, or to detail one of the ward nurses to the special care of the patient. Provision should be made for the frequent of the urine for sugar and diacetic acid on the ward. This is of much greater value than collecting a twenty-four hour specimen and waiting until the next day for the report.

On the day of operation the patient receives from 30 to 50 grams of glucose in the form of oatmeal gruel or orange juice at

least two hours before operation. If the patient is receiving insulin give the morning dose as usual at the time of the glucose meal. During the operation keep the patient warm. In the severe case it is desirable to give 1000 c.c. of saline solution subcutaneously before the patient leaves the table.

Immediately after operation, start rectal tap water. Test the urine within the first hour and give insulin if necessary. Test the urine every two hours subsequently for the first twenty-four hours. Give insulin whenever necessary. Test the urine every four hours during the second day. Test the urine every six hours during the third day, which means three times a day before meals and at 10 p.m. Start fluids by the mouth as soon as possible. If fluids cannot be taken by the mouth carbohydrate in the form of glucose, by rectum or intravenously, should be given. The patient should get at least 50 grams of glucose in the first twenty-four hours.—*American Medicine*.

Painful Feet.—Among the minor ills which affect the major portion of our population may be counted painful feet.

The etiology of this defect may be found in one of the two factors:

1. Remote foci of infection of minute or massive character; long-lasting constitutional diseases necessitating recumbency or effecting a general muscular weakness; and carrying of excessive weight, either artificial or natural, such as occurs in pregnancy, when not only the uterus with its contents, but the increase of adiposity augment the body weight.

2. Local trauma, usually of long duration which strains and, eventually, stretches the soft foot structures and injures the osseous system of the foot. This trauma may be caused by ill-fitting shoes, by faulty foot posture, and prolonged but unaccustomed standing and walking, as it happens in a rapid change of occupation from a sedentary to one demanding the upright posture most of the day; worse yet, when, in addition to the body weight, the carrying of artificial loads is required.

An etiological axiom may be formulated as follows: Painful feet result from the establishment of a disproportion between the weight-bearing capacity of the feet and the load they are called upon to carry.

Either the foot structures become inefficient in virtue of constitutional diseases and foci of infection, or the foot insufficiency results from local injury or excessive superimposed weight.

Symptomatology.—Pain, the predominate symptom, may be named "pain of insufficiency," which differs from that of inflammation or of torn or broken tissues. It is a feeling of fatigue which turns into a dull pain. The appearance of the feet may be normal: they do not necessarily present the deformity of flatness. What actually causes pain in feet is the process of growing flat. The operation of changing the configuration of the feet is what elicits pain. Markedly developed flat feet may be painless because the individual bones, the ligaments and muscles have already in course of time, and gradually, adapted themselves to the demands placed upon them. The foot structures have become reconstructed and reformed to their need. It was this procedure of adaptation to the new requirements which expressed itself as pain.

Treatment.—On the etiological factors involved as disclosed by a carefully taken history, and the physical—local and general—findings, should the treatment be based if permanent result and retention of the shape of the feet are desired. Foci of infection should be removed whenever possible. Foot and leg exercises and massage should be practised if long recumbency in any illness is required. Sudden change of a sedentary occupation to one necessitating much walking and standing should be avoided. Injurious influences such as ill-fitting, narrow and tight foot gear, commercial arch supports and other harmful contrivances should be discarded. While these procedures are of a curative nature, they are of a prophylactic as well, and may serve as instruction to the prospective and the actual foot sufferers.

The painful feet need local treatment, besides the wearing of corrective shoes and supports of adequate construction in each individual instance as a temporary measure.

The local treatment consists in the application of physical measures. To hasten the absorption of inflammatory deposits, to increase the circulation and to overcome the contractures in the joints, negative galvanism and diathermy are used beneficially. To gain muscle strength and increase joint motion, manipulation, interrupted electrical stimulation, massage and mechanical vibration are applied. This treatment must be given in addition to the temporary wearing of well-built shoes, made-to-order supports, and physiological walking and standing.—*California Medical Journal*.

On the aetiology, pathogeny and physio-pathology of scarlet fever. Prof. Cantacuzene (Report to the French Congress of medicine in Presse Medicale 2. XI-29)

A very interesting *mise au point* of the question of the scarlet fever whose resume is:—

(a) There is no cultural or biological method enabling to differentiate the so-called *Streptococcus scarlatinae* from the other groups of streptococci.

(b) The Dick reaction is irregular and inconstant, instable and labile and can in no way be compared with the Schick reaction in diphtheria.

(c) The serum treatment of patients by horse serum, immunised against the *streptococcus scarlatinae* or its toxine gives favourable results only in mild or hyperpyretic forms and completely fail in malign and hypertoxic forms of scarlet fever.

(d) The vaccination by Strept-scarlatinae or its toxin has not yet proved successful in all countries; the authors who claim for its efficacy have rather based their opinion on the indications, given by Dick reaction which is quite fallacious. Even in these cases, the so called immunity does not last for more than one or two years.

(e) Experimental transmission to human beings gives very interesting results: From 82 cases recorded to have been submitted to the inoculation of *S. scarlatinae* in tonsils, only 4 contracted the disease. On the other side, 12 cases where the tonsil exudat from scarlet patients was inoculated, contracted the disease in 100%.

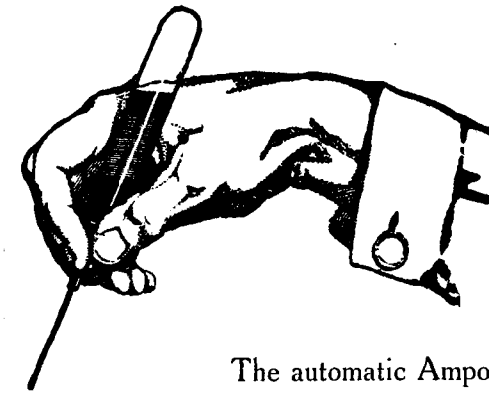
It is highly probable, therefore, that an unknown element is present in these exudates causing the disease.

(e) The scarlet products recolted on hypertoxic patients and passed through 3 filter have reproduced the disease on monkeys and rabbits even when a small parcel is deposed on a scarified skin. The serum of rabbits cured from the disease agglutinates the *S. scarlatinae*, but it has never been possible to isolate such *Streptococcus* from the blood of the rabbits.

The explanation of these facts can be given supposing the streptococci act to a large extent as carriers of the real virus which would be adherent to these microbes.

New studies are necessary to discover the true cause of scarlet fever.

In the same Congress, the second report on this subject is signed by M. Sacquepee and Liegeois (*On the role of the streptococcus in scarlet fever* ibid), from which the following fact must be retained: under the name of *Cantacuzene phenomenon* the author des-



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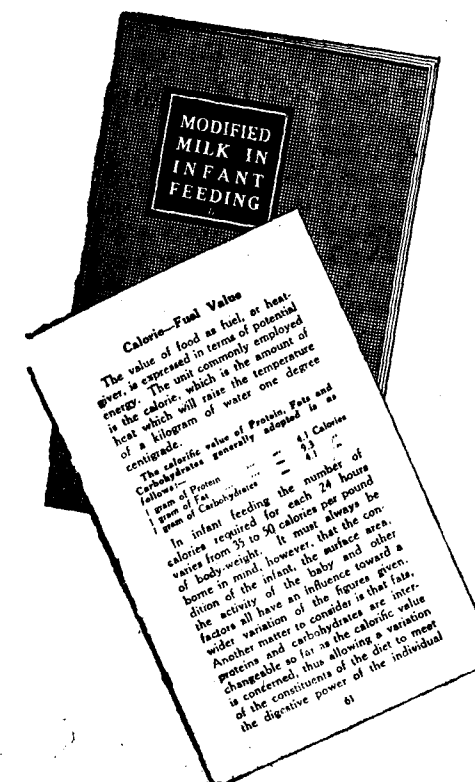
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cribes that the filtrate of the urine of a scarlet fever patient renders agglutinable any streptococcus, not agglutinable previously. Subcultures on this medium confer a very persistent agglutinability lasting at least 10 months and resisting to 100 C temperature and to iode which is so strongly antibiotic.—*F. De. M.*

Acute and Chronic myelogenous leukaemia.—Mariano Castex. Lecture delivered before the Nat. Acad. Med. from Buenos Ayres (*Prensa Med. Argentina* 10-XII-29).

Two interesting cases. The first one of acute beginning by fever pains and tumefaction of the joints, diagnosed as acute rheumatism. Anorexia, anemia, general progressive debility. The clinical picture remembers either a septicaemia, or an endocarditis lenta, or an acute leukaemia. Generalised lymphadenia, small, indolent ganglions being palpable at the neck, axilla and crural region, or visible at both hilar zones (radiography). Large splenomegalia. Liver congested. Chronic amygdalitis cryptica, but no hemorrhagic or necrotic stomato-pharyngitis, very common in such cases. No sign of diathesis hemorrhagica. Blood: 154,200 white cells, from which 83 % are lymphoidocytes, micromyeloblastes, and myeloblastes. Diagnosis: *myelosis leucemica lymphoidocitica* vel *micromyeloblastica*, one of the sub-types from the old *leucemia myeloidea acuta* actually divided into three types: *myelocitica*, *myeloblastica*, *lymphoidocytica*. Interesting to note the rheumatism like beginning, and the negative reaction of Schultze-Winkler (Oxydases) owing to the undifferentiated cells of white series. Large discussion on the infective theory of the disease, due to the researches of Ebstein and Fraenkel and to the fact of contagiousity, noticed by Obrastzow (nurse rapidly died from infection transmitted by a patient with acute leukaemia). The infection is absolutely mortal, the death coming short time after the beginning.

The second is a *leucemia myelogenæ chronica*, subacute beginning characterised by pseudoangor, partly attributed to arterio sclerosis; chronic progressive evolution with hypochromic anemia; myocardic claudication due either to infective toxicosis (chronic constipation) either to hæmopathia where a large increase of red immature cells and myelocytes and meta-myelocytes are found (70, 300 W. cells). Prognosis fatal but ameliorations interrupted by recidives. Treatment: arsenicals, roentgen-therapy.—*F. De M.*

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On the contamination of haemolymph in mosquitoes infected by the yellow fever virus (H. Beaurepaire Aragao, & A. da Costa Lima) Mem. Inst. Oswald Cruz Supp n° 10 Aug. 1929.

A certain number of days must elapse before the stegomia is able to transmit the disease by its bites to man or to *M. rhesus*. This period might well be explained as representing the time required for the germ to pass from the mosquito stomach to the caelomic cavity and hence carried by means of the haemolymph to the salivary glands. The virus should then be found in the caelomic fluid. Hindle recently contradicted this hypothesis; inoculating two monkeys, one with mosquito legs emulsion, and the other with the rest of the body, only the latter having contracted the disease.

Taking the fluid directly from the pericardial chamber the authors prove that it conveys the infection giving the clinical signs and the typical lesions of the yellow fever.—*F. De M.*

Saprophytism of the Tubercle Bacillus. A. Fontes (paper read before the 2nd Pan American Congress of Tuberculosis held at Rio de Janeiro 30-VI-29 to 7-VII-29) in *Mem. Inst. Oswald Cruz. Suppl. no 10 August, 1929.*

Fontes, it is well known, is the pioneer of the work showing the existence of filterable virus in tuberculosis, now generally admitted after the experiments of Hauderoy & others. The author asks firstly: does the tuberculous bacillus in saprophytic life exist in the external medium? After quoting a series of experiments succeeding to give tuberculosis by injections of paratuberculous germs (Kolle, Schlossberg, Pfannestiel, Igersheimer San Felice) and those who failed to confirm such results (Lange, Heymann, Strauss, Dall'Collo) the author concludes: special circumstances may act upon the tuberculous germs transforming them into types which, little by little, become more similar to the common acid fast type, in consequence of deep alterations of their biology, turning them a virulent, modifying their biochemistry so as to make them lose the main characteristics of the pathogenous bacilli, in narrow condition of forced parasitism.

A series of his personal experiments prove however the possibility for the bacillus of tuberculosis to live in condition of latent life in artificial cultures for a delay of 2 years and 7 months recovering its virulence (in the meaning of capacity of reproduction without losing its morphologic and natural characters, provided it finds favourable elements for its development such as heat, nutritive element and humidity.

Some other experiments where the bac. of Koch was cultivated in symbiosis with an actinomyces, show that this association did not alter the character of T. B. for a very long period. The author quotes the studies of the Indian researches Soparker who verified the virulence of dry sputum kept in the dark even after 309 days. And the first part of his paper concludes: we must be most reserved with regard to the destruction of the tuberculous virus by the external dysgenetic condition; besides, they induce us to think of the possibility of infections starting from infected media. There is however in the literature about the matter, no definite documentation that may allow affirming the condition of normal saprophytic life of the bacillus of Tuberculosis.

In the second part of his paper the author asks: can the b. of tuberculosis live in saprophytic condition in animal organism? Some cases are quoted (a) patient with chronic bronchitis, no T. B. at microscope, inoculation in guinea pig positive with chancre and adenitis with acid fast bacilli. New inoculation of the pus of this ganglion negative; (b) renal tuberculosis with Bacillary discharge since 13 years; health of the patient fairly good; inoculation to guinea pigs always mortal.

Conclusion: the bacillus of tuberculosis, under special condition of parasitism may undergo alterations in its virulence, in order to show a particular state of relative saprophytism.

In the third part the author deals with the following problem: does the Koch's bacillus derive from a saprophytic source?

The work of other authors is resumed. Among them, the reviewer thinks it will perhaps be interesting for the colleagues working in India, to know the theory of Ferran of Barcelone. Ferran synthetises his doctrine in denominating *alpha* all non acid fast bacteria from various origins, likely to determine, when in pure cultures, in the inoculated animals, the formation of tubercles with the presence of Koch's bacillus. This bacillus, the final term of revolution of the saprophyte to pathogenous type, is named *gamma*. Between them there is group of distinct races more or less homologous *beta*. The *gamma* bacteria when in artificial media lose some of their properties giving rise to a non-acid fast subrace *epsilon*. Between the *gamma* and *epsilon* bacteria there is an acid fast emulsionable variety *delta*. The vaccination of Ferran, so largely used in Spain, has as antigen the bacteria of *alpha* group.

The conclusion of Fontes on this matter is: the change of Koch's bacilli into polymorphic and avirulent type is possible but, in spite of the wide series of accumulated experimental facts,

which show a tendency to admit the possibility of this transformation by characters acquired hereditarily or by mutation of saprophytic bacilli acid fast or not, into real Kock's bacilli, no peremptory demonstration of this phenomenon could be got at up to this date.—*F. De M.*

MEDICINE AND THERAPEUTICS.

Remarks on the mercurial diuretics, salyrgan and neptal.—Hathiegan, Gavrilă & Borbil in *Miscanea Medicală* Roumanya Aug. Sept. 1928.

Very efficacious and devoid of toxicity, specially indicated in cases of large oedemas, constituted by transsudats, where other diuretics failed. Doses: $\frac{1}{2}$ cc. to 2 cc. by intramuscular injection, to be repeated every three days. Salyrgan can eventually be given by intravenous injection. The diuresis rises up to 4000 cc. in average. Strong chloruria was observed in all cases; hydraemia and chloruraemia in 50 %. In one case of nephrosis, diuresis was increased without any aggravation of the lesion.—*F. De M.*

New principles on the cure of pernicious anemia and their results.—V. Luigi Varga. *Terapia* (Milano) October, 1929.

The author referring to the Whipple's method shows that the Hungarian author, Jeney, working in Prof. Jobling institute in America, has discovered the properties of liver extract at the same time as Whipple and independently of him. Mouzon in *Presse Médicale* (n°102-1927) claims the priority of this method to Perrin of Nancy (1904).

The interest of this paper resides specially in the fact that the author treats his patients with insulin Richter, followed or not by liver extract and arsenicals, with wonderful results. Insulin does not act on blood itself, but increases its alkalinity and the appetite of the patient.

If we accept that one of the causes of pernicious anemia is the excessive acidity of the blood, the administration of the insulin finds a *Priori* its logical indication.—*F. De M.*

Two years of oral vaccination against typhoid in Milano.—Tron *Giornale di Bacteriologia Immunologia*. August 1929.

Short summary given by the author, the whole paper being published in the *Boletín del Instituto Sieroterapico*.

Milanese. Vaccinated 153171, informations obtained from 129640. controls 52416. The rough percentage of morbidity among the vaccinated has been from 2 to 6 times less than among the controls; if only real failures are taken into consideration, the morbidity falls to 10 times less than among the non-vaccinated. The ingestion of bile does not seem to have a sensible influence upon immunisation. Better results are obtained by the administration of strong and repeated doses of vaccine. It is impossible to collect sufficient data for a statistic worthy of value: the clinical impression of the author is that oral vaccination against typhoid fevers confers a certain degree of immunity, without an absolute protection.

No data were available in order to judge the influence of the vaccination upon the mortality.—*F. De M.*

Diphtheritic anatoxin in the treatment of ozena.—P. Carlo Monti. *Terapia* (Milano) Oct., 1929.

Belfanti has long ago discovered a diphteroid bacillus in Ozena, known as *bacillus Belfanti* in France. Neumann confirms these results, but shows that this bacillus is also found in normal noses. Antidiphtheric serum has been used in the treatment of Ozena by Belfanti and Della Vedova. Feldstein uses intramuscular injections of diphteric anatoxin with good results.

The author treats by this method 20 cases (12 with nasal insufflations, 3 with intramuscular injections, 5 with both injections, and insufflations).

Results: 4 cases cured, 5 ameliorated, the others with very little or no results.—*F. De M.*

Pyretotherapy in progressive paralysis, tabes, and scleroiss with Mixogon.—Enrico Fillak. *Terapia* (Milano) Oct., 1929.

The use of Mixogon by intravenous injections gives very good results, not inferior to those of malaria therapy, used by Wagner-Jauregg. The method is innocuous and more easily maniable.

Clinical results: very good in dementia paralytica, some ameliorations in tabes, none in sclerosis.—*F. De M.*

Insulin in the treatment of menorrhagias of ovaric origin.—Dr. J. Soler Julia. *Ass. medica* (in *Prensa medica argentina* 10-12-29). Vogt has proved that Insulin acts upon the menstruum

of diabetic women, reducing its quantity and duration. The author has used this therapeutic in a case of persistent menopause hemorrhages (40 units daily twice, before meals) and in three cases of menorrhagia by ovaric insufficiency with very good results. Insulin has an elective action upon the ovary, but none on hemorrhages caused by endometritis, fibromas & cancer. The mechanism of such action has not yet been explained.—*F. De M.*

Treatment of diabetes mellitus by glycolytic amygdalines.—Corsonel 10.—*Giornale di Bacteriologia et Immunologia*.—Torino Aug., 1929.

Livierato has shown that the extract of palatin tonsils from oxen possesses a glycolytic action entirely similar to that of Insulin. Farmachidis, Vattuone, Tulliato, Da Rin have confirmed these experiments and shown that acute processes attaining the tonsils cause glycosuria in normal persons and aggravate a pre-existent diabetes (Hirschfeld, Labbe V. Noorden). The extract of tonsils reduces hyperglycemia, glycosuria and acetonuria, raises the standard of carbohydrates tolerance and increases the muscular force and the weight of the body. The extract of tonsils is an hormone analogous to pancreatic hormone (insuline) and antagonistic to suprarenal hormone (adrenaline).

It is used in human clinics, under the form of tablets, containing 0.50 of tonsil extract, in daily dose of 10 tablets. The author has seen that the sugar has not been completely reduced, but the polyuria ceases, the polyphagy and polydipsy diminish, the asthenia, acetonuria and neuralgic pains completely disappear. At the side of other antidiabetic drugs, the tablets of tonsils extract are a valuable sugar reducing Agent, devoid of any danger.—*F. De M.*

On the use of Plasmochin in the treatment of Malaria.—Froilano de Mello. *Presse Medicale* September, 1928.

Plasmochin kills rapidly the gametes of all forms of human plasmodia & the schizonts of *Pl. vivax* & *malaria*.

Without action on the Schizonts of *Pl. falciparum*, these can however be destroyed by quinine. Plasmochin compound is a happy formula of real value in malignant tertian.

Plasmochin increases the haemoglobine, the number of red cells, and eosinophyllia. Regression of splenomegalia is obtained.

No serious accidents have been seen in author's experience. Some gastralgias and cyanoses cease rapidly after the interruption of the drug. The author is of opinion that either to command this interruption or on account of some mortal cases, due to intoxication, reported by other malarialogists, the use of plasmochin must be made under strict medical surveillance.

It is to be hoped that on account of the gameticid action of plasmochin & the consequent possibility of rendering uninfected the local anopheline fauna, this drug should constitute an ideal chemoprophylactic agent in malaria campaigns. A precise experiment on this point is needed by a mass plasmochination of one, or two highly malarious villages, combined with killing adult anophelids during the course of the experience, to see what are the results of such treatment during the following malarial and non-malarial season.

Ocular troubles due to arsenobenzols. Prof Terrien *Archiv. d'ophtalmologie* September, 1929.

The author divides the reactions into two groups: those of a pure toxic origin (hyperaemia of conjunctiva, perikeratic injection, iritis, irido cyclitis, myopia, oculo sympathetic syndrom, retinian haemorrhages) and precocious reactions due to Herxheimer phenomenon, many of them causing neuritis and optic atrophies. The group of neurorecidives is also described (optic neuritis, ocular paralysis iritis) the explanation of which the author gives in the following words: the energetic action of the arsenobenzol on the spiritochetes particularly exposed during this period to the therapeutic action on account of their dissemination, provokes their rapid and massive destruction. But at the same time the formation of antibodies resulting of the normal evolution of the disease non-treated or less strongly treated by mercury is stopped. The spiritochetes which are respected retain their activity and finding the tissues without defence give the reaction known as neurorecidives.

The best prophylaxy of such accidents is to be very cautious in the use of arsenobenzols, defending them rigourously when there are serious lesions on the cornea, or ureal tractus, specially if the optical tractus is interested. In optical neuritis of tabetic patients arsenobenzol must be formally prohibited.—*F. De M.*

Correspondence.

TO THE EDITOR "*The Antiseptic*"
DEAR SIR,

With reference to the case of "Malaria with very peculiar and varied complications" published by Dr. T. S. Suryanarayana Iyer L.M.P. in your issue for November, 1929:—

I am of opinion that this was a case of Intestinal obstruction of the Dynamic type following mesenteric Embolism (thrombosis) with colonies of malarial parasites. I have come across three such cases myself in 22 years' practice.

From the account given, it is not clear if this case was given any Quinine after the 18th July, 1929 i.e. the 2nd day under treatment. In any case, I think, if the writer of this case does not mind my saying so, the Quinine was not given by the proper route. Such cases must be treated as the same lines, as far as Quinine is concerned, as cerebral malaria and nothing short of the Intravenous route is of any use.

I again differ from the opinion expressed in the concluding paragraph viz., that Laparatomy alone would have saved the patient—it would have been an extremely hazardous line of treatment indeed and this is just one of the kinds of case where medicine prevails over Surgery. Keeping in mind the analogy of its pathology as compared with that of cerebral malaria, the lack of indication for the knife at once is apparent. I hope your subscriber will pardon any frank expression of opinion.

Yours faithfully,

10-12-29 } B. J. BOUCHIE, M.R.C.S., (ENG.) L.R.C.P., (LON.),
Medical Officer, N. W. Railway., Jind Junction.

Book Reviews

Contributions to the Principles of Morphology.—By William Bernard Crow D. Sc., Ph. D. F. L. S.—Published by Messrs. Kegan Paul, London Price 5 sh.

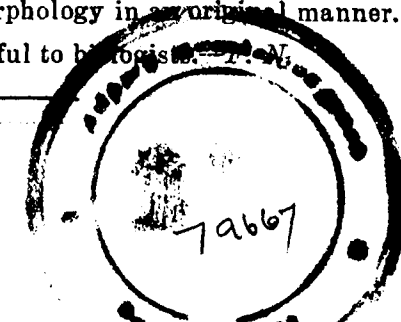
This is a contribution along a new line, towards unification of thought with reference to diverse natural phenomena. Unity out of diversity, is the basic idea in modern scientific research and the author works up this idea in regard to concrete biological data viz., the structure of living things.

A study of comparative anatomy reveals the dynamic nature of the relationship between organic constructions, and there has developed a science of form, which sympathises all facts of organic structure and development in plants and animals including man. To Goethe, belongs the credit of having initiated the idea of a unity of plan in organic structure. According to him all the objects of nature form a connected whole. They are produced by the activity of an "Internal Force," a concept allied to the creative energy of the Greek philosophers or the libido of the modern psychologists.

Yet having admitted a unity of plan, the varieties observed in nature have likewise a system of development which gives rise to individuality and which is the nature of the relation or form inherent in each organism, and homology is the relation of different organisms to one another. Homology in its turn leads to classification and type, which however are made to change with every new orientation given to structure and function. The variations of structure and character are also due to relationship by descent and this concept explains the peculiarities which differentiates one type from another.

A few examples, showing the application of the above mentioned principles, to the structure of plants and animals, would have added to the interest of the book. Being the author's thesis which he submitted for his doctorate degree, he has developed the subject on broad lines and has discussed only the main principles of the science of morphology in an original manner.

The book should prove useful to biologists.



Cholera and its Treatment.—By Ramakrishna Guin L.M. & F. (Bengal Medical Service)—Published by the Author, 14 Pratapachandra Ghose Lane, Calcutta. Price Rs. 2.

A practical, illustrated and useful hand book on the modern treatment of cholera, written from the author's experience as a Resident Medical Officer, infectious wards, Campbell Hospital, Calcutta.

The special feature of the book is a full description of Saline injection both intravenously and subcutaneously, the instruments required, the safeguards to be adopted and the composition of the fluid to be injected and the indications for the same. The paragraph on the determination of the specific gravity of blood is very useful and interesting.—U. V. R.

Heat Pyrexia.—By Lt.-Col. C. J. McCartie M.A., M.D., M.C., I.M.S., (Retd.)—Published by Brownie & Nolan Ltd., Dublin and can be had from Messrs. Thacker, Spink & Co., Calcutta—Price Rs. 0—12—0.

This is a neat little book describing Heat pyrexia, a name given to all cases of pyrexia caused by heat. The author says it is not heat-stroke, no heat-fever and describes very graphically the symptoms of Heat-Pyrexia and how the temperature of the body is kept uniform about 98.4 F. by a mechanism called the Heat Regulator both in the coldest part of the earth and in the hottest.

The author while welcoming the use of woollens in the cold region to retain the heat, condemns the use of flannel by the soldiers in India especially in the hot weather and going about without solar hats. Some statements are very commending. He says "The Indian dress for the climate is a loose white cotton blouse over a cotton loin cloth or trousers, lock shoes and no socks. The doly bearers in India endure the severest of all labour. The coolies carry twice the burden of the Soldier, yet, you can never see either class suffer from the heat while the soldiers—British and Indian—are struggling panting and over heated."

On the whole it is a very interesting booklet specially useful for Europeans newly arrived in tropical countries and to the Indians who persistently imitate European style.—U. V. R.

"Clinical Methods" Ninth Edition. By Robert Hutchison, M. D. Edin., F. R. C. P. Lond., and Donald Hunter, M.C., F.R.C.P. Lond. Published by Cassell and Co. Ltd, LeBelle Sauvage, London E.C. 4. Price 12s. 6d.

First published in 1897, this Manual has been reprinted thirty-one times, and has now attained its 87th thousand.

The volume was thoroughly revised for the Eighth Edition in 1924; it has now been revised with the same thoroughness for the Ninth Edition.

In the present revision Dr. Hutchison has had the collaboration of Dr. Donald Hunter, whose name now replaces that of the late Dr. Rainy on the title-page, while help has been given in special sections by recognized authorities on the subjects.

The most important alterations and additions will be found in the chapters on the Nervous System and The Examination of Pathological Fluids, and in the chapter on Bacteriological Investigations, which has been re-written by Dr. G. T. Western; but all the other chapters have been subjected to a careful revision.

The new illustrations include two colour and two half-tone Plates.

While much new matter has been introduced, Dr. Hutchison has been careful, by a rigid elimination of matter that has fallen out of date, to keep the volume within its former limits.

The Hygiene of Marriage.—By Isabel Emslie Hutton, M.D. Published by William Heinemann, Ltd. London—Pages 121. Second Edition.

The present edition has been brought up-to-date and made more useful by the addition of entirely new chapters on menstruation and menopause, sterility (so common to-day) and Birth control (a much talked of subject recently.) The main subject is described in three sections. The chapter "Before Marriage" deals with the things which the young people about to be married ought to know and shows how a rash and negligent union without proper consideration before hand may cause unhappiness and worry later on. The third chapter describes how and when the "Consummation of Marriage" must take place, and gives some of the difficulties that may be met with and how to remedy it. The chapter on "Married life" describes how a great deal of the trouble which causes unfortunate matrimonial tragedies can be avoided by a proper understanding between each other and adjustment and adaptability of the husband and the wife to the new condi-

tions. This book must be chiefly read by those who are about to be married and young married people, because a great deal of unhappiness, anxiety and general ill-health in married people is caused by ignorance of facts with which they ought to be acquainted with before marriage. It is also a very useful book for the guidance of the members of our profession in making a correct diagnosis and giving proper advice in such cases.—*K.L.R.*

A Diet Summary in average servings for Diabetes.—by P. J. Cammidge, M.D. (Lond). Published by Bailliere, Tindall and Cox, London Pages 8. Price. 1 sh.

In this small pamphlet, the protaein, the fat and the carbohydrate contents of common food stuffs are tabulated in grams and also in round numbers as one-fourth, half, twice, the ration, one ration being equal to a fixed number of grams, values are much easier to remember. A diet summary of this kind is quite essential in the dietic treatment of diabetes, and we commend it to all medical practitioners.—*K.L.R.*

Outlines of Dental Science, Vol. XIII, Dental Local Anaesthesia.—by John James, L. D. S., E. & S., Livingstone, 16—17, Teviot Place, Edinburgh.

Since extraction of teeth, (by which is meant painless and bloodless extraction), has been brought to ridicule by the Medical Profession (state and independent) and since even the illiterate in the remote country parts have been informed of or have experienced what a modern Dentist means and what a great stride, the modern Dentistry has taken in relieving human sufferings, it is quite opportune that the readers of the "ANTISEPTIC" must be acquainted with, nay must practically make use of the latest methods of anaesthesia in extraction of Teeth.

The book under review is one of the most useful and exhaustive treatise on this useful subject, which is becoming more and more important for Indians at present. The book though small, treats all the methods known to Medical Dental Science, and of the methods, general anaesthesia is known to all Medical Practitioners. But since the operation can be performed by expert hands in a few seconds, chloroform should only be resorted to in very few cases. In regard to local Anaesthesia, we are of opinion that the general practitioner can easily resort to Ethyl Chloride spraying methods, Cocain being a little tedious. All the same the medical profession will surely gain much from studying this treatise, atleast to relieve human sufferings, if not to decrease mishaps and fatality during this so called "minor operation" of Tooth-Extraction.—*H. V. R.*

The After-treatment of operations.—By P. Lockhart-Mumery, F.R.C.S., M.A., M.B.C.M., Published by Bailliere, Tindall and Cox, London; Fifth Edition; Pages 281; Illustrations 47; Price 7/6.

Much attention has been devoted, of late, in the preparation of patient and after-treatment of operations, and improved technique in the preparation and after care is mainly responsible for lessening the risk of complications during and after operations. In this book the author discusses, in a simple and lucid style, the importance of proper treatment of patients after operations so as to avoid the common complications, which were more common before them now, and how to treat the case when complication does occur. Introductory chapter deals with such general things as postures after operation, insomnia, acidosis, flatulence, bed-sores, etc. The second chapter describes the treatment of wounds, and in the this hæmorrhage after operation is discussed.

W. B. Gahrief, M.S., F.R.C.S., writes about blood transfusion in the fourth chapter. In the fifth chapter the author describes the causation, prevention and treatment of shock. In the sixth urinary tract complications and in the seventh post- anaesthetic complications are given. The rest of the book deals with complications arising after a particular operation and how to combat it. There are very few books of this kind which deals with such an important branch of surgery in a practical way. We highly commend it to all practitioners and house-surgeons, who have to deal with such cases every day.—*K.L.R.*

Infectious diseases and other fevers in India.—By Purshotam Dass, T. Patel, M.D., (Lond.) &c. 1929, Pp. 784, Price Rs. 10: Butterworth & Co., (India,) Ltd., Calcutta.

The author has written this after fifteen years of experience of fevers in general and infectious diseases in particular in England and in India.

The present book is an expansion of series of lectures delivered by the author to the students of University of Bombay College of Surgeons of Bombay.

Such of these infectious disease as are commonly met with in India have been described fully with their modern treatment.

One will find in it a lot of clinical information and many practical points in the etiology; diagnosis, prophylaxis, and treatment of various fevers well stressed. Many of the more important bacteriological and pathological aspects have been mentioned where ever necessary.

The incidence and variations of these diseases have been directed vividly as they occur in various provinces of India.

We have no hesitation in recommending this book to all the medical practitioners and to the medical students its usefulness cannot be overestimated.—*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.]

Practice of Medicine.—Dr. Hughes Dayton M.D., Published by Messrs. Lea and Febiger, Philadelphia. 5th Edn \$ 2.25 net.

The after treatment of operations.—Dr. J.P. Lockhart Mummory F.R.C.S., M.A., M.B., B.C., (Cantab). Published by Messrs. Bailliere Tindall & Cox, 7 and 8, Henrietta St., Covent Garden, London. Price 7-6 net.

Methods and uses of hypnosis and self hypnosis.—Dr. Bernard Hollander, M.D., M.R.C.S.L.R.C.P., Published by Messrs. George Allen and Unwin Ltd., Ruskin House, 40 Museum St., London W.C. 1. Price 6/- net.

The Practical Medicine Series-Pediatrics.—Edited by Dr. Isaac A. Abt M.D., with the collaboration of Arthur F. Abt, M.D. Published by *The Year Book Publishers*, 304, South Dearborn St. Chicago, \$ 2.25.

Seventeenth Annual Report of the United Fruit Co., Medical Dept.—Published by the United Fruit Co., 17, Battery place, New York, U. S. A.

Light Therapeutics.—Dr. John Harvey Kellogg, M.D. Published by the Modern Medicine Publishing Co., Battle Creek, Michigan, U. S. A.

Diabetes and its treatment.—Frederick Dr. M. Allen, M.D. Published by Messrs. Funk and Wagnalls Co., 354-360 Fourth Avenue, New York, U. S. A.

Care of the mouth and teeth.—Harvey J. Burkhardt, D.D.S. Published by Messrs. Funk and Wagnalls Co., 354-360, Fourth Avenue, New York, U. S. A.

Infectious diseases and other fevers in India.—Dr. Purushothamdas T. Patel, M.D., M.R.C.P., D.T.M., & H.F.C.P.S. Published by Messrs. Butterworth & Co. 6, Hastings St., Calcutta, Price Rs. 10.

Consumption, its cause, prevention and treatment.—J. D. Narula (N.D.) Published by Bernard Pallisy & Co., Rawalpindi, India.

Diabetes.—J. D. Narula (N.D.) Published by Bernard Pallisy & Co., Rawalpindi, India.

Piles.—J. D. Narula (N.D.) Published by Bernard Pallisy & Co., Rawalpindi, India.

Aspects of rheumatism and gout.—Llewellyn Jones M.B., (Lon.) Published by Messrs. William Heinemann (Medical Books) Ltd. London. Price 10/9.

Diathermy.—Elkin P. Cumberbatch, M.A., B.M., D.M.R.E.M.R. C.E. Published by Messrs. William Heinemann, (Medical Books) Ltd., London. Price 1/1.

The principles of Infant nutrition.—Dr. K. H. Tallerman, M.D.: (Can.) M.R.C.P., & C.K.J., Hamilton. Published by Messrs. William Heinemann (Medical Books) Ltd., London, Price 10/-

Diseases of the Throat Nose and Ear.—Dr. Dan McKenzie, M.D., F.R.C.S.E. Published by Messrs. William Heinemann (Medical Books) Ltd., London. Price 45/-

Jacob's Atlas of Dermo-chromes, Vol. II.—Dr. Henry Magcarmac C.B.E., M.D., F.R.C.S. 4th Edn. Published by Messrs. William Heinemann (Medical Books) Ltd. London. Price £ 5-5.

Yogic physical culture.—S. Sundaram. Published by Gurukula Ashram, Kangeri, Bangalore.

Therapeutics of fevers.—Dr. H. C. Allen, M.D. Published by Messrs. Boericke and Tafel, Philadelphia.

A Diet Summary.—Dr. B. J. Cammidge, M.D. Published by Bailliere Tindall and Cox 7 and 8, Henrietta St., London. Price 1 net.

Hydatid Diseases, its pathology, diagnosis and treatment.—Harold R. Dew, M.B.B.S., F.L.C.S., F.A.C.S. Published by The Australian Medical Publishing Co. Ltd., Sydney.

Acute infectious Diseases.—Dr. J. D. Rolleston, M.A.M.D. Published by William Heinemann (Medical Books) Ltd., London, Price 15/- net.

General Paralysis and its treatment by induced malaria.—Report by Surgeon, Rear Admiral E. T. Meagher, R. N. Inspt. of the Board of Control, England and Wales. His Majesty's Stationary Office, Westminster, London, S. W. 1. Copies can be had of Messrs. Higginbotham's Madras. Price 25/-

Acknowledgment.

Horlick's Malted Milk Calendar, 1930. We acknowledge with thanks, the receipt of the above calendar, published by Messrs. Horlicks Malted Milk Co. Ltd., London. The picture portrayed therein is both graceful and charming, the subject selected being the touching incident in the *Ramayana* describing *Sita's* insistence on sharing the 14 years' exile of her banished husband Prince *Rama*.

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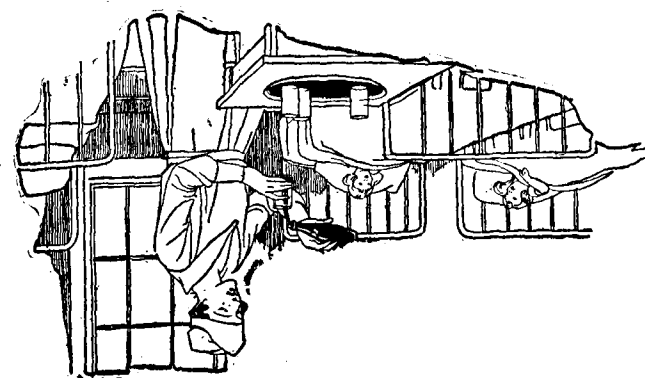
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REVIEWS AND OPINIONS:—

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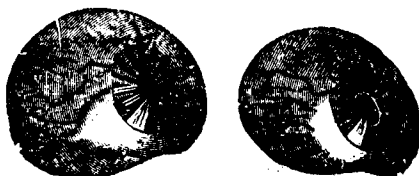


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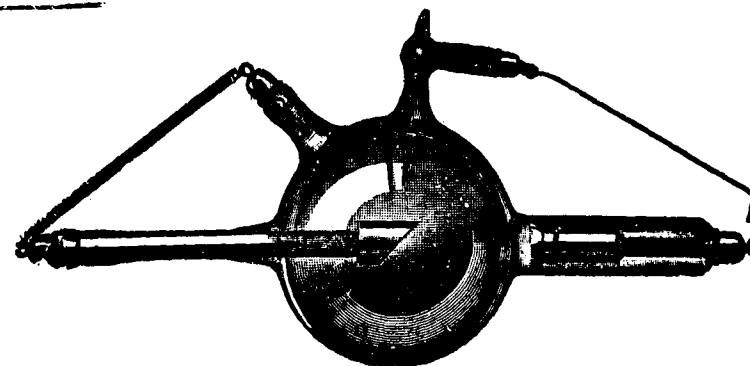
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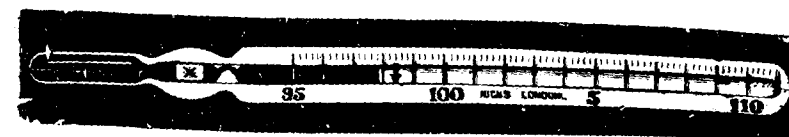


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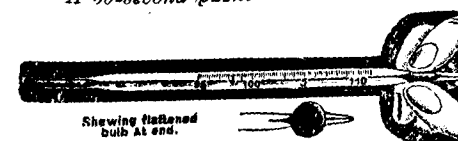
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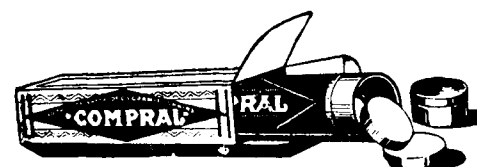
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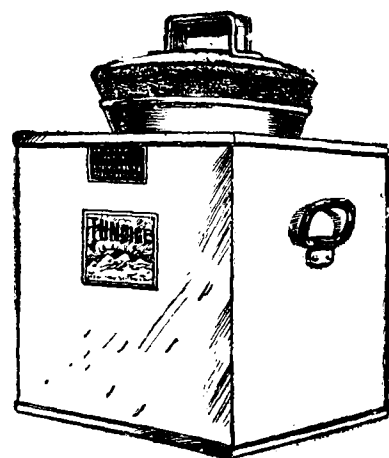
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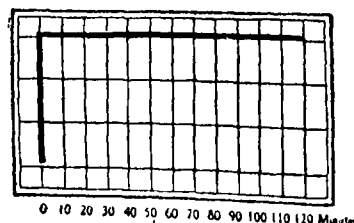
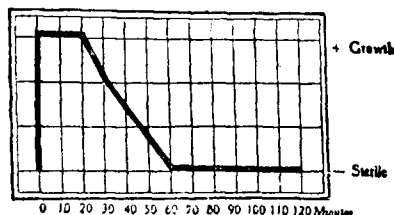
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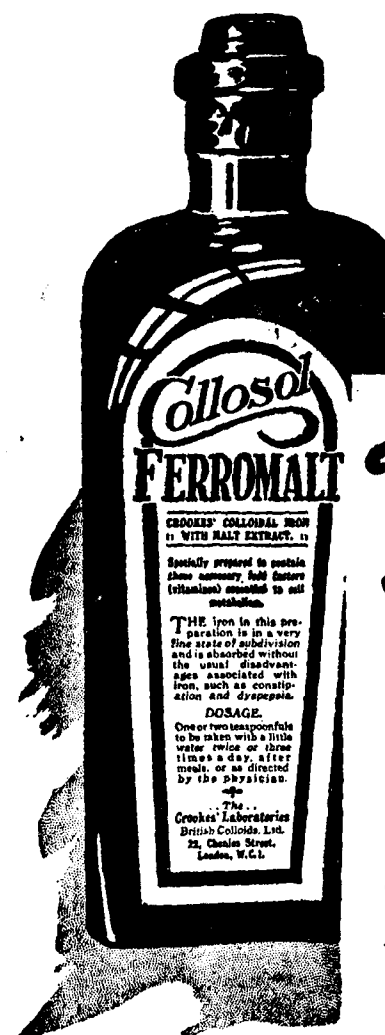
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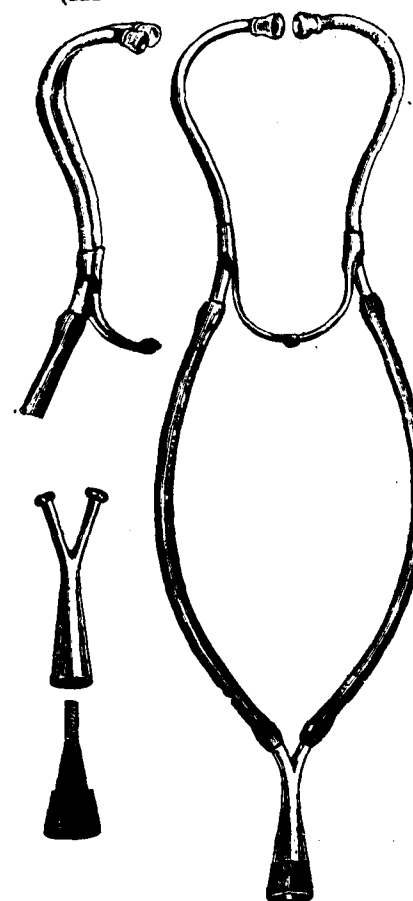
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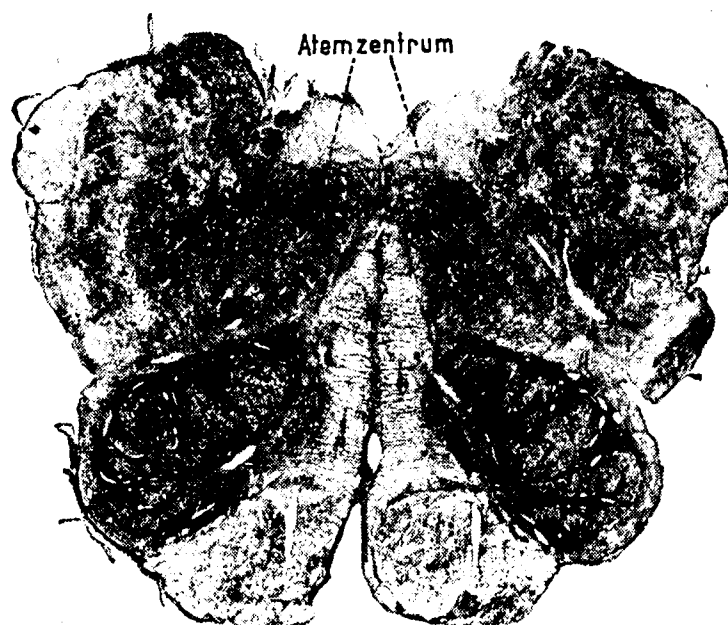
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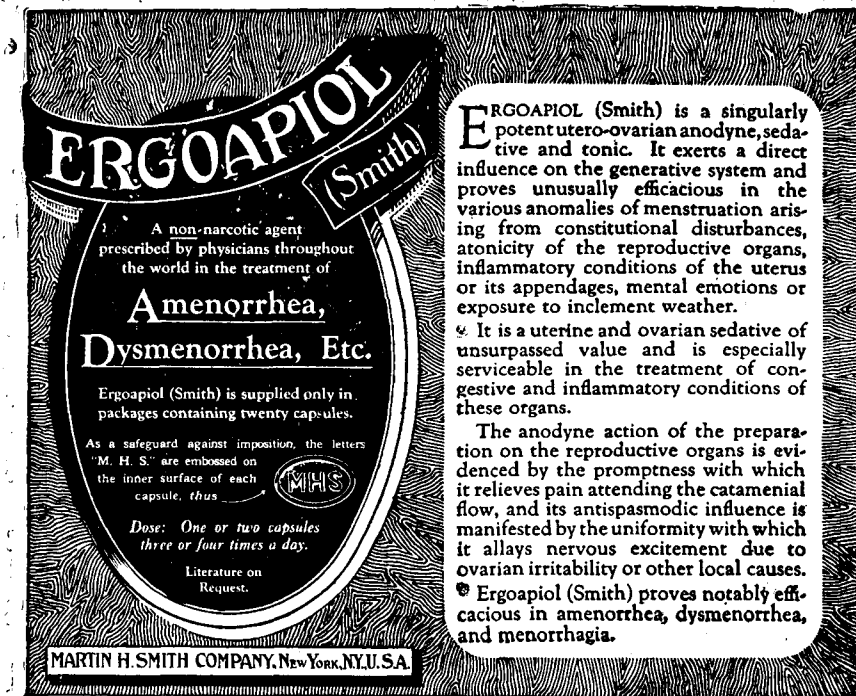
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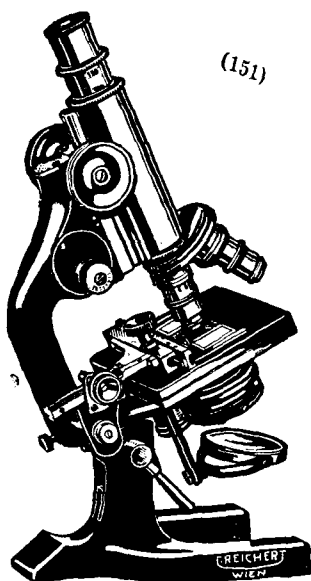
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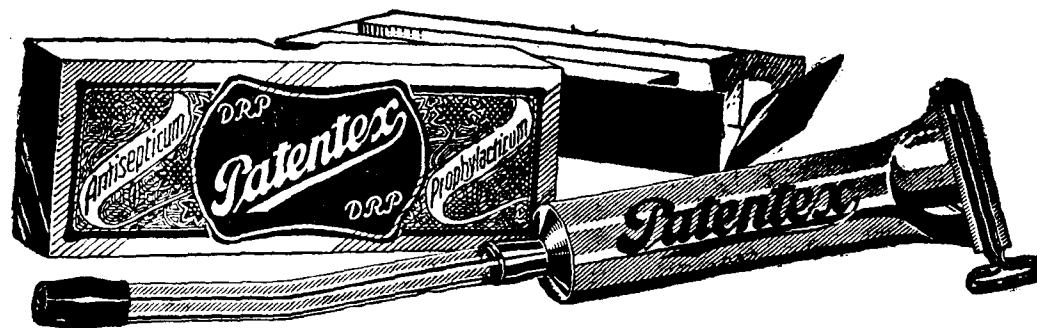
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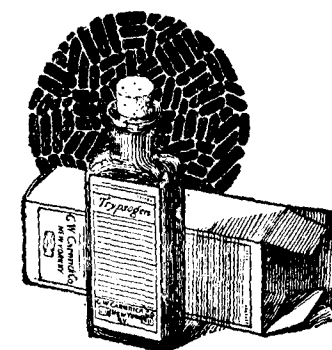


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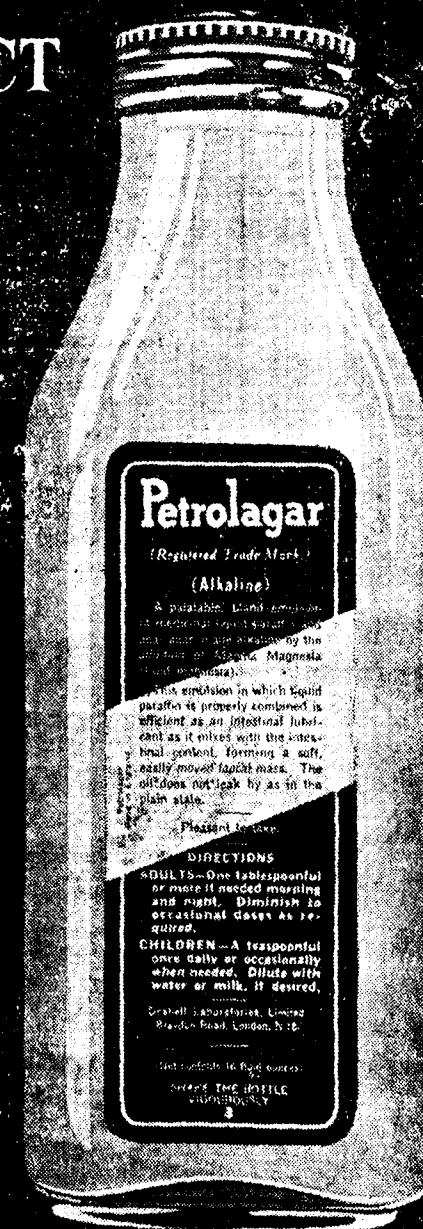
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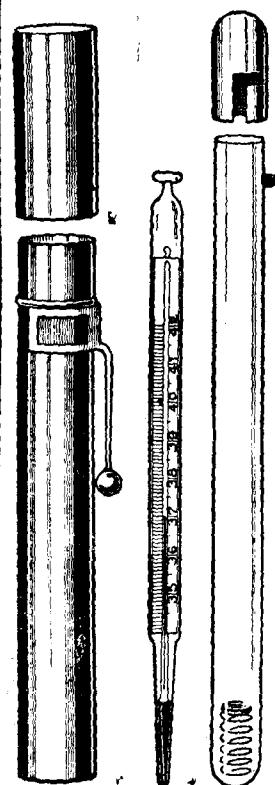
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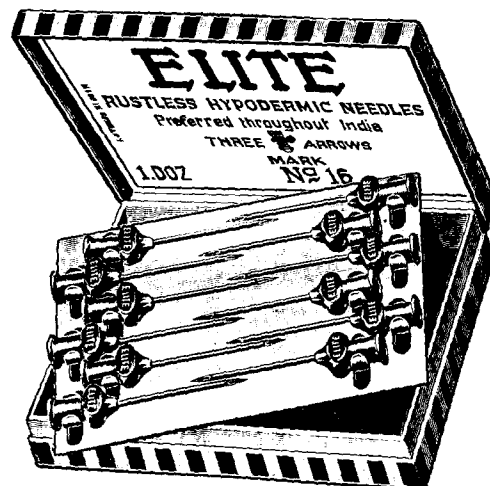
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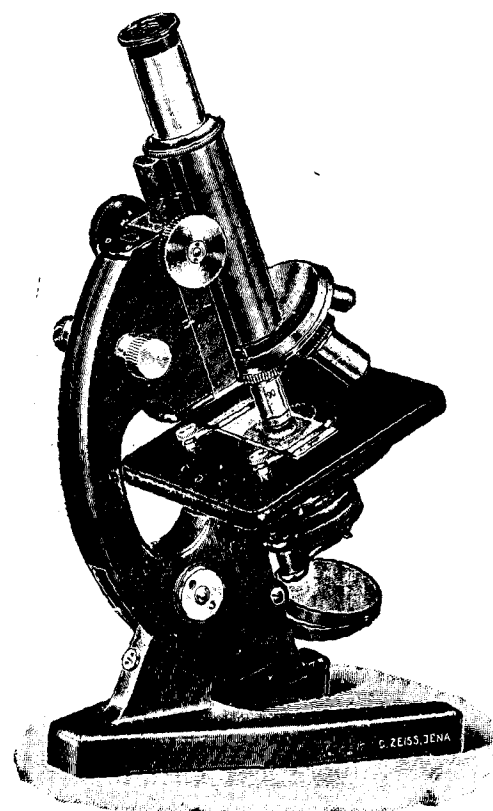
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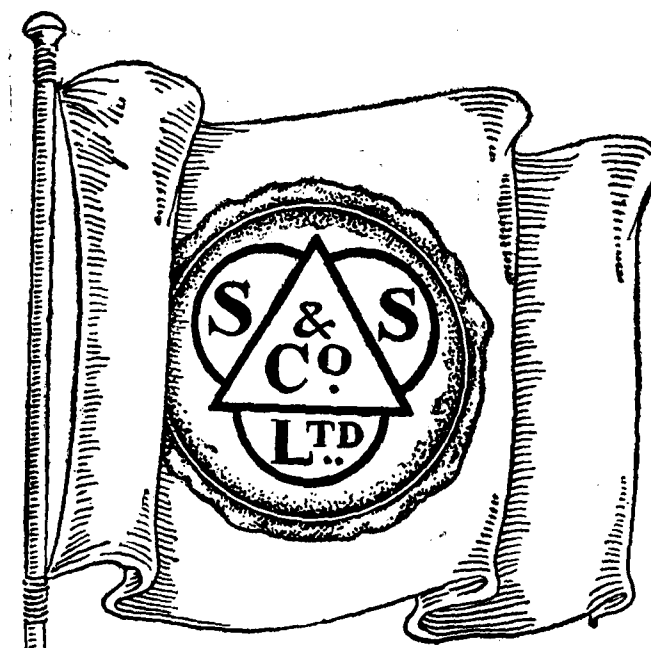
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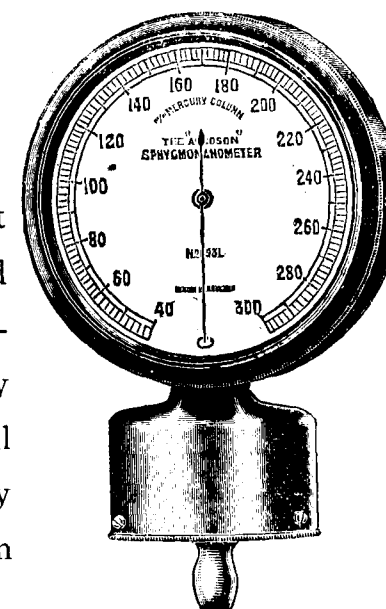
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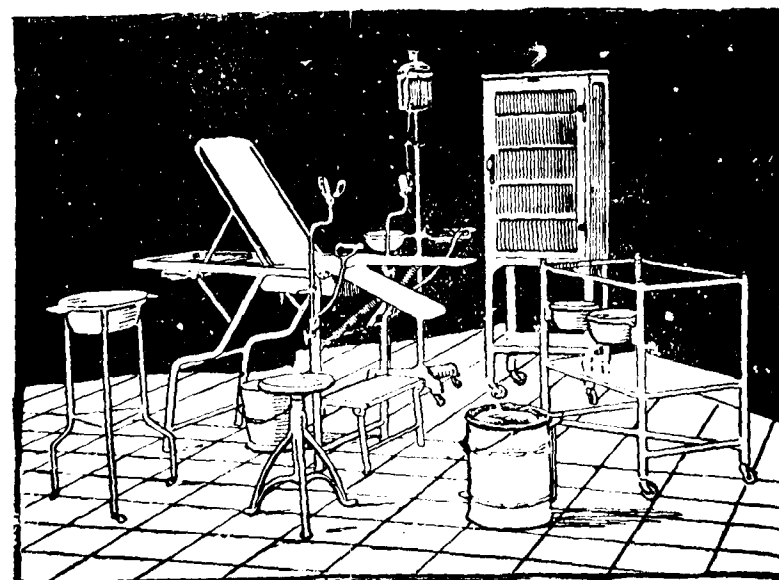
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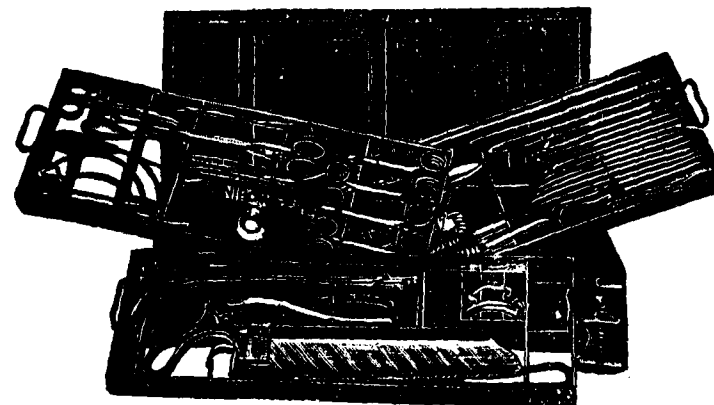
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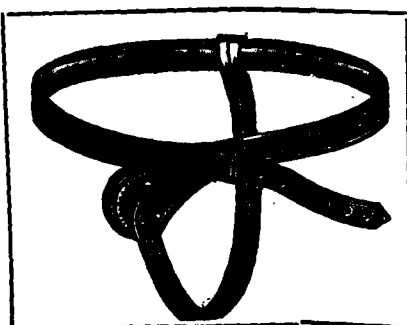
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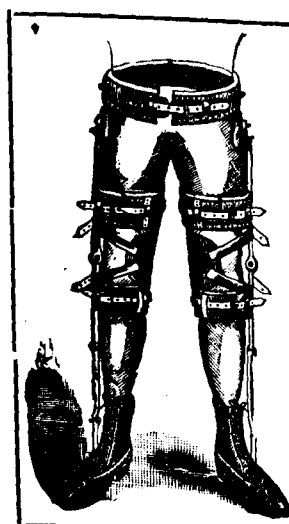
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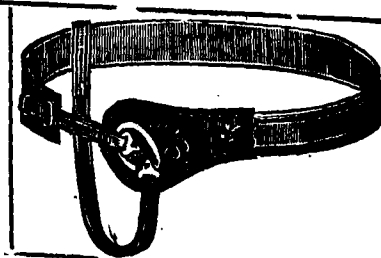
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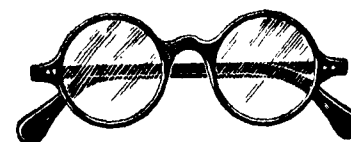
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[No. 2

Original articles

RICKETS WITH SPECIAL REFERENCE TO ITS ETIOLOGY, EARLY SYMPTOMS, AND TREATMENT.*

BY

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 The Royal Colleges, Edinburgh.*

Rickets is a disease about which a great deal has been written. Unfortunately much of the literature on the subject contains quite erroneous views, based on a misunderstanding of the real nature of the disease. Some text-books would have us believe, for instance, that rickets does not commence until the second year of life, and that it consists essentially of changes in the skeleton. Nothing could be more fallacious and misleading. Such teaching is likely to prevent the early recognition of the disease, which is most essential from the therapeutic standpoint. Then, again, it is of the utmost importance that we should detect rickets in its very early stages, before any change has taken place in the bones, for

*Specially contributed to the *Antiseptic*.

it is only by so doing that pelvic deformity, bow legs and other unfortunate results can be prevented.

We have always maintained, in spite of opposition, that the bony changes are not really rickets. These are simply and solely the *results* of rickets, just as valvular disease may be the result of acute rheumatism, but can by no means be called by the name of the latter disease. When we grasp this important fact, but only then, we will be far on the way to obtaining a proper idea of what is really meant by the disease known as rickets.

Rickets commences at a very early age. It may start as early as the third month. Certainly it rarely begins later than the age of six months. As regards its etiology we have proved to our own satisfaction that it is due to the lack of the "antirachitic principle," whatever that may be, in the food which the infant is given. We expressly avoid the use of the term vitamin, which is doubtless a convenient enough one, but very often used merely as a cloak for ignorance. This antirachitic principle may be lacking in the mother's milk if she happens to be in poor health from any cause such as too rapid pregnancies. In the main, however, rickets is caused not by defective mother's milk, but by the use of dried milk, condensed milk, and artificial "foods," none of which contains the antirachitic principle as we understand it. We have proved this up to the hilt from our own personal *clinical* experience, which is worth a very great deal more than any amount of mere laboratory experiment. In our clinic, for a number of years, we were constantly meeting with rickety infants; but latterly we seldom encountered a case. The cause was simply that we had been broadcasting the use of cow's milk amongst the mother, and doing everything within our power to encourage and foster breast-feeding.

We do not wish to appear egoistic, but we must say that, looking back on efforts extending over nearly thirty years, we feel that we have accomplished something in stamping out rickets in a district which is noted for its poverty and unhygienic surroundings. Our unostentatious efforts received no recognition officially. Certainly we got no encouragement either from the Public Health Department or from the Board of Health—rather the reverse, but we laboured on, content to see the good seed springing up and bearing fruit. Doubtless others will get the credit of accomplishing something which had already been achieved long before their appearance on the scene.

We have never swerved from our original contention that rickets was the result of improper feeding. Even if the surroundings

are unhygienic an infant will not develop rickets if properly fed. There are those who maintain that faulty hygiene is the cause of this disease. It may be a contributory factor, but it is certainly far from being the *fons et origo*. Some statistics, we published a few years ago, are a positive proof of this. Then again, one may keep puppies shut up, and without exercise, and say that thus rickets is produced. But puppies are not humans, and the proof at best is not very convincing. Nor are rats. Americans especially are keen on experiments with rats in connection with researches on rickets. They say that rats develop rickets under certain circumstances. But do they? Can it be proved that the so-called rickets of rats is the same disease as human rickets? We doubt if it can satisfactorily be proved to be so. If we would understand rickets aright, we must study the disease clinically, not in a laboratory surrounded by rats and test-tubes.

To recognise rickets we must know what are the earliest clinical evidences. These are briefly, restlessness, sweating and bronchial catarrh, with probably more or less tenderness. An infant who is restless in its sleep may be the subject of early rickets, especially if it perspires during sleep and wakes up with beads of perspiration on its forehead. The pillow may be wet with sweat, and the hair at the back of the head may be denuded from the infant rubbing its head constantly on the pillow. Tenderness of the limbs and body, as is seen when the infant is being undressed or bathed is also very significant of early rickets. A rickety infant is also subject to repeated attacks of bronchial catarrh. In fact it very readily catches cold during sleep, as it constantly throws the bed clothes off in its restlessness.

Of course the first sign may be a convulsive seizure; but usually other evidences are present before this more serious manifestation. Irritability of the face muscles is also at times an early sign of rickets. Other nervous phases are tetany and laryngismus stridulus due to spasm of the glottis which relaxes with a strident cry, hence the name. If we wait for bone changes to take place before we diagnose a case of rickets, we will lose the golden opportunity of nipping the disease in the bud as it were. It will certainly be too late to prevent pelvic changes and their attendant consequences in later life in the female. If it were only to prevent these it would be worth while to use every effort to stamp out rickets from our midst.

Rickets infants are "late" infants. They are late in cutting their teeth, late in sitting up, and late in walking. The muscles

are flabby, especially if they have been brought up on artificial "foods".

Now as to treatment. The first thing to be done, obviously, is to attend to the feeding. As the infant is usually not on the breast we must find out what it is getting. Starchy food of any kind is bad: so are dried milks, condensed milk, and artificial "foods". Any of these which the infant happens to be getting at the time must be stopped at once. Then the infant must be given only the fresh milk of some other animal. Locality often determines the particular animal selected, be it the cow, goat, ass or mare. Such milks never cause rickets. Let us make no mistake here. We must only give fresh animal milk, and nothing else.

Then we must order cod liver oil, which apparently contains the antirachitic principle, whatever that may be. Now here, again, we are being humbugged—we can use no better or more expressive word—into using cod liver oil which has been treated in some way, "radiated," "extracted," "exposed to Sun's rays" and so on. All this is totally unnecessary, and adds materially to the expense of what ought to be really a comparatively cheap product. We are told of the wonderful advantages of these commercial products over the ordinary old fashioned cod liver oil. All we can say is that for a long period of years we have got most excellent results with ordinary cod liver oil, and we see no reason whatever for going to the added expense of purchasing any of these new varieties in spite of the claims of their manufacturers. Then again, we must not fall into the error of using petroleum oil. This is a mineral oil, is not absorbed, and has no value whatever in the treatment of rickets. Moreover, even as an emulsion, it is very unpalatable. The false notion, too, that cream can replace cod liver oil, requires to be pointed out. Moreover if we give too much cream to a young infant we are apt to get troublesome constipation. What happens is that the fat unites with alkali of the intestinal secretion and forms hard soap stools. So avoid petroleum, and never use cream, at least in large amounts or as a substitute for cod liver oil.

Fresh air and sunlight are helpful in curing rickets. Natural sunlight is infinitely superior to artificial lamps, but the latter have a certain value. Personally, with the carbon arc lamp we have been thoroughly satisfied, and consider it as superior to the mercury vapour lamp which is so largely employed and advertised. Cases we have so treated, however, have been private ones, and naturally they were more likely to give good results than cases treated at a public clinic.

We must not forget the value of massage. While this is helpful in the later stages to increase the circulation in flabby muscles, it is of equal value in the early stages. Ten minutes, twice a day, should be devoted to massage of the body and limbs with warm olive oil. Some times this massage, even when carried out by an amateur, has a wonderful effect in getting the muscles to show a better tone.

Of course when bone changes have actually developed, splints and even operations may be required to correct gross deformities of the limbs; but even in such cases, attention to feeding, the administration of cod liver oil, plenty of sunlight and fresh air as well as regular massage will materially improve the condition.

What we wish to see, however, is the complete annihilation of rickets. This can only, we repeat, be brought about by the abolition of artificial feeding with anything save fresh animal milk. Herein lies the great secret of fighting this enemy of child-life; and it is well worth striving for, is it not, the total expulsion of rickets from the roll-book of infantile diseases.

*ON THE INCIDENCE AND DIAGNOSTIC VALUE OF ENLARGEMENT OF CERVICAL LYMPHATIC GLANDS IN PULMONARY TUBERCULOSIS.

BY

RAO BAHADUR DR. M. KESAVA PAI, M. D. AND
C. A. VENUGOPAL, L. M. & S.,

(From the Tuberculosis Institute, Madras.)

The frequent occurrence of enlargement of the cervical lymphatic glands in children is a well known clinical feature and its causation has been variously put down to carious teeth, eczema of the scalp, tonsillitis, otitis and other septic conditions of the skin and structures of the head and neck. The presence of such glands is in fact much more frequent than is usually supposed and a careful palpation at the posterior edge of the sternomastoid, in the submaxillary region on either side of the larynx and trachea and in the supraclavicular region of the neck reveals the presence of glands, feeling like beads often in chains and occurring in greater or less number and size in a large majority of persons in both normal and abnormal conditions of health.

*Read at the Indian Science Congress, Allahabad, in Jan. 1930 and sent to the *Antiseptic* for publication.

It has been the custom in several tuberculosis clinics to note the presence of such glands and attach to them the same significance as is associated with the presence of enlarged tracheo-bronchial glands, this latter constituting in its marked form the so-called tracheobronchialadenopathy, a condition which is now universally acknowledged to be due to tuberculous infection. Thus Johnston¹ out of a total number of 1918 children in schools found enlarged cervical glands in 90.7 % of children who were diagnosed to be infected with tuberculosis, but in only 45.5% of those examined for abnormalities whether tuberculous or otherwise. In the tuberculosis clinics at Edinburgh Sir Rebert Philip has been teaching that enlarged lymphatic glands in the neck whether in children or adults should be considered by presumption to be tuberculous in origin unless there be some other evident cause for such enlargement.

The object of this investigation has been to try and estimate to what extent this glandular enlargement is due to a secondary infection and inflammation or whether it is due to a condition of allergy induced by the repeated entry into the glands of tubercle bacilli through the lymphatics from the regional mucous membrane. The constant throwing up of bacilli laden sputum past the mucous membrane of the trachea, larynx, pharynx, tonsils and mouth must lead to a continuous absorption of tubercle bacilli into the regional lymphatic glands and this will keep up an allergic condition in the glands of the same type as occurs in cutaneous tissue when a Von Pirquet or intradermal test is applied. It need not be the actual production of a tuberculous focus as in the true scrofulous glands. This type of "Scrofulosis" of the cervical and mesenteric glands appears to be a common feature in cases of pulmonary tuberculosis, especially of the open type.

It has been held by a large number of clinicians² that tuberculosis of the lungs and glandular tuberculosis do not as a rule co-exist in the same individual. The bovine or attenuated infection constituting the scrofulous glands of childhood and early adult age is considered to confer an immunity against pulmonary tuberculosis of the adult and conversely pulmonary disease usually the result of human bacillus infection is considered to bestow an immunity against glandular tuberculosis. We do not consider that the glandular enlargement noticed by us is a true tuberculous affection, because it is in a very small minority of cases that these glands enlarge sufficiently to be evident to the eye or constitute a true scrofula. It is only by deep and careful palpation that one is able to detect their presence. This 'scrofulosis' is therefore in our opinion a condition, at least

in a large number of cases, of allergy kept up for a length of time by continuous absorption of tubercle bacilli or their products into the glands of a tuberculous subject which leaves the glands in a permanently enlarged, fibrosed or even calcified condition.

The subjoined table shows the result of examination of 2617 cases that presented themselves at the outpatients' department of the Tuberculosis Institute of Madras during the year 1927. It is seen from the table that whilst 92 % of the bacillus positive cases showed palpably enlarged glands and 88 % of the bacillus negative cases 72 % only of the clinically non-tuberculous cases showed such enlargement. Whilst 11 % showed visibly enlarged cervical glands in the bacillus positive open cases and 3.6 % in the total clinically tuberculous cases, 2 % only showed similar enlargement in cases that did not reveal signs of active tuberculous disease in the lungs.

It may be concluded from the above analysis that (1) palpably enlarged cervical glands are present in a large number of subjects, normal and abnormal; (2) they are found in a larger number of tuberculous subjects than in non-tuberculous subjects; (3) they are found more frequently in bacillus positive cases than in bacillus negative cases; (4) visibly enlarged cervical glands are found about five to six times more frequently in bacillus positive cases of pulmonary tuberculosis than in non-tuberculous individuals; (5) whilst the presence of enlarged cervical glands may be considered as an additional evidence of pulmonary tuberculosis, it can by no means be considered as a diagnostic sign of the disease; (6) true scrofula is uncommon in subjects of active pulmonary tuberculosis; (7) the larger incidence of such glands in open cases of pulmonary tuberculosis points to their enlargement being due to a condition of allergy resulting from absorption of tubercle bacilli and possibly their products through the cervical lymphatics, this view being supported by the fact that whilst 93% of the bacillus positive cases giving a strong Von Pirquet's reaction show glandular enlargement, 78% only of the open cases with a weak or negative Von Pirquet reaction exhibit similar glandular enlargement.

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Result of Examination of 2617 cases for Enlargement of the Cervical Lymphatic Glands.

	Cases clinically Pulmonary Tuberculosis			Cases clinically non-tuberculous
	T. B. +	T. B. —	Total	
Cervical glands palpable—all cases	296 92%	699 86%	995 88%	1072 72%
do do Von Pirquet + cases.	275 93%	550 89%	...	
do do Von Pirquet — cases.	21 78%	149 77%	...	
Cervical glands not palpable	25 8%	115 14%	140 12%	410 28%
Visibly enlarged cervical glands present	35 11%	3 0.4%	38 3.6%	31 2%

LEPROSY—A MEMOIR PART II.

(Continued from page 10.)

BY

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

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

The use of Anti-leprosy remedies, Symptoms and Signs.—The onset of Leprosy may be either chronic, acute or subacute. But the majority of cases have a chronic onset. The story of a typical case may be like this:—“The patient had some leprosy relatives or friends, living with him for some time. He had opportunities of close contact with them. He had syphilis or got repeated attacks of a periodic fever. After some time he noticed that there was a small patch of skin, where he had no sensation or his attention was attracted by a blister (heat acting on an anesthetic area) or that he noticed a thick red patch on his skin.” If the natural resistance of the body increases—the disease may stop at that stage. But if further lowering of the vitality takes place, the history will be:—“After a few months or years of further attacks of malaria or Kala Azar or any other causes lowering the vitality, the patient got slight attacks of fever with swelling of his ear lobules and face and he noticed some small eruptions all over his body. Further attacks of mild fever resulted in progressive thickening of his ears and skin, and led to the development of nodules”. Now it will be evident that leprosy is a single disease from beginning to end though the clinical manifestations may vary at different stages. Hence the modern classification of leprosy into A, or Primary Nerve cases (i.e.) cases which show nerve symptoms to begin with, such as—anesthetic patches; thickened nerve trunks etc etc; and B or Bacteriologically positive cases of different degrees for example—B-1, denoting cases which show a few bacilli in the skin; B-2 denoting cases which show more number of bacilli and B-3 denoting cases which show abundant bacilli in the skin lesions. In B type of cases (of all degrees) a clip from the affected skin shows a few bacilli, the number depending upon the age of the lesion. Thus in B 1, lesions—erythematous patches and thickened depigmented patches of skin—a few Bacilli are found; in B 2 lesions—swollen ear lobules, small nodules, thickened areas of skin etc etc—a greater number of bacilli are found; and in B-3 lesions—considerably swollen ear lobules, definite nodules of various sizes all over the body etc. etc.—abundant bacilli are found. This shows that the clinical manifestations also correspond with the number of bacilli.

*Specially contributed to the Silver Jubilee issue of *Antiseptic*, April 1929.

present. Sometimes in B-3 or B-2 cases, instead of definite nodule and thickened areas of skin, the whole skin of the face may be swollen and present a "puffed up" appearance—due to all round infiltration of the deeper layers of the corium and it is this condition that has been described as "Leontiasis" = "Lion's Face" in older text books.

A case beginning as a Primary nerve or A-1 type may pass on to B-1, or skin type (of the first degree) if the natural resistance is still further lowered. On the other end of the scale we have B-3 cases (Bacteriologically positive cases of the highest degree) also showing nerve symptoms when the disease is on the decline. Here, it should be recollected that Leprosy is a self healing-disease but its course is very prolonged, in fact it is so prolonged as to make us lose sight of its self-healing nature. In conformity with its self-healing nature, B-3 cases of Leprosy begin to come down naturally, having reached the highest stage. There is a progressive diminution in the number of bacilli. Periodic reactions are produced and with each reaction—a certain number of the bacilli are destroyed and a certain amount of improvement in the clinical condition is also caused. It is rather strange that the reactions at this stage should cause a rapid improvement, whereas the same reactions in the earlier stages of the disease, should cause an increase in the symptoms. This strange phenomenon could be explained only by the assumption that immunity of a certain type is produced in B-3 cases which are on the decline. This assumption is strengthened by the fact that such patients are seen to be so weak and emaciated, that this would be the very stage at which, one could expect an increase in the disease. Such cases while coming down begin to show nerve symptoms as the bacilli are rapidly dying out. It should be recollected that the kind of symptoms at any stage depends upon the number of organisms present; the greater the number the more the symptoms of skin type and the lesser the number the more the symptoms of nerve type. Accordingly B-3 cases which are on the decline, due to the rapid destruction of the bacilli and consequent diminution in their number show secondary nerve symptoms in contra-distinction to the primary nerve symptoms shown by early A-1 cases. While the primary nerve symptoms are superficial in character e.g., anesthetic patches, depigmented and anesthetic patches or depigmented & hyperesthetic patches etc. etc., the secondary nerve symptoms are chiefly trophic in character viz., acroteric lesions, glove stocking varieties of lesions, glove stocking anesthesia, perforating ulcers, absorption of muscles and bones specially the small bones, metacarpals, phalanges, metatarsals etc. etc; and dropping or death of fingers, toe etc. The small muscles of the

face and hands are absorbed; the muscle fibres of the flexors and extensors of the hand are replaced by less elastic fibrous tissue; consequently, a typical fixed facis and characteristic claw-like hands are produced. This absorption in the A 2 stage (secondary nerve stage) is rather confined to the deeper structures like muscles and bones, and it does not seem to involve the more superficial appendages of the skin—for example, a solitary nail may be seen perched on the top of a finger stump when the bones are absorbed from within the finger. Either the small bones may be absorbed or they may drop off as the trophic nerves are destroyed. In Primary nerve cases, when nerve trunks are affected, the pressure of the granuloma on the axis cylinders causes needle pains, anesthesia of the area of skin supplied by the nerve, analgesia of the muscles supplied by the same affected nerve and finally gradual replacement of the muscle tissue by the less important fibrous tissue, as the trophic influence is on the wane. But in secondary nerve cases (i.e.) cases showing secondary nerve symptoms (previously the cases might have been either A or B type) the organisation of the granuloma causes destruction of the axis cylinders and the affected nerve trunks become converted into fibrous cords. In such cases one finds acroteric lesions, which cannot be remedied by any treatment. It should be emphasized that primary nerve cases, when left to heal naturally (without any treatment) may develop into A-2 (Secondary nerve) cases, if the natural resistance of the patients is not sufficiently increased, subsequent to the onset of the disease. In A-2 cases—the replacement of the highly developed muscle tissue by the less developed fibrous tissue, leads to the development of contractures, and the formation of clawhand. Similarly, the absorption of the small muscles of the face—specially the absorption of the muscle fibres of the orbicularis oculi—causes Ectropion. Also the atrophy of the surrounding skin or the healing of nodules around the orbit with its consequent fibrosis—may cause Ectropion. When the eyelids become completely everted in complete Ectropion—the eyeball is exposed to injurious influences from outside and as the natural protection is lost—diseases of the conjunctiva and cornea may follow. Cornea becomes insensitive to light and finally impaired vision follows. Granulomatous changes involving the nerves of the eye may cause several other lesions. Broadly speaking, eye lesions may be produced at any stage of the disease in the primary stages specially B types—capillary embolism involving the capillaries of the eye may cause different types of lesions; or the implication of the nerves and in the later stages loss of trophic influence may all cause the different eye lesions met with in leprosy. Space forbids a detailed description of them.

To appreciate clearly, the relation between the various types and to record cases symbolically, Dr. E. Muir, has suggested the use of a Parabolic curve. In the curve the vertical part indicates the number of bacilli in the body, and the horizontal, the duration of the disease. Predisposing causes are represented by arrows which meet and act upon the curve at various stages and the duration and the severity of the predisposing causes are represented by the length of the arrows and the number of feathers respectively. The lesser the number and virulence of the bacilli and greater the natural resistance, the flatter will be the curve. The greater the number and virulence of bacilli and the lesser the natural resistance, the higher and more abrupt will the curve be. After reaching a certain height, the curve descends and on the descent secondary nerve symptoms begin to appear, as the bacilli are all dying out and the natural resistance is increasing due to the production of a certain type of immunity. Thus the areas through which, the curve ascends and comes down to the base line, after reaching its zenith, may be termed A-1 and A-2 to denote primary and secondary nerve symptoms respectively. Or rather, the ascending limb of the curve represents for a short distance the primary nerve stage and hence designated as A-1 area and the descending limb on the right side for a short distance towards its termination represents the secondary nerve stage and hence designated A-2 area. This evidently means that almost all cases are A-1 cases to begin with and can be diagnosed clinically from nerve signs while they are in the A-1 stage i.e., before the bacilli have increased to such an extent that they could be found in the lesions on bacteriological examination. Also, in the descent of the curve skin cases begin to show secondary nerve symptoms as the bacilli are decreasing, thus emphasizing the fact that the skin and nerve types are interchangeable and are different stages of the same disease and are caused by the same causative organisms viz., *M. leprae*.

Many cases may follow the course represented by a flat curve for a long time but suddenly, the curve rises due to the sudden lowering of the natural resistance enabling the bacilli, to rapidly multiply and increase in numbers, with the result that the cases pass on to B type. The B area in the diagram is divided into B-1, B-2 and B-3 areas, according to the vertical height of the curve i.e., B-3 representing the largest number of bacilli found in the skin, and consequently the advanced skin type of cases, B-2 representing less advanced cases of skin type in which lesser number of bacilli are found in the skin; and B-1 representing the commencing skin type of cases in which a few bacilli could be found in the skin. But it should be remembered that

the types and stages are interchangeable and that there is no clear outline between any of the types and the different stages mentioned. In fact patients are seen frequently who are passing from one stage to another, as evidenced by the presence of signs indicative of one stage in one part of the body, and of another stage in another part of the body. So we may speak of A-1 = Primary *n* cases; A-1 A-2 = primary *n* cases passing on to secondary nerve stage; A-1 B-1 Primary *n* cases passing on to B or Bacteriologically positive skin type of the 1st degree—due to sudden lowering of the natural resistance; B-1 B-2, B-2 B-3 = Rapidly advancing skin type of cases as evidenced by the increasing number of bacilli found in the skin lesions; B-3 —A-2 = Bacteriologically positive (skin) cases of the highest degree coming down to secondary nerve stage owing to rapid destruction of large numbers of bacilli; and so on. B-2 and B-1 cases too may go on to A-2 stage, as the natural resistance increases. Thus a great variety of cases could be seen; space forbids a detailed description of all of them. The following synoptic table of symptoms, may be helpful in arriving at a diagnosis of the type and stage of a particular case:—

(A)

(1) Depigmented patches	(no. A. F. bacilli)	
(2) Erythematous patches	(Do)	
(3) (1) or (2) with anesthesia	(Do)	
(4) (1) or (2) with Hyperesthesia	(Do)	
(5) (1) or (2) with Anesthesia in the centre and Hyperesthesia in the margins	(Do)	A-1 type.
(6) Anesthetic areas without Depigmentation or any other visible change	(Do)	

B

(1) Erythematous patches	(A.F. bacilli positive)	B type
(2) Depigmented patches	(Do)	B-1 B-2
(3) Thickened areas of skin	(Do)	or B-3
(4) Rashes and cracks in the skin	(Do)	depend-
(5) Shiny scar like areas	(Do)	ing upon
(6) Definite nodules of various sizes	(Do)	the num- ber of bacilli present

C

(1) Wasted Thenar and Hypothenar Eminences	} A-2 stage (no. A.F. bacilli.)
(2) Contractures, Perforating ulcers	
(3) Dropped or Absorbed fingers and Toes	
(4) Deformities of fingers and Toes etc.,	

N. B.—A combination of symptoms of any two stages, should be designated by the letters denoting those stages, the first letter, denoting the symptoms of the initial stage or the initial symptoms and the second—the stage to which the case is passing on. For example—when anesthetic and depigmented patches are found side by side with contractures or perforating ulcers, etc. the designation should be A-1 A-2.

Diagnosis of Leprosy.—Clear cut cases present no difficulty. But, as in many other diseases, diagnosis may at times be very difficult. Reliance should be placed on the two cardinal signs of Leprosy:—

(i) Anesthesia (in nerve type of cases) and (ii) presence of *Lepra bacilli* in the lesion (in skin type of cases). If there is only a depigmented patch, in a case which is neither anesthetic nor shows *M. leprae* the diagnosis is rather difficult. But if there is a clear history of contact with Lepers or Leprous relatives and if there is also a thickened nerve trunk like the ulnar, peroneal or the great auricular or thickening of the cutaneous nerve that supplies the depigmented area, a positive diagnosis of Leprosy may be made. Depigmented patches are met with in the following diseases and these should be excluded before arriving at a diagnosis of Leprosy:—

(i) *Leucoderma.*—In this disease, the depigmentation is complete—white patches and spots are the rule; whereas, in Leprosy, the depigmentation is partial. There is no anesthesia in *Leucoderma*; but if Leprosy is also present specially in A type of case—anesthesia may be found in *Leucodermic* patches. But it is necessary to caution here that *Leucoderma* by itself does not cause anesthesia; it is the coexisting Leprosy that is responsible for the anesthesia found in cases which look like *Leucoderma*.

(ii) *Psoriasis.* The patches are white and appear, as if they are dusted with some fine white powder. Slight rubbing of the lesions with a pledget of cotton-wool gives rise to bleeding. This is because in *Psoriasis*—the papillae of the corium are exaggerated unlike Leprosy—in which disease, they are flattened out and the lesions are consequently very vascular. Hence the ease with which such lesions bleed when rubbed. The history of syphilis, absence of anesthesia, and the absence of *M. Leprae* will distinguish this condition from Leprosy.

(iii) *Tinea.* The depigmentation is not unlike that in leprosy. A scraping of the affected skin with a blunt knife edge and staining of the scrapings, reveals the causative fungi under the microscope. Further, the absence of anesthesia or *M. leprae* may also help to form a diagnosis.

(iv) *Dermal Leishmaniasis*—(Initial Stage). In this disease, small or large spots of depigmentation may be found specially on the face or neck in the initial stages. Later on, as the disease develops—definite nodules of a reddish color may be present. A clip from the skin (Depigmented Spot) or (a nodule) may show L. D. bodies on staining a smear (made from the clip) with Giemsa's stain or culture of the juice expressed from the clip or (the clip itself may be aseptically grafted on to the N. N. N. medium) may yield flagellates (*Herpetomonas Donovanii*). In some of these cases, there may be a previous history of Kala Azar. The absence of anesthesia or the *M. leprae* will also help in the diagnosis.

(v) *Burns.*—Sometimes simulate the Depigmented patches of Leprosy. But the history of Burn and the absence of anesthesia or *M. Leprae* will settle the diagnosis.

(vi) *Syphilis.*—Syphilitic Maculae; the eruptions of secondary stage may leave behind alternate dark and depigmented areas or areas of different degrees of depigmentation. Such areas and the Maculae of syphilis should be distinguished from depigmented patches of leprosy. History of exposure to infection (primary sore etc.) plus a positive Wassermann and the absence of the two cardinal signs of leprosy will establish the diagnosis. But it should be remembered that syphilis and leprosy may coexist in the same patient.

A definite diagnosis of leprosy can only be made in the presence of anyone of the two cardinal signs:—

(i) *Anesthesia.*—(In nerve type). This varies in degree and kind; a definite standard is necessary to have uniform results. The following method is found to be simple and practical and is widely adopted;—The patient is stripped as far as possible and his skin is examined all over the body. Any suspicious area—say, a faintly or prominently depigmented area is taken. The patient is blindfolded. A folded piece of soft paper is used for testing the sensation of touch. First healthy areas of the skin are touched and the patient asked to point out with one of his fingers, the touched areas. Making sure that the patient has understood the examiner's intentions (this is essential when dealing with illiterate, or idiotic or imbecile patients) the suspected areas are then touched. If there is anesthesia the patient will fail to point out the area touched. Sometimes he may point out not the exact area touched but a little away from it; for example, in a suspected patch, when the centre is touched, he may point

out the margin. This is due to the presence of parasthesia (caused by the overlapping of nerve supply of the skin). After repeating this process several times, to make sure that there has been no errors the anesthetic areas may be mapped out. If there is neither anesthesia nor hyperesthesia or paraesthesia, a deep clip from the suspected patch of skin should be taken for Bacteriological Examination.

(ii) *Finding M. Lepre in the skin* (in B type or skin type of cases) with a pair of sterilised sharp scissors curved on the flat, a clip should be taken from the suspected patch of skin, which should be deep enough to include the corium; say the clip may be 2 to 3mm in depth and the size of a nail paring. The under surface of the clip is rubbed on to a clean slide. The smear is fixed by heat and stained by Zeel-Neelson's method for Acid-fast organisms. Different Techniques are in vogue but the following has given consistently good results in my hands:—When large numbers of slides have to be stained this technique is particularly convenient. The smears are all fixed by passing the slides rapidly through the flame of a spirit lamp several times; and they are allowed to cool; otherwise they may crack when the cold stain is poured into them. Carbol fuchsn solution is poured on the smear and allowed to act in the cold for 10 minutes. Heat may be employed to quicken the staining process, but when large numbers of slides are to be stained the cold method is the more convenient in as much as other works may be attended to, during the ten minutes taken by the stain to act. After ten minutes the excess of stain is poured off and the smear is decolourised with 5% Acid Alcohol mixture (Hcl 5 parts; Distilled water 20 parts; Absolute Alcohol 75 parts) until there is just a faint pink color remaining. The slide is then thoroughly rinsed in clean tap water. Methylene blue is poured on the slide and allowed to act for a minute. Then the slide is again rapidly rinsed in clean tap water and dried in the sun and never blotted. It is better to use B.W. and Co's soloids as these soloids keep well and do not overstrain. The method of preparation is also easy as these soloids are very soluble and do not require grinding. Examination under the oil immersion lens will reveal the organism as red stained rods packed together like bundles of cigar and some single rods also, scattered here and there. When a few bacilli are found the case is classified as B.1 = (Bacteriologically positive—of the first degree); when there are relatively more numerous bacilli—the case is classified as as B.2 (Bacteriologically positive—of the 2nd degree—(moderate) and when millions of bacilli in bundles and singly are found throughout the field, the case is classified as B.3 = Bactriologically positive—of the 3rd degree (advanced.)

In the mucous membrane of the nose, bacilli may be found, specially in B type of cases. With one limb of a blunt pointed dressing forceps (sterilised), the nasal septum in the vicinity of the anterior end of the inferior turbinate bone, is scraped, or if definite ulcers or nodules are found—these are scraped and from the scrapings, smears are made and stained as before.

When either the acid fast bacilli are found in the skin lesions or in the mucous membrane of the nose or anæsthesia as tested for above, is found, a diagnosis of Leprosy is justified. But if there has been some local injury to the nerve, caused mechanically the presence of anæsthesia in the injured part alone is not enough to justify the diagnosis of Leprosy. For example, in cases of moderately severe burns—there may be permanent anæsthesia of the affected skin, due to the superficial nerves having been destroyed. But the history will help us in the diagnosis.

Subsidiary signs of Leprosy. In the absence of any one of the two cardinal signs mentioned above, the presence of one or more of the following subsidiary signs must be considered as sufficient to raise a strong suspicion of Leprosy but a definite diagnosis should always be based upon any of the two cardinal signs:—

(i) *Deep analgesia* (without superficial anæsthesia) is sometimes found when the leprous infiltration has involved the deeper layers of the corium. A pin-prick or a deep thrust with a knife edge produces no pain. A similar lesion is found in Syringomyelia. But in the latter disease loss of pain and heat sensation is present without loss of superficial touch. In leprosy, loss of superficial touch is the initial symptom. Syringomyelia is rather rare. Other signs of the disease should be relied upon for diagnosis.

(ii) *Loss of the sense of heat and cold.* This may be the first sign of Leprosy and it may be tested for with test-tubes containing hot and cold water. When the heat sensation is lost in a particular part of the skin, the patient can not feel when any hot substance comes into contact with the affected part; but as a result of the contact, a blister may be produced which may have attracted his attention to the affected part. Thus in some cases blisters may be the initial lesion.

(iii) *Hyperesthesia.*—Without or with anæsthesia except in certain rare localised lesions of the spinal cord which are easy to differentiate from Leprosy, these signs are usually found in Leprosy.

(iv) *Depigmentation.* This is a very suspicious sign, and when combined with a definite history of contact or rather close contact

with leper relatives, may be sufficient to provisionally diagnose leprosy subject to confirmation later on.

(v) *Erythematous patches*.—May often be the first sign of Leprosy. Such patches may be present in other diseases too—e.g., in Syphilis, copper coloured raised patches may be found all over. But the diagnosis should rest on the presence or otherwise of any of the two cardinal signs of Leprosy.

(vi) *Thickening of the Superficial nerve trunks*. Those most commonly involved are:—(i) ulnar (ii) peroneal (iii) great auricular as it winds round the posterior border of the Sternomastoid and ascends to the auricular region (iv) radial and (v) various other superficial cutaneous nerves. If there is a well marked thickening and pressure on the thickened nerves produces needle pains in the area supplied by the affected nerve, leprosy is to be very strongly suspected.

(vii) *Para-keratosis with glossiness and thickening of the skin*, specially, in the palms and soles and inability of the hairs to protrude from the hair follicles are characteristic signs in nerve Leprosy. But Para-keratosis may be found in other skin diseases e.g. Scleroderma or Hide-bound skin and Ichthyosis or Xeroderma or Fish-skin disease or Winter disease in which in the early stages fish-skin like markings are found, which are rather faint in summer. But in winter the markings become very prominent and scales begin to shed. As the disease advances the scales become blackish in colour and then the disease is known as Ichthyosis Hystrix (Nigra). But the appearances in these diseases are rather different.

(viii) *Anhydrosis* This may precede Anæsthesia in some cases and may be the earliest sign. While surrounding areas of the skin are moist with sweat, the affected area is dry, or there may be anhydrosis of the limbs with compensatory Hyperhydrosis of the trunk. Injection of pilocarpine and subsequently dusting the body with fine French chalk will render hydrotic areas prominent.

(ix) *Interfollicular swelling*.—The areas of the skin between the interfollicular ridges, are rendered prominent by the infiltration of the corium raising up these areas while this is resisted by the downward pull of the hair follicles and sweat glands. A similar appearance is found in Lichen planus but the hard horny feel and the lilac colour are wanting in Leprosy. A clip from such an area is usually positive for A. F. bacilli in Leprosy.

(x) *Dry Rhinitis* with occasional Epistaxis and ulceration in the nose—specially in Endemic areas, are strongly suspicious signs.

(xi) *Irregular attacks of Pyrexia* with nerve pains, are also strongly suspicious signs, in the absence of Tuberculosis.

(xii) *Trophic blisters & ulcers*, (in the absence of Diabetes or any other cause) are also suspicious signs.

(To be Continued.)

*GASTRO INTESTINAL SYMPTOMS IN MALARIAL FEVER

BY

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The malarial parasite on entering the system may give rise to a variety of symptoms, which, if the practitioner is not on the look out for, may mislead him in the routine of his line of treatment and sometimes even with disastrous results. In the tropics, the usual picture of an attack of malaria is quite familiar even to the lay mind. Headaches, general malaise chilliness and, may be, rigors followed before or after at times with vomiting or nausea, rise of temperature, sweating, and the fever comes down. The diagnosis of malarial fever with these characteristic symptoms is nothing difficult. It is however the atypical types that will mislead the practitioner in their diagnosis. Symptoms of gastro intestinal disturbances are not quite so rare as sometimes thought of in malaria. Lack of appetite and repugnance even at the sight of food is very often the premonitory symptom in malaria. This is the usual history one gets often in patients who come for consultation in malarial districts to the dispensary. This symptom, on examination, if no definite cause for this disinclination for food is to be found, should arouse suspicion in the minds of the practitioner and make him think of an impending attack of malaria in his patient and the patient should never be sent away with a stomachic mixture only. A stomachic does absolutely no good at all to the patients in such cases. Such mixtures will never set the appetite in these cases till actually the attack of fever has subsided and the gastro intestinal system has regained its normal. The appetite in malaria is lost for a few days both after and before the attack of the fever. The unsettled nature of the gastro intestinal system shows itself in many ways in malarial

* Specially contributed to the Antiseptic.

cases. The furred tongue, and often thickly coated is almost an invariable accompaniment, if not a precursor of an attack of malaria. The bowels in general tend to be constipated and sometimes diarrhoea is the rule and this may be the predominant symptom marking the true picture of the case in rare cases, as in the case quoted below. Vomiting is a symptom more common in the infants, though by no means the rule. In adults the vomiting, when present, may come on before or after the rigor. In women if the attack of fever coincides with the actual menstrual date, vomiting in such cases occurs more frequently, as I have noticed in many cases. In cases where the diarrhoea also accompanied the fever, it ceased invariably with the fall of the temperature. In all cases with diarrhoea as a symptom careful watch should be kept on the diet to be given and should always in such cases be confined to liquids only. In such cases I think it a mistake even to allow the patient rusks or bread. In rare cases we must keep in mind the fact that the diarrhoea if not checked may lead on to very serious consequences. Occasionally we come across cases where both vomiting as well as diarrhoea comes on with the attack of fever. And in such cases we should always keep in mind the possibility of a sudden collapse of the patient and should be quite ready to combat such an occurrence without much delay. The following case is quite interesting in that it showed both these symptoms in a marked degree and also there was an alarming degree of collapse accompanying the vomiting and the diarrhoea. This particular case was also interesting in that it was quite possible to have made a mistaken diagnosis of the case as one of Cholera; as it was only last year in this same district a cholera epidemic broke out in this same month and with 8 deaths to its sad list, and also the first cases so diagnosed at the time happened to be one from this hospital itself. The clinical picture, the persistent vomiting and purging, total collapse of the patient in a district where cholera cases do occasionally occur would have been quite enough to have created a scare in the entire district. Few important facts about the case made me cling on to my diagnosis of the case as malaria showing gastro intestinal symptoms to a very severe degree in spite of the fact that all these symptoms of cholera showed themselves, in this case even the characteristic "rice-water" stools were present. The following circumstances may be noted:

(1) The patient was a bad malarial subject.

(2) The patient was at the time having her menses, and in my experience vomiting and diarrhoea did occur in a few such cases though never in such a severe type as this case.

(3) The coming down of the temperature to quinine.

(4) The fact that though the patient almost totally collapsed at one stage with severe vomiting and diarrhoea, the temperature taken under the tongue did not show it to be sub-normal but on the other hand it showed a rise.

With such an extreme degree of collapse as in this case, if the case had been one of cholera, certainly the temperature would have been subnormal and would never have risen actually.

The case referred to is this:—

Miss W. M. J. F. aged 22, single, was admitted to Government Hospital, Alutnuwara on 16-12-1929 with a history of fever coming on with rigors, loose motions and vomiting of 2 days duration. She had been a malarial subject for the last 2 years, but on no occasion did she ever before had vomiting and diarrhoea at the onset of the attack of fever as at this time. The district itself is highly malarial. She was having her menstrual periods at the time of admission. Menstrual history—flow is usually somewhat excessive and lasts for about 4 days on the average. Lungs and heart—nothing abnormal. Persistent headache present.

With the onset of fever, vomiting starts and usually subsides with the fever. The vomited matter was watery and no trace of bile was present. Temperature on admission was 100. Several motions were passed daily with tenesmus at the time of passing the stools and pain in the lower abdomen. The stools contained no blood or mucous but were watery and contained shreds of epithelium at the bottom. The patient was somewhat weak at the time of admission. I prescribed for her:

R

Quinine bisulph	grs.	10
Acid sulph. aromaticus	m	10
Chlorodyne	m	5
Pot bromide	gr.	10
Aqua chloroformi ad	oz	1
	oz.	1 t.d.s.

and also for the headache

R

Aspirin	gr.	7½
Phenacetin	gr.	3
Caffein citras	gr.	3

The powder was to be taken when the headache became severe. She was put on an absolute low diet and on fluids. There was slight

tenderness over the lower abdomen. On the following day vomiting ceased but the diarrhoea continued. M.T. 100, E.T. 99

18-12-29. M.T. 102°6. E.T. 104. and at this stage vomiting and diarrhoea came on again and the patient was unable to retain anything. At this stage I stopped both the mixture and the powder and gave her 10 grs. quinine intramascularly.

19-12-29. diarrhoea and vomiting ceased but the temperature began to keep up. M.T. 102°6. E.T. normal. I now omitted the previous mixture and put her on

R

Quinine bi sulph.	gr.	10
Acid Hydrobromic dil	m.	10
Tinct. card co	m.	10
Aqua ad	oz.	1

Oz. 1 t.d.s.

20-12-29. M.T. 99°6. E.T. 102°6.

Early in the following morning, she suddenly started severe vomiting and diarrhoea and was passing stools of the type of the classical "rice water", her pulse became thready and she was in a collapsed stage. The pulse at this time at the wrist was hardly perceptible. Now every precaution was taken to revive her from this collapsed state and stimulants were ordered, and she was kept warm with blankets. Arrack was ordered in table spoonful doses every 4 hours, and she was given the following mixture every 4 hours.

R

Bismuth carb	grs.	20
Sodi bi carb	grs.	20
Acid hydrocyanic dil	m	3
Chlorodyn	m	5
Tinct . card co	m	10
Pulv trag. co.		q. s.
Aqua ad	oz	1

and later I gave her also-

R

Quinine bisulph	grs.	7
Pulv Doveri	grs.	10

1 t. d. s.

When the patient collapsed the temperature recorded under the tongue was 99.

21-12-29. M. T. & E. T.=99. As the patient complained of a dull headache and also of sleeplessness I ordered for her a draught of chloral and bromide at bedtime.

22-12-29. M. T. & E. T.=101. diarrhoea ceased but occasionally she had attacks of nausea.

23-12-29. Pulse improved and the stimulants were omitted at this stage.

24-12-29. M. T. & E. T. 99. and she was again put on quinine and acid hydrobromic dil mixture., everything else being omitted.

25-12-29. Temperature came down to normal.

26-12-29. Ordinary diet was allowed now and the patient's appetite too improved.

27-12-29. The patient wished to go away and was discharged cured.

Cases & Comments

A CASE FOR DIAGNOSIS

BY

K. V. ADALJA M.B.B.S., NAIROBI.

Patient is a young lady of twenty-five complaining of gradually increasing weakness and constipation for the last one year. For the last fifteen days, she has lost the capacity to walk, is mentally dull (being rather melancholic) and does not sleep well. For the last three days, saliva dribbles from the mouth at times; besides she feels difficulty in swallowing.

Previous history :—Patient had a tumour removed from the uterus two years ago (definite history as to the nature of the tumour cannot be had from the patient.) For one year, after the removal, she remained alright and then started feeling weak.

No history of syphilis can be elicited; she is a mother of four children and had no abortion any time of her life. Patient never suffered from influenza.

The course of the disease is very slow. No marked difference in her attitude towards others could be detected. She is gloomy for the last fifteen days only. Examination:—

Nervous system:—Patient is mentally dull; she can hardly grasp what is said to her. Facial appearance is rather expressionless; eyes are more or less fixed.

Weakness of all the voluntary muscles of the body is present. There is certain amount of rigidity on both the sides. The weakness is slightly more marked on the right than on the left side of the body.

Knee jerks:—+ + +
Ankle clonus:—+ + +
Plantar reflex:—Extensor (!)
Abdominal reflex:—Present
Biceps " :—+ + +
Triceps " :—+ + +

Involuntary reflexes such as defaecation and micturation are not affected. Fine tremors of the tongue and hands are present. Pupils appear to be of normal size and react sluggishly to light.

Gait shows definite changes. Patient walks with the head bent a little forward, with arms bent at the elbows and hands held in front of the abdomen and with the eyes fixed in front of her. She walks slowly but has no difficulty in turning. She feels giddy while walking.

From what could possibly be elicited sensations do not seem to be affected. She has no vomiting either with or without nausea. Nothing can be said as to the presence or absence of optic neuritis.

There is no nystagmus and nothing as to the nature of speech can be said as the patient hardly speaks.

Lumbar puncture cannot be done owing to the reluctance of the relatives of the patient.

Vertebral column is normal. No pain on passing down the head. Other systems appear to be alright except that patient has some anaemia.

Discussion:—More than one diagnosis are possible. According to my opinion the most probable ones are:

- (1) Encephalitis lethargica. (Parkinsonian type)
- (2) General paralysis of the insane.
- (3) Early disseminated sclerosis.
- (5) Tumour of the brain.

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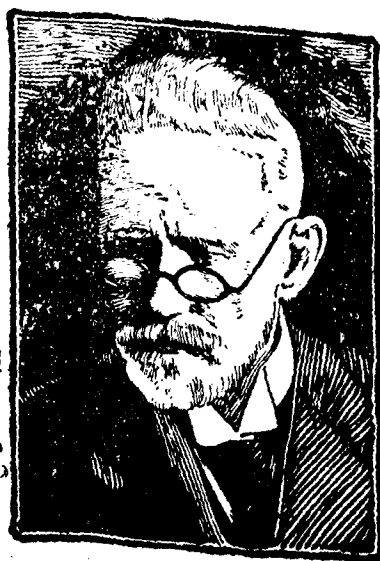
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(1) *Encephalitis lethargica*:—There are certainly many corroborative findings. The gait, the rigidity etc. favour the diagnosis but the sudden onset of the paralytic symptoms and the change in gait and the absence of history of fever are some of the unexpected findings. The parkinsonian type of this disease is a slowly advancing disease except when it is acute in which case there ought to be a history of some fever immediately preceding the affection. Moreover, long history of the initiating weakness rules out the idea of the attack being acute.

(2) *G. P. I.*:—The exaggerated knee jerks, tremors of the hands, slow and sluggish pupillary reaction to light together with the melancholic mental attitude of the patient support the diagnosis but there is no specific history or the suspicion of one. Moreover, the patient has no hallucinations.

(3) *Disseminated sclerosis*:—The tremors would suggest the diagnosis but the absence of their involuntary character and the nystagmus make it untenable.

(4) *Tumour of the brain*:—Giddiness leads to its consideration but the absence of vomiting without nausea makes it less possible. However, fundal examination should be done but it is not possible in the absence of any ophthalmologist.

Any information barring laboratory ones will be gladly supplied. (Laboratory examinations are so very costly here that they are beyond the reach of average means especially when more than one are to be done.)

AN INTERESTING CASE OF MALARIA.

BY

J. MUKERJEE, M.B., RANCHI

Mrs. S., aged 25 years, of average height and development, took suddenly ill. Prominent amongst the symptoms were (1) lock-jaw, (2) tremor of the whole body, (3) spasm of the extensor muscles of hands and feet, (4) minute-gun spitting and (5) fever. The fits of lock-jaw, tremor and spasm were coming and going off and during the recess the jaws could be separated. She could answer the questions. She retained her consciousness all through. The disease started like this: One night she ran a slight temperature. The next morning it came down to 98-6. It again shot up towards the evening to 102-8. And she developed the afore-said nervous phenomena, on the third day of the disease. I was

called on to see her as her people found in the morning her hands and legs cold and thought she was going to collapse. The night previous the fits continued as stated above. Her case was diagnosed to be hysteria by my predecessors.

On arrival, I found an improvised gag between the jaws, tremors of the entire body, spasms of the extensors of the hands and feet. Temperature was 100.6. I thought she was evidently passing through the chilly stage of fever. The relatives assured me she had never had a shake but frequent tremors. I was also told that she never had had any convulsive attacks. There was no sign of injury anywhere over the body. Her menses were regular. I took her blood. The temperature gradually rose to 103.5. Under the microscope M. T. rings were found. This was a case of interest not only from the view-point of the manifestation of malaria but also from the stand-point of treatment as would be obvious presently. As the rings were of subtertian type I administered quinine Bi-hydrochlor grs. X in 2c c solution (P. D. & Co.) intramuscularly. I administered Am-Brom-gr, viii, pot-citras, pot-bicarb and Mag carb-gr. xxx each, syrup orange—3i, Aqua Menthpip—3i per dose T. D. S. Her bowels were already moved by calomel and Mag. sulph previously. The injection was repeated on the 2nd and 3rd days of my visit, the remittent type showed a tendency to intermit. The morning temperature became 98.2 and the maximum during the day did not exceed 99.6. Encouraged by the result I gave a 4th injection. But curiously enough, in the afternoon of the 4th day of my visit, i. e. 7th day of the disease, she kicked up a temperature. The next morning the temperature far from dropping down began to cause anxiety. It was 102.6. During the course of the day it reached 105.2. I utilised hydro-therapy as an adjunct. The mixture and quinine had done good to the extent of stopping the fits of lock-jaw, tremors and spasms but beyond this they placed me utterly at sea—could it be a case of malaria intermixed with typhoid? The pulse was below the proportion to temperature. This fact and the resumed run of the fever sustained the doubt. But the absence of any tenderness in the right iliac fossa also contributed to an opposite suspicion. Vidal could not be thought of so early. So I had to hit upon a new plan. As she became very weak I ordered a routine stimulant of Tr. Digitalis, liq. strychnine and Spt vin galici, and as she refused to have any other better stuff I prescribed Plasmoquin (Bayer) gr. 1/3 with Aristochin (Bayer) gr. iv, T. D. S. In two days time the temperature became intermittent and in another five days the fever was off. On the 8th day of this fever she developed retention of urine and her bowels did not respond to purgatives.

Recourse had to be had to cathartics and enema. This condition went on for another four days. I tried Hexamine.

Since then I have come across several other cases of malaria rebellious to quinine, having pulse rate below the proportion to the temperature and the above powder has stood me in good stead. Now we are confronted with the relative merit of quinine and plasmoquin. There is no doubt that the latter has a great potentiality. But the day is not yet come when it can replace quinine from economic and clinical points of view. Besides it has its drawbacks. It tends to form methhæmoglobin and produces cynosis in some, gastric pain in a few and the both in others. Admixture of quinine (Plasmoquin comp. of Bayer) or Aristochine and exhibition, not on empty stomach, overcome these difficulties.

The three points of interest in the case cited are: (1) diminution of fever with quinine injection; only to be set at naught after the fourth dose—a very queer incident, (2) lock-jaw, tremors and spasms (3). The spitting did not stop till the complete defervescence of fever.

I should like to compare notes with my confreres who have encountered similar difficulties in frank cases of malaria. The differential count in my case was—Polymorphos=72% Lymphocytes=19% Monocytes=9% Eosinophile=0%

DYSENTERY.

BY

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

R. K. Tapovan Hospital, Dharchula, Almora, (Himalayas.)

In this paper I wish to discuss briefly about *Dysentery* which is so common in this country.

Definition—Dysentery is nothing but a *Symptom*, complex in nature, associated with the *passage of Blood and Mucous* in the stools with *pain and tenesmus*.

Kinds—There are two manifestations of Dysentery:—

Viz—(a) *Amœbic* (b) *Bacillary*.

Difference :—

<i>Onset</i> —Gradual, patient may continue his work. Subacute and chronic stages occur with thickening of the colon.	<i>Acute</i> with rise of temperature, great prostration and collapse may supervene. No thickening of the colon except in <i>Flex-nor type</i> .
---	--

Stools— <i>Offensive</i> , diarrhoeic semiformed or formed with or without adherent traces of mucous and blood.	<i>Inoffensive</i> , usually mucous watery stools with <i>bright red blood</i> , which tends to mingle with faeces.
Colour—Varying from deep brown to <i>Gray</i> with dark and Tarry if blood present.	Usually of <i>pale</i> colour with bright red blood.
Reaction—Acid but alkaline in chronic cases	Alkaline.
Stools under Microscope—Mobile, entamoeba Histolytica with ingested R. B. C. clear ectoplasm, sudden shooting out of Pseudopodia, vacuoles not prominent, Nucleus obscure.	Culture: Non—Lactose Fermenting colonies on plating with positive coagulation to specific sera. B. Shiga, B. Flexnor etc. on culture.
Cellular elements—scanty	C. E.—Abundant.
Poly—Few	Poly—In large numbers.
Eosinophyle—some, (coarsely granular)	Eosino—absent.
Poiknotic Residues—Formed by secretion of a powerful proteolytic ferment resulting in semidigestion of cellular elements by E. Histolytica.	P. R.—Absent, but prominent macrophages present.
Red cells—Ingested	R. C.—unaltered.
Charcot leyden crystals—Found when acute stage is subsiding which is pathognomic amaebiasis.	C. C.—not found.
Pathology—Affection of sub-mucosa of the intestines, amoeba eat away the submucous tissue forming mucous abscess which burst into the intestinal canal and gives rise to cavities in the submucosa with undermined edges.	Affection of superficial mucous layer with necrosis and denudation and therefore larger amount of cellular elements.

Frank hæmorrhage common— F. H.—not common.
due to opening of the submucous arteries.

Thickening of the colon—common C. C.—not common.
(because Amœbae destroys the submucosa and perforate into the colon to prevent this thickening of the colon)

Complications and sequelae— Collapse with vomiting and purging, Faecal toxæmia Fatal chronic arthritis, neuritis.
Periodical diarrhoea and ch. diarrhoea alternate with constipation and ch. Indigestion
Amœbic abscess—occurs particularly of the liver, spleen, brain, chronic peritonitis with consequent ascites Rogers Peritonitis—not common.
cirrhosis of the liver, Perforation of bowels Hæmorrhage, acute abdomen.

Diagnosis:—Stools with mucous and blood associated with tenesmus and pain in the abdomen.

Differential Diagnosis.

- (1) **Proctitis** and ulceration of the Rectum—differentiated by Rectal Examination and History (Syphilis and Malignant disease) most common.
- (2) **Cholera**:—Collapse and rice water stools are pathognomic. Examination of stools.
- (3) **Algid manifestation of Malarial parasites**.—History of previous attack and Malaria Examination of Blood and stools will make the thing clear.

Treatment. Amœbic:—

Rest in bed, use of bed pan for stools. Give 'Oleum Ricini mixture orally and inject Emetine hydrochlor by subcutaneous or intramuscular route, Intravenous in urgent cases.

Heavy doses of Bismuth.—160 grains of Bismuth Subnitrates in one dose often work marvellously, 6 grains to 12 grains in one course may be prescribed. Wash the bowels by argentinitrates if required ($\frac{1}{2}$ grain to 1 ounce of redistilled water).

Diet.—*Milk and Barley.*

Bacillary Dysentery:—*Aviod protein diet.* Mixed *antilyser-teric serum*—Intramuscular or intravenous in urgent cases, or subcutaneous in flanks gives magic response in some cases. *Sulphates* are to be prescribed orally with caution. Bowels may be washed with *silver nitrate lotion* in severe cases.

Diet.—Starchy food, arrowroot, Lime, Whey and Glucose can be given.

A CASE OF GENERAL PARALYSIS AFTER CHOLERA

BY

DR. NAGENDRA CHANDRA NATH

Narayanpur, Dacca, Bengal

In March 24, 1929, I was called on to attend a cholera case with the usual symptoms of cholera therein. The patient was 55 years old, a cultivator, Muhammadan by caste. Name-Najamiah of Patiladhoa, which is half a mile distant from here.

After treating him with the usual medicines, the patient was completely cured within a week and rice diet was given. No intravenous Saline was required during his treatment. During convalescence I gave him—Syrup Hæmogen of B. I. company. All was going well until the 9th day.

Unexpectedly I was called on to attend the same case on the 10th day of illness. After going I asked the patient what the condition was. The patient told me that from the previous night he could not move his limbs. I then examined the patient minutely and found him in the following condition.

The patient could neither walk, raise up his limbs nor stand up even in any position. He could not move his neck. No pain was felt in any part of his body. Knee-jerk was lost. Sensation and everything of his body were alright both physically and mentally except the above symptoms. So I diagnosed the case as general paralysis.

I was somewhat perplexed to see the paralysis coming suddenly in such an old age. But to my utter surprise, I found the patient quite alright after giving him the following mixture for only 6 days.

R

Pot. Iodide	gr.	v.
Spt. Ammon Arom	m	xv.
Liqr. Strychnine Hydro	m	iii.

Liqr. Arsenicalis	m	iii.
Aqua Chloroform	ad	℥ii.
m. f. t. (6) T. D.		

Conclusion:—Up to this day the patient is going on with his work without any discomfort. Now I ask my fellow brethren to correspond through this journal, if they can disclose the cause of Paralysis in this particular case.

AMUL-THAS

BY

HAFIZ MHD ABDUL SHAKOOR L. I. M., MADRAS

Cassia	Fistula	(English)	Cassia Fistula (botanical name)
Khayar-i-	Shamber	(Arabic)	
Khayar-i-	Chember	(Persian)	
Amul-thas		(Urdu)	
Konnekei		(Tamil)	
Rayala-Kaia		(Telugu)	
Suvarnaka		(Sanskrit)	
Garmala		(Hindi)	
Cassipulpa		(Latin)	

Nomenclature:—In upper Hindustan it is called Sundaraj. Avicenna speaks of it under the name of Khayar-i- Chember.

Characteristics:—The tree rises frequently to the height of 50 ft. With leaves pointed and of a singular face, green colour and the long fragrant flowers of a golden tinge placed on long pendent terminal spikes. The fruit (which is common in most bazaars) is a brownish coloured pod, about the thickness of the thumb, and nearly 2 ft. in length. It is divided into numerous cells (upwards of forty) each containing one smooth, oval shining seed. The pulp of the fruit is somewhat viscid and of a sweet mucilaginous taste. There are more than 34 species of cassia grown in India.

Habitat:—Egypt, Kabul and India.

Parts used:—Pulp of the fruit, flowers, and seeds.

Mode of administration:—Internally and externally.

Potency of the drug:—10 years, Preferable to use old ones as the fresh from the tree may cause Haematuria in some cases. Better always to use one year's old stuff.

Planetary Relation:—From the point of colour attributed to planet Zuhel (Saturn)

Temperament:—According to Avicenna (Boo Ali Seena) hot and moist in moderation but others are of opinion that it is hot and moist in the 1st degree.

Dose:—1 to 3 tolas for adults and ½ to 1 dram for children.

Deleterious effects:—Procreator of nausea, causes twisting and dysentery.

Correctives:—Almond oil, Aneesoon musthaghi, oil prepared out of the pulp of pumpkin (Roghani maghzi Thukmi kadoo) and emulsion of Tamarind (Zulali amlī)

Substitute:—Thrice the quantity of maveez (deratchi) and baidana, small quantity of Thurbud and half the quantity of Thuranjabeen may be substituted. Badam (almond) oil need not be used for children.

Special Properties and actions.—The cassia fistula pulp is considered by Hakims as a most valuable laxative and is prescribed by them in various forms in cases of habitual constiveness. The moderners place this amongst their mild muslihath (Purgatives) but it acts as an auxilliary in all the expelines of dashes e.g., in combination with tamarind it is cholagogue, with Rasvooth in phlegmagogue and in conjunction with Kasni and Baidi-Sada or with the juice of the leaves of Shahathra, Aftheemoon of his fa-ij it proves as a melanagogue. In addition with Raisha-i Khathenee (root of Khathinee) Behdana and Isphooghool (school verai) macerated water (looab-i-Isphooghool) or almond oil it removes the congestion of the intestines, dysentery and intestinal twistings. Solvent of the inflammations through purgation corrects the vicious blood and heat in the circulation is subsided. Removes roughness of the thorax. The outer covering of the pod boiled as a decoction and taken will cause easy delivery. The following prescription is efficacious in getting rid of colic and obstruction or suppression of urine:—

Cassia fistula pulp $10\frac{1}{2}$ mashas with Rose water or Anise water or aqua distillata.

Castor oil 8 mashas.

Its leaves used as greens in dietary which cleans the bowels. Gul-khand (a preparation) prepared from its flowers eradicates dry cough.

External uses:—Paste of cassia fistula pulp removes gout and joint pains. Suppurates inflammations. Its gargle in combination with the juice of green coriander leaves or leaves of makkao (juice of) or with both or infusion of Isphooghool or decoction of Mysore dal (masoor-ki-dal) relieves Pharyngitis and also Tonsilitis. Its paste removes ring worm. In swelling of the abdomen its application subsides. Its root rubbed and pasted over inflammations and ulcers relieves the condition. The pulp applied round the umbilicus of the children relieves flatulence and vayu pains. Its decoction used as ear drops stops discharge. The easy method for its use is as follows, which is not worth a pie, a minute's labour.

Take $\frac{1}{2}$ oz. of cassia fistula pulp and put in $\frac{1}{4}$ measure of cow's milk and boil. Then it is ready for gargling in cases of chronic inflammations of the throat, tonsilitis and pharangitis and akin diseases of the throat.



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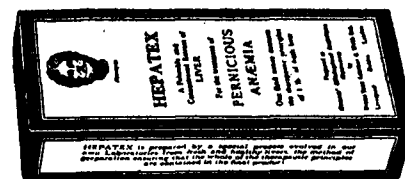
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[No. 2

RECRUITMENT TO THE I. M. S.

The Indian Medical Service has a long and interesting history behind it. For the last 175 years or more, this grand service, it must be admitted, has held aloft the torch of medical lore and has helped a great deal in shedding the lustre of Western Medical Science in India. Though the Indian Medical Service is a purely military service, it has practically remained a Civil Medical one all these years. Between 400 and 500 officers are lent by the Military Department to the Civil side, for whose employment nearly 278 Civil posts are reserved. These posts include administrative posts under the Government of India and the Provincial Governments for medical relief, sanitation, education and research work in the country. Other Executive appointments are also held by them such as Superintendents of Jails and Mental Hospitals, Medical Store-keepers, Civil Surgeons and the like. Such a combination of Civil and Military duties, which subordinates the needs of the Civil population to the requirements of the military is unheard of in any other civilized country in the world.

Various have been the attempts made to separate the Civil Medical Service from the Military and "the grotesqueness of a doctor going to see a patient with a sword in one hand and a stethoscope in the other had attracted the attention of the Government of India, as far back as the year 1879." Between 1879

and 1911 no tangible result came out of these efforts, for the Military had always the upper-hand. From 1911 onwards, the number of Indians entering the I. M. S. was materially increasing. This alarmed the Army Department and they proposed to make the I. M. S. a purely Civil Service and to organize the Royal Army Corps in such a manner as to enable it to fulfil all the military requirements. This attempt, too, proved futile. The Public Service Commission, which was appointed shortly after, recommended the absorption of the I.M.S. into the R.A.M.C. and the formation of a separate Civil Medical cadre for each province, with some reservations such as the provision of European Medical attendance for European Civil employees and the like. This recommendation of an authoritative and costly Royal Commission, too, was brushed aside by the Government of India and the Secretary of State. Meanwhile, vested interests in England were busy agitating over the question of recruitment to the I.M.S. even for military requirements, as they thought that such a pressure would retard the rapid Indianisation of the Medical services aimed at by the Ministers in the Provinces and help them in the restoration of their pristine power and prestige. Since the war there was a heavy decline both in quality and quantity of I.M.S. officers recruited. Concessions after concessions have been offered to them and the two most important among them are (1) the abolition of the system of recruitment on the basis of a competitive examination and (2) the fixation of a definite ratio of 2 Europeans to 1 Indian, recruited for the service.

The resolution that was recently moved by Mr. Jayakar in the Legislative Assembly and passed in a modified form, with the assistance of the European group, is most welcome and opportune at this critical juncture. Mr. Jayakar's original resolution runs thus: "This Assembly recommends to the Governor-General in Council that he be pleased to revive the competitive examination for recruitment to the Indian Medical Service which had been held in abeyance for the last 14 years and hold it annually at a convenient centre in India and make it obligatory for the entrants to the examination to hold a medical qualification registerable in India."

The resolution is clear and self-contained and is a great advance over the the present unsatisfactory system of recruitment by selection in which only 18% of Indians had succeeded as against 50% when the competitive examination system was in vogue. It also insists on a medical qualification registerable in India in the same way as a registerable qualification in Great-Britain was urged for Indian candidates sitting for examination.

This resolution had no chance of success as the Government of India, though convinced of the iniquities perpetrated by them, were unable to accept it just for the sake of saving their own skins. An amendment was however moved, by Sir D'Arcy Lindsay at the instance of Col. Gidney, which provided for the examination being held simultaneously both in England and India. The amended resolution which was carried without a division urges Government "to revive the competitive examination for recruitment to the I. M. S. which had been held in abeyance for 14 years and hold it annually simultaneously in India and England and make it obligatory for the entrants to the examination in India to hold a medical qualification registerable in India." We are thankful to Mr. Jayakar, Col. Gidney and Sir D'Arcy Lindsay for getting this small boon for the Medical profession in India. But we are afraid that this resolution will remain a dead letter, like so many other resolutions passed in the Assembly in the past. As regards the ratio of recruitment, the Government of India are equally adamant and unwilling to yield. Their proposal to recruit in future Indians to Indian vacancies in the recognized proportion' of one Indian to two Europeans irrespective of the rate at which European candidates were forthcoming to European vacancies is merely an eye-wash and "so long as the vicious water-tight division of the Service into Indian and European holds and Indians cannot hope for more than a third of the total number of posts, however strong they may be in number and qualifications, this injustice of the domination of a particular race in a key service will continue."

We have often urged in these columns the total abolition of the I. M. S. and the formation and indianization of a separate Medical Service for Civil employ, and unless that is done, the discontent among the Independent Medical Profession and the growing unemployment among Medical men in this country will continue to exist.

Medical News and Notes

VENEREAL DISEASES.

BY

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

Soft sore.—Various works regarding diagnosis and treatment are to be pointed out—The culture of the *Streptobacillus* has entered into the routine. From this fact, it was easy to isolate specific antigens (1) with which the diagnosis of the disease can be obtained by an intradermic reaction. This test is valuable for the differential diagnosis, often difficult, with the syphilitic or the mixed sores. The antigen of Nicolau and Banciu has given 91% of positive results.

The treatment by vaccinothérapie (Dmelcos Podlenc for instance) gives very good results. The vaccine is now administered intramuscularly, which gives results as good as the intravenous way practised before. The severe febrile reactions are thus avoided. The vaccine is also mostly used for the complications of the soft sore. Vaccinothérapie is the best treatment for the bubo. See Prof. Pautrier (2).

Gonorrhoea.—We know how difficult it is to ascertain the complete cure of the disease, being given that the gonococcus can shelter in the different tissues of the sexual organs.

Gory and Jaubert (3) advise the culture of the sperma. If it is negative (absence of gonococcus) the patient is cured.

The treatment of gonorrhoea by chemical dyes has always its numerous supporters. Jausion, Pecker and Lenegre (4) use the following formula (for 1 dose) Gonacrine (diaminomethyl—acridine—hydrochloride) 20 centigr. Methylene blue 1 centigr., Pyridine 1 centigr. Distilled water 10 c.c. Fifteen intravenous injections given twice or thrice per week, cure radically acute gonorrhoea.

(1) Rivallier—Bull. Soc. Fr. Dermat. et Syphiligraphic 1928 No. F.
Nicolaud Bonciu—id

(2) Prof. Pautrier—id

(3) Presse Medicale—1928—No. 29.

(4) Bull. Soc. Fr. Dermat. et Syphiligraphic—1928—No. 6.

See also XVI. Indian Science Congress—Andre: Intravenous chemical treatment of gonorrhoea.

Syphilis.—The studies of Levaditi and his collaborators (5) seem to prove that this parasite of syphilis, as well as the other spirochetidæ, passes through a phase of ultramicroscopic granulations.

The serological diagnosis of Syphilis by the methods of flocculation is being used gradually nowadays—Vernes' method is specially recommended on account of its precision—(6).

After advent of the War, the cases of nervous syphilis preponderate over the cutaneous cases. The question of sermotropic and neurotropic virus remains always not decided.

For arresting the disease, the novarseno benzol is always the most used remedy.

Sulfarsenol and Acetycarson are very convenient, for they can be injected hypodermically.

Among the Bi salts, quinby and muthanol (with or without Radium salts) give very good results.

Hg is far from being given up and it always has its merits as a treatment of consolidation after the results obtained by As and also against visceral syphilis.

The jaundice appearing in the course of the arsenical treatment is considered more and more as being of syphilitic origin; so it is not a reason for stopping the treatment (7) In any case, if we want to be very prudent, As may be replaced by Bi or Hg. (8).

In the nervous syphilis (tabes, G.P.I.) Thermotheapy (treatment by fever) is in high favour. The malariatherapy is the most used method.

But due to the possible danger of the inoculation of the parasites, some prefer to use Dmelcos intravenously injected (see above re-Soft chancre) and have obtained good results (9).

DISEASES OF CHILDREN.

We shall speak of Diphtheria altogether with infectious diseases.

Rickets.—The treatment by U. V. rays is entered into the routine. Numerous studies have shown that the use of radiated ergosterine is easy and efficacious.

Ergosterine (Vitamine D), an isomer of cholesterine, acquires under the action of U. V. rays a very great antirachitic power.

(5) Ann. Institute Pasteur—1928, March.

(6) Numerous Articles—See also VII Congress Feata Calcutta 192 F—Labernadie XVI Indian Science Congress Madras 1929—Z. Ardae.

(7) Milian—Presse Medicale 1928 March.

(8) Ravaut—Soc. Fr. Dermat. et Syphiligraphic—1928—Nov.

(9) Combemale et Trinquet—Reunion med-chiz. des Hop. de Lille—1928 Mars.

It is given to children by drops—The proportion of the Ph and Ca in the blood increases rapidly. Radiography shows the calcification of bones. The general condition improves quickly. (10)

Athrepsy.—Sulfarsenol hypodermically administered gives good results even if hereditary syphilis is not the cause. (11)

The treatment of *Eruptive fevers* with convalescent serum is marked with good success,—and it is possible in big institutions,—but it is a regrettable fact it cannot be adopted owing to complexities in private practice.

VARIA.

Diabetes.—The general opinion is that systematical treatment by insulin being of long duration and very costly, this remedy must be reserved for prevention and treatment of the complications of diabetes (anthrax, coma; surgical operation to be done). For diseases other than diabetes, insulin gives also good results in the treatment of furunculosis,—progressive emaciation in adults, atrophy in infants, non-diabetic sores (in this last case, Insulin can be given in an ointment).

Kidneys.—The urea in doses of 15 to 50 grams daily acts as a strong and harmless diuretic, save the case of azotemia (12).

Calcium Chloride acts well against oedema (See above Ascitis).

Basedow's Disease.—(exophthalmic goitre)—We know that the simple goitre is looked upon by some as due to the lacking of Iodine in feeding, and that hypothyroidy can be treated by administering Iodine—It may seem paradoxical that they have tried to treat Basedow's Disease which is after all an hyperthyroidy by the same Iodine. However, Prof. Marcel Labbe has done so and reports 24 cases treated with success (13).

Barbers.—Etiology is not finally decided, in spite of the various works of N. Bernard and his collaborators (14) which seem decisive regarding the action of B. asthenogenes.

As to the diagnosis of the incomplete forms, Trabaud (15) proposes to make use of the Aldrich and Mac-clure test (the injection of 0.22 cc. of normal saline into the skin gives way to a small swelling of oedema, which normally gets dissolved in 50 to 90 minutes). In Barbers, even in incomplete forms, the swelling gets dissolved in a few minutes.

(10) Marfan—Bull. Soc. Rev. Paris 1928 Mars.—Rohmer. iv. Armand-Delille et Bertrand—Bull. Soc. Med. Hop. Paris, 1928 Oct.

(11) Leroy—These Paris 1928.

(12) Simici et Marcou—Presse Medicale—1928 No. 60.

(13) Soc. Med. Hop.—1928 Juillet.

(14) Ann. I. Pasteur Indo—China from 1924 to 1929.

(15) Rev. Med. Hyg Tropicales—1928—Juillet.

Gleanings from Medical Press

SURGERY

Typhic Spondylitis. Gonzales, Ontaneda and Vidaurreta. Presse Med, Argentina 30. VII. 29): Cases of typhic spondylitis are rare in the literature. This one developed during convalescence. Symptoms and radiographic images absolutely typical of a spondylitis. Rapid recovery under vaccinothrapy.—F. De. M.

Buccal vegetative pyodermitis simulating cancer Gougerot Presse Med 16-XI-29.

Many times, misunderstood for tuberculosis, mycosis, syphilis, phemphigus, leishmaniasis and specially oral cancer, this disease can be easily treated in the following way:

First phase. Wash with NaCl 1 gr. copper sulphate 0.001 to 0.002 diluted in a glass of water; cauterize with zinc chloride 1/20, or silver nitrate a 1/10, or strong lugol (Iodum 1, potassium iodide 2, distilled water 10) or even with Ziehl fuchsin or milian solution (crystal violet and light green aa 0.10, alcohol a 95 20 gr).

Second phase. Use the same wash and when the vegetation phase is ameliorated employ methylene blue a 1/100 (in the case where fuso-spirochaetes are present, employ a watery solution of 914 or surfarsenol).

A propos of such cases the author remembers that vegetative pyodermitis of skins have also been described and Azua and Sala have shown under the name of pseudo epitheliomas many of such cases which, histologically resembling the epitheliomas have been cured by local antiseptics.

The clinical types are:

(a) Type Hallopeau, folliculitis and vegetations en nappe. resembling vegetative sycosis.

(b) Type Azua pseudo epitheliomatosis or epitheliomati, form with abscesses having begun by a papula.

(c) Type Gougerot tuberculosis, with two varieties, one dry, verrucoid and the other wet, eczematiform.—F. De. M.

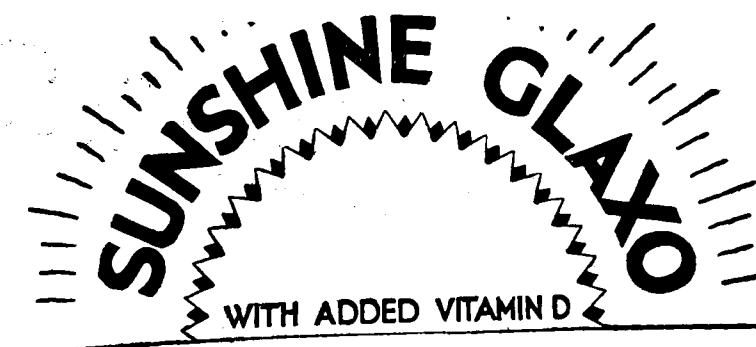
A propos of the Tumours called Endotheliomes of Pleura
R. A. Ley (*Bruxelles medical* n 3. 17-XI-29).

The author studies some cases of such tumours which are not rare in pathology. In 5 years he has found 9 cases on 2000 autopsies. The diagnosis during life is extremely delicate. Differential diagnosis must be made with tuberculosis accompanied by pleuretic exudate and with pulmonary tumour. Some of these cases are complicated with tuberculosis, and many of them are the result of the extension more or less limited of a pulmonary tumour. Surgically inaccessible, these tumours must be treated by radiations which give excellent results specially in tumours of lymphoid origin. Among his 9 cases, haemorrhagic exudate was found once, serous exudate five times and no exudate in 3 cases. Histologically the tumours were fibrocarcinomas 4, cancer of alveolar type 1, of bronchic type 1, polymorphous 1, atypic malphigian epithelioma 1, cystoadeno-carcinoma 1. All those tumours are of a type, distinctly epithelial. Indeed theoretically tumours of conjunctive origin are possible in the lung and pleura but they are very rare and it seems that most of these neoplasms diagnosed as sarcoma are really atypical epithelioma. The evolution of a tumour in pleura either primitive or metastatic gives a violent fibroblastic reaction, conferring to all those neoplasms the same macroscopic characters.

The reviewer having found one case of this nature on a colleague, considered as tuberculous, calls the attention of his Indian colleagues to such facts.—*F. De. M.*

Contribution to the study of a conservative treatment of empyema by rivanol solution. Diehls (*Therapie der Gegenwart* 1929 Book 7 analysis in *Bruxelles medical* 17-XI-29).

Aspirate by a syringe some quantity of pus, inject normal saline in same quantity, aspirate and inject again repeating the operation till the liquid is quite limpid? Begin then to use Rivanol solution a 1/1000 in the same way and keep a small quantity of this solution (half of the pus originally aspirated in the pleural cavity). The effervescence has been obtained in 28 days. Particularly indicated this method in children and very weak patients.



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MEDICINE

On the classification of chronic rheumatisms (Prof. Benzacon and M. Pierre Weill) *LIII French Congress for the advancement of science. Press Medicale 20 XI 29.*

An acute articular rheumatism does not cause the chronic rheumatism. The roll of tuberculosis is reduced to some clinical rarities. Among the infections, blenorragia remains in the first place. Some other infective stages must be rigourously separated.

Two classes of chronic rheumatisms *d'emblee* must be considered: the progressive, deformant, symmetrical rheumatism, the etiology of which is obscure and the mono or polyarticular rheumatisms without trophonervotic evolution.

Among these, the following are the main causes: gout and obesity commanding a treatment for these troubles, endocrine disfunction specially on ovaric and thyroid secretions and finally the vascular rheumatism due to deficiency and protein, which constitute the true chronic rheumatism and can be cured only modifying the metabolism by a right study of the troubles of nutrition causing such stages.—*F. De. M.*

A new case of meningococcus septicæmia of pseudo malarial type cured by acridinic chemotherapy. Veillon, R. Martin, St. Rou Soc. Med des Hop 15-XII 29.

Meningococcus type B giving a pseudo malarial infection lasting 3 weeks and rapidly and definitely cured by acridinic chemotherapy. From the second intravenous injection of acridinic yellow the temperature came to 37 and remained normal.

As the case was relatively recent the therapeutic success is really interesting as we know that the meningococciæmia are particularly difficult to cure when they are of less than one month of evolution.

The reviewer calls the attention of medical practitioners in India to the existence of meningococciæmia, type B, at least in Malabar, often misunderstood as cerebral malaria convulsions, tetanus, worms and other such diagnosis, specially when attacking young children.—*F. De. M.*

Splenic form of Hodgkin disease. Mondon (Soc. Med des Hop. 22-XI-29.)

A young sailor having shown jaundice during 6 months died from a hæmorrhagic syndrom. The autopsy shows a typical case of Hodgkin disease with Sternberg cells. As the splenic lesions were predominant, one can easily see the difficulty of diagnosis.

G. Weill remembers that the splenic form of Hodgkin's disease is not exceptional. One of his personal cases simulated Banti's disease and was diagnosticated only when ganglions appeared and showed the Sternberg cells. In the presence of an isolated case of splenomegalia, one must always think of a Hodgkin's disease.

Bezancon reports a case of splenic form where fever resembling colibacillosis and a syndrom of pleural reaction was taken by a subphrenic abscess. The operation showed a large spleen with typical lesions of lymphogranulometosis. No ganglions were found and the only sign which could be taken as suspicious was a cutaneous lesion of the leg remembering fungoid mycosis.—*F. De. M.*

Classification of hepatic cirrhosis. Rossle (*Reunion Pleniére de la Soc. Anat de Paris* 8.9 Oct. 1929.

The cirrhosis hepatica is not a morbid unity. A classification based on etiology is and will always be impossible. The morphological characters concerning pure histology and the constata-tions of annular or infiltrative sclerosis do not interest the clinics and the anatomopathologists.

The histogenetic point of view is the only one which may represent some advancement on the actual confusion. It is evident that transitional types are found everywhere and some isolated types, already described as the Hariot type and Banti's disease must be withdrawn. The classification proposed by the author is the following:

I Cirrhosis atrophica (Laennec cirrhosis)

Type of cirrhosis hystolitica

Chronic hepatosis with chronic interstitial hepatitis

II Hypertrophic cirrhosis

1. *Hypertrophic variety* of Laennec cirrhosis (hepatitis-predominant)

2. *Angiohematotoxic cirrhosis* (pure chronic hepatitis) Type of desmolytic cirrhosis (mesenchymotoxic), cirrhosis with splenomegaly

(a) non pigmented (reticulotoxic)

(b) hemosiderotic

(c) hemochromatic (bronzeus diabetes)

III Mixed forms and varieties of the above types (vide II. la) and false cirrhosis, cirrhosis atrophica pigmentata, chronic yellow atrophy

IV Biliary cirrhosis:

1. Cholastic cirrhosis
2. Cholangitic cirrhosis
3. Cholangiolotic cirrhosis

V Rare forms: C. cardiaca, c. provenient of yellow chronic atrophy, Wilson disease, parasitic cirrhosis, c. in Gaucher and Niemann Pick disease.

Large discussion. No agreement, but on one point: the actual insufficiency of the different classifications, rendering the subject worthy of further studies.—*F. De. M.*

Abdominal pain in the pneumonia of children Nobecourt (*Le concours Medical* 26 VIII. 28)

The author insists upon the painful points in pneumonia in children and their importance on diagnosis. The *point de cote* in children is never frankly in nipple; it is localised rather in infrahepatic or subcostal region, in the flanks and specially in abdomen. Many times this pain is misunderstood for a symptom of appendicitis or peritonitis and the practitioner must always in such cases examine the lungs and have present in his mind the possibility of a pneumonia.—*F. De. M.*

Transmission of human leprosy to white mouse Souza Arango (*Suppl. Mem. Inst. Oswaldo Cruz* 8. 22.VI.29.)

The inoculation of emulsion of lepromata to white mouse intraperitoneally, produces either a mere generalised infection, causing death within 3 or 4 weeks, or an infection characterised by a tumour, micro abscesses or dermic nodules. The presence of globules in these lesions shows a real multiplication of *H. bacillus* in the animal. The transmission of the infection from the white mouse to the white rat is positive. A new field of experimentation is so open to the study of the etiopathogeny of leprosy.—*F. De. M.*

Nephretic Syndroms of Thyroid Origin. Prof. Jimenez Diaz in *Rev. Med. de Barcelona*, 6F. 1929.

The action of thyroid gland on water metabolism authorises the thyroid therapeutic in odemas and all brightic patients show some degree of thyroid insufficiency. Excellent results are obtained by thyroid treatment, specially in those patients whose

disease seems to be due exclusively to thyroid hypofunction. The prognosis is very benign in such cases and the results of treatment wonderful.—*F. De. M.*

Remarks on the fungi found in the siderotic nodules and their relation to the development of splenomegalies, Pinoy (*LIII Congress of French Association for the advancement of science Presse medicale 20, XI, 29.*)

It is well known the large discussion held in the last years about the mycotic origin of certain splenomegalies. The problem is not yet settled. Some authors (Nanta etc.) are advocating such etiology, others (Langeron etc.) denying it.

Pinoy has reproduced experimentally the splenomegalies in rabbit and guinea pig inoculating in the heart or veins a culture of *Synbacterium splenomegaliae* together with spores of *Aspergillus fumigatus* and *A. nidulans*. The guinea pigs often and the rabbits always are resistant to such inoculations and show large splenomegalies (more than 20 cm long). In the first weeks it is easy to make a retroculture of either bacteria or fungus. Later on, only irregular yellow bodies, reliquats of the fungi are to be found keeping sometimes the filamental disposition of the mycelium, but the cultures are negative. There is an interesting homology between these experimental lesions and the pathological records on human splenomegalies.—*F. De. M.*

THERAPEUTICS.

Calcium chloride in kidney diseases. Blondel 1'Hospital et Pres. medicale 20, XI, 29.

Calcium chloride is indicated:

(a) in functional, intermittent or orthostatic albuminuria a 0.50 to 1.50 per day, during 15 days every month.

(b) in albuminous nephritis @ 0.50 per day in children and 0.50 to 1 gr in adult during 15 days every month.

(c) in acute nephritis, @ 0.50 to 2 gr or even strong doses till 11 gr. per day, when the oedema are very pronounced.

(d) in acute haemorrhagic nephritis 1 to 3 gr per day during 4 to 5 days, interruption of the treatment, new series of the same doses,

(e) in chronic hydropigen nephritis @ 4 to 6 gr per day or better strong doses from 10 to 15 gr per day during 5 to 12 days.

The dietetic must be poor in sodium chloride.

(f) in hematuria, haemoglobinuria & bilious haemoglobinuric fever @ 4 gr per day.—*F. De. M.*

Four new cases of sclerosis en plaques treated by hemolytic serotherapy.—Larguel-Lavastine and Koressios (*Soc. Med des Hopitaux analyse in Press Med. 16-XI-29*)

From the first 3 cases reported by the authors to the Soc. of Neurology, two maintain the cure since three years, and one has a persistent amelioration. In 4 new cases the therapeutic has now been experimented with these results.

(a) Beginning since 6 months. Spastic and cerebellous syndrom very acute. 3 injections of 1, 2, 3 cc of serum. Since 8 months the cure is complete.

(b) Beginning since two years. Subacute scleromyelitis of slow progressive evolution without any remission. March impossible. 2 injections of 3 and 5 cc. Immediate amelioration. The patient can walk alone.

(c) Beginning in 1926. March impossible without help. Four months treatment. Ameliorations, the patient being able to march alone with a stick. Double Babensky and spastic march still remain.

(d) Beginning in 1924. Spastic syndrom very acute. 2 days after an unique injection of 3 cc. The march is very ameliorated.

The therapeutic cures when employed in early cases, and seems to stop the progress of sclerosis in old cases.—*F. De. M.*

Utility of monkeys for the preparation of sera against polyomyelitis and infantile paralysis. A Pettit (*Bull. Acad of Medicine Paris 12-XI-29*)

The excellent results obtained by these sera in experimental work are also confirmed in human clinics. The requests for these sera are now very large from all parts of Europe and America. One case from Drs. Brodin and Alajouamne is quoted as particularly brilliant: 12 hours after the first injection, the intestinal and cystic paresia were dominated and the muscular paralysis ameliorated. The preparation of such sera is very expensive on account of difficulties for providing laboratories with monkeys.—*F. De. M.*

Four years of vaccination by diphtherie anatoxins in the Maritim Hospital of Berck M & G Mozer (*Presse Med.* 27-XI-29)

The vaccination began in December 1925 and carried on in 3000 children with external evolutive tuberculosis has never given any serious accident. Before the vaccination (1924 and 25) 103 cases and 8 deaths occurred, in 1928-29, in spite of new elements of contagion having been imported only 5 cases occurred among 1000 children, regularly vaccinated, curing easily and without complications. These facts allow the author to claim for the efficacy of the antidiphtheric vaccination by antitoxin.—*F. De. M.*

On the insulin cure in diabetic patients which are tuberculous: mortal hemoptyses during the treatment. Giovanni Rizzo (*II Policlinico Sezione pratica* 15. VII. 1929).

In spite of Chabanier, Labbe etc. who consider insulin indicated in diabetes complicated with tuberculosis, many others find that this treatment is formally contraindicated in such cases. The evolution of tuberculosis has been accelerated with such treatment and mortal hemorrhages have occurred. Blum and Schwalb believe that the tuberculosis which is generally insidious in diabetic patients accelerates its evolution under insulin correction of the sugar troubles. Mauriac believes that impurities in insulin specially the heterogen albumin are responsible for such troubles. According to Le Barre those impurities might act on diminishing the formation and the action of thrombine, hence the haemorrhages.—*F. De. M.*

Basic optochin in therapeutics Ehinger (*Rev. Med. de la Suisse Romande* 25-VII-29 analysis in *Pr. Med.* 27-XII-29.)

Basic optochin is anethyhydrocuprein. Morgenroth has shown in 1911 its specific action on pneumococcus *in vitro* and *in vivo* (septicemia of mice). In human clinics as the chlohydrate of optochin gave some cases of amblyopia and toxic optical neuritis, basic optochin is now used with wonderful results in fibrinous pneumonia due to pneumococcus and capillary bronchitis and bronchopneumonia of children.

Doses and mode of administration; per os and per anum, 5 to 6 daily doses 0.15 to 0.20 for adults, 0.02 to 0.05, 0.08; 0, 10: 0, 12 for children. Repeat the treatment for three days. If good results are not obtained, it must not be continued after this period.—*F. De. M.*

Liposoluble bismuth preparations R. Mignot (*Presse Medicale* 27-XI-29.)

The introduction of liposoluble bismuth preparations constitute a wonderful progress in antisyphilitic treatment. As says Levaditi, they form a *trait d'union* between the soluble salts and the insoluble preparations. Intermediate between the aqueous solutions and the colloidal mixtures they have the strong treponemicide power of the former and the durable and deep curative action of the latter. They have the advantage of an easy dosage, are perfectly tolerated, heal rapidly the infective accidents and exercise a powerful influence on the serum reactions. They must be of the first rank of bismuth preparations.

Among these are quoted the following: iodobismuthate of tricitylamine or 338, soluble siprobismol (double iodide of quinine and bismuth associated to lecithine and dissolved in oil), camphor carbonate of bismuth, double camphorate of ethyle and bismuth, amethyl-hydrocynamate of bismuth, the german preparation named embial etc.—*F. De. M.*

Fattening therapy of tuberculous patients by insulin.—Stellio Sticotti (*II Giornale di Tisiologia* 31-VIII-29).

The first authors to try the insulin therapy in tuberculosis were Falta, Baner and Nyiri, Vogt. Injection was given of 20-150 units 2 to 5 times in 3 weeks, half an hour before meal.

Excellent report of the results of many authors. Three hypothesis have been made on the cause of this fattening: increase of appetite, accumulation of water on tissues, transformation of the hydrocarbonates into fat.

The author has treated all kinds of tuberculosis with insulin, increasing gradually the doses to 2 X 20, 20 X 30 units per day according to the individual sensibility. His cures lasted 364 weeks.

Conclusions: insulin gives good results in slight cases, but is contraindicated in advanced cases where it does not increase neither weight nor appetite, but gives sometimes strong thermic and local reactions, as well as renal troubles. In such cases insulin may only be tried if all conditions are optima and there is no sign of toxæmia.

Good results have also been reported by Zelter (*Insulin in pulmonary tuberculosis: Zeitschs-fur Tub.* 1928-N. 3) by the following method: 1st day 5 units, 2nd day 10 U. in two injections, 3rd

day 20 U. in two injections and so on till 60 U. per day. The cure must be done during 364 weeks.—*F. De. M.*

Treatment of diarrhoeas by an organic iodase Carvills and Sautet *Com. Acad. of Medicine* 19-XI-29). A new product, auri-phenene, chemically a dioxyphenene iodosulphaurate of potassium, gives excellent results in fermentation, diarrhoeas of tubercular patients and in hot climate diarrhoeas. The drug contains 31% organic iode and it seems that it acts by liberation of iode in alkaline intestinal medium and a coagulant influence on mucin and albumin. Doses, cachets of 0,25, 2 to 6 times per day.—*F. De. M.*

Intoxication due to pine apple Joyeux. (*Soc. de Med. et d'Hyg. tropicales* F-XI-29). Two cases: Symptoms similar to those following the accidents of 914. Rapid death by cardiac collapse, when the intervention is not urgent. The treatises on tropical pathology do not record any intoxication due to pine apple and it must be known to doctors. It seems that there is a special sensibilisin and the dramatic congestive syndrom belongs to the dominion of anaphylaxys.—*F. De. M.*

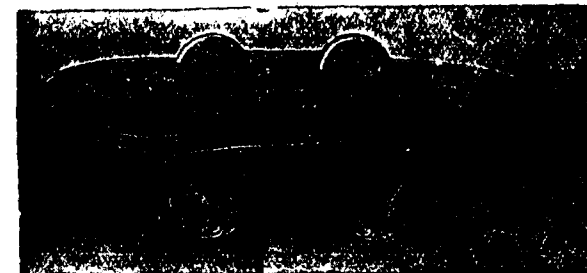
A method for the treatment of toxicomania Modinos. (*Com. to the Acad of Med.* 5 XI. 29.) Injecting the serum obtained by vesication the author claims to have extinguished the desire of the patients to use toxics. The number of injections vary. The first case is of chronic rheumatism in a cocainomane, 10 c.c. of verosity plus 2 c.c. of chloral injected by the first and repeated two times more cured the patient. The second case is a lumbago norphinomane, the third an old intoxicated with haschick and heroine. 8 cases of such intoxications have been cured by this method (*Monde Medical* 1-XII-29).—*F. De. M.*

The use of acetylcoline in clinics Luigi Villa (*I Policlinico Sez. Medica* 12. I-XI-29). Acetylcoline introduced in therapeutics in 926 by Villaret and Bezancon is an excitant of vagus hormone (Loewi) and at the same time a vaso dilatator. It must be given by injections and not per os. The doses vary from 0,02 to 0,05 to 0,2 or 0,4 *pro die*, each injection should not be of more than 0,2. The effect on blood pressure is manifested in 10 to 30 seconds. It is indicated as a precocious remedy in arteritis or thrombosis of any nature as well as a preparatory medication in cases of surgical

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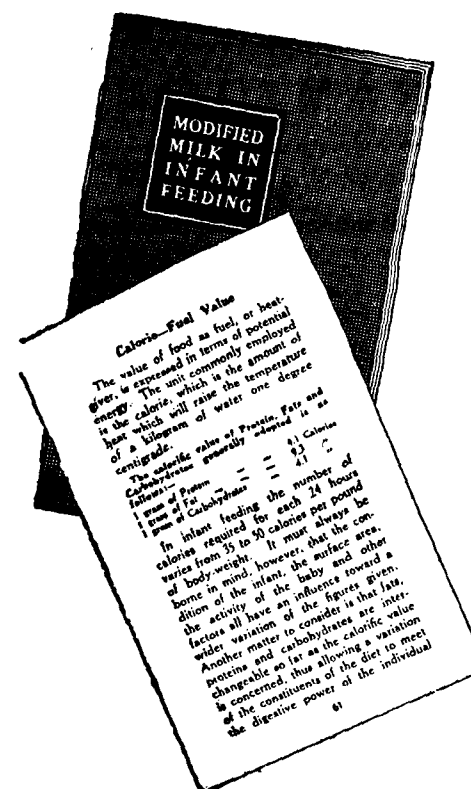
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The author reports good results in some personal cases viz. senile gangrene, endarteritis primitiva with gastric ulcer, multiple arterial thrombosis with hemiplegia secondary to a streptococcic endocarditis, gastric pains in a case of tabes dorsalis:—F. De M.

Spirochæta hispanicum var marscanum recur rentotherapy. Remlinger and Bailly (*Compt Rend. Soc. Biol.* C II 635). The recurrent virus is used in the treatment of neuropsychic affections and in general paralysis, much less than the malaria parasite. The authors show the difficulties of handling *Sp. obermieri* or *venuelensis* and the relative facility with which guinea pigs can be used in laboratories of hospitals as reservoirs of virus of *S. hispanicus*. A simple instillation of the blood in the conjunctiva of guinea pigs or patients as well as of the emulsion of an injected tick is enough to give the recurrent fever:—F. De M.

Thyroid reactions in acute toxic-infections, M. Barilari I Mogilewsky. (*La Semana Medica de Buenos Aires*, 16 V. 29.)

Functional hyperactivity of thyroid glands is found in many acute toxic-infections. It must be differentiated from infectious thyroiditis. Such hyperfunctionalism is manifested by a lot of symptoms (hyperthyroidism) where the digitalis gives us results. Rest, psychotherapy, ice bags, apurinic dietary and specially antithyroid serum are best treatment for such syndrom eventually with addition of bromides and ruminal:—F. De M.

Phylactic non Specific actions vis-a-vis of ophydic poisons, Y. Vellard, *Suppl, no 9 Mem. Just, Oswaldo Cruz* 31, VII. 29.

The words *Phylactic action* belong to Billard and mean the protection conferred by the injection of a neurotoxic substance, antigenic or not, vis-a-vis of other substances having the same affinities: the first substance, impregnating the sensible elements, would not allow them according to this theory, to fix the second substance. So, for example, farmol protects against diphtheric and tetanic toxins and viper venom and spartein; the spartein allows guinea pig to resist to 10 lethal doses of viper venom.

The author studies the phylactic action of 12 neurotropic drugs on intoxication of pigeons by the toxin of *Crotalus terrificus*.

Lachesis Jararaca, *Naja tripudians* and make the following statements:

(a) Some of these drugs were a special protective action against these toxins allowing, when injected one hour before, to avoid any symptom of intoxication. Others act only when injected simultaneously. Others are inactive, none is curative.

(b) Besides this phylactic action some of them neutralise to a certain extent the venom in vitro after one hour contact.

(c) The conditions under which such influences are caused vary largely according to the venoms and the drugs. Their mechanism gives origin to a lot of theoretical hypothesis.

(d) Practically some of these drugs, specially adrenalin and spartein, can be used as an advantageous complement of serotherapy.

In a publication of the *Institua Vital Brazil*, it is recorded that no treatment other than specific serum can give results in snake-bitings. Such is also the conviction of Dr. Raymundo who, studying in Nova-Gova, a lot of the so called *Secrets of native herborists* showed that none of them possessed any curative action. Only the rhizoma of *Zingiber cosmunar*, showed some effect, as some Guinea pigs resisted to a lethal dose of Naja toxin, (0, 15 of the zoma given per os) and others lived much longer than in controls. It is quite possible that this action may be the so called phylactic action referred to above. *Aguivas Indo-Port de Med Hist Natural Vd, 2 Contribution to the study of the so-called secrets against snake bitings:—F. De M.*

ROENTGENOLOGY.

Radiology of Thorax:—Samuel Brown (Radiology, 1929, XIII, 575). The purpose of this paper is to show the value of studying the thorax in three dimensions. Theoretically, stereoscopy should answer every purpose but this is not the case. Samuel Brown believes after many years of study using stereoscopic plates and supplementing them with a lateral plate that the value of stereoscopy has been over-rated with the exception of an early tuberculosis. But in the case of gross lesions of the cardiovascular and pulmonary system, the anterior-posterior and lateral views are much superior in locating abnormal shadows, determining their relation to surrounding structures and the interpretation of their probable nature.

It has been observed that there exists a constant relation between the size of the thorax and the size of the heart. This has led to the following formula: The transverse and anterior-

posterior diameters of the thorax are determined, the measurements being taken at the level of the fourth rib anteriorly. The two measurements are multiplied and the product is divided by the sum of the two measurements. The quotient will be equal to the transverse diameter of the heart under normal conditions. If the actual transverse diameter of the heart, on a six foot plate, does not exceed the predetermined measurement, it will be evident that no hypertrophy or dilatation exists. If, however, the actual transverse diameter of the heart is found to exceed the predetermined measurement, there is strong evidence of the existence of cardiac enlargement.

In the X-ray anatomy of the lateral view of the thorax, a glance at the anterior and posterior boundaries shows the anterior costophrenic angle to be on a higher level than the posterior costophrenic angle. Therefore, if a slight amount of fluid is present in the pleural cavity, it is the posterior costophrenic angle that will be obliterated first. The diaphragm may be found to be elevated and partly obscure the heart shadow due to paralysis of the phrenic nerve or increased intra-abdominal pressure. The diaphragm may be pressed low as a result of emphysema, pneumothorax or pleurisy with effusion. Adhesions between the diaphragm and pleura and their exact locations may be determined.

Fine changes in the lung apices cannot be differentiated, but gross changes and their exact location can fully be determined.

The hilus is recognized by its irregular dense shadow below the arch of the aorta. The esophagus cannot be differentiated unless it has been rendered opaque.

In the lateral view, the middle lobe of the right lung overlaps the heart shadow. Tuberculous cavities or infiltrations of a lobe can be located with certainty. The absolute location of a lesion is especially important in diseases of the pleura, such as interlobar empyema and encapsulated empyema.

Thus it is seen that anterior-posterior and lateral views enable one to study the thoracic structures in their true perspective, because one is studying volumes rather than surfaces:—*Minnesota Medicine.*

Fifteen Years with Radium in the Treatment of Fibroids, Non-malignant Bleeding, and Dysmenorrhea. John O. Polak. *Am. Jour. Surg.*, May, 1929, VI. 648.

The author's experience over a long time with many cases has led him to the following deductions: (1) Accuracy of diagnosis is essential, and if there is any doubt in the diagnosis, operation is preferable to irradiation. (2) Highly neurotic or oversexed individuals, or those with an unbalanced nervous system, should not be treated with radium, as irradiation produces atrophy of the vagina and cervix as well as atrophy of the ovaries and is apt to accentuate all symptoms. (3) The occurrence of other intra-abdominal lesions requiring surgery makes it wiser to operate on many pelvic tumors than to employ radium therapy. (4) Rapid growth of a pelvic tumor suggests malignancy of the uterus or ovaries and complete extirpation is preferable to irradiation. (5) Degenerating pelvic tumors should be removed by operation. (6) Pressure symptoms from large fibroid growths of the uterus are most quickly removed by hysterectomy, as tumor shrinkage from irradiation is variable and uncertain and may never occur. (7) Pelvic inflammatory lesions may become activated by irradiation and may cause peritonitis and death. Hence in the presence of these lesions, operation is indicated. (8) Large pelvic tumors, pedunculated subserous fibroids, and large submucous growths require hysterectomy, particularly so if there is pressure on the bowel, ureter, bladder, or when metrorrhagia is the common symptom. (9) Radium has proved its usefulness in the treatment of menorrhagia in young girls and in intractable cases of dysmenorrhea without gross extra-uterine lesions. The amount of radiation should never exceed 300 milligram-hours. Treatment may be repeated if necessary. (10) For myomata in young girls or child-bearing women under 35 years of age, myomectomy should be selected, while in multinodular growths with extensive involvement of the myometrium, subtotal hysterectomy with the retention of an ovary and tube should be the procedure of choice. (11) Extremely anemic patients or women in whom the cachexia is out of proportion to the blood picture are bad radium risks. Operation gives better results, but all such operations should be preceded by blood transfusions. (12) In cases with malformation, faulty position, or cervical tumors where uterine drainage is impaired, radium should not be used. (13) Myometrial, exudative processes or adnexitis contraindicate the use of radium. (14) Finally, careless and indiscriminate use may produce far-reaching damage. Where radium is

indicated for benign gynecological conditions, the least amount of radium that will control the situation is the ideal.—*Radiology*.

GYNAECOLOGY.

On a case of puerperal septicaemia due to *B. perfringens*. Raizeet Mayer. *Soc Med des Hop. de Paris* 15 XI. 29.

A case, showing after an abortion, hæmolytic jaundice, hemoglobinuria, anuria, death in 6 days,

The hemoculture reveals a pure culture of *B. perfringens*. Autopsy showed gas infiltration of many organs, specially of liver.

Such septicæmias are not rare and have been particularly studied in Germany.

The reviewer calls the attention of medical practitioners in India to many cases of *perfringens* infections in the course of prolonged typhoid fevers and to the indication of specific anti-*perfringens* or mixed antigangrenous sera in their treatment.

Headache at the Menopause due to Thyroid Deficiency.—N. C. Stevens (*New England Journ. of Med.*, p. 168).—This type of headache does not appear to have been described previously. The patient is a woman past middle life, generally married and parous; she is likely to be overweight; her temperature is usually subnormal (it is sometimes found as low as 96.5); the pulse rate is apt to be slow; the blood pressure is usually normal; the skin is dry and coarse; the hands and feet are cold; tactile sensation is diminished the knee jerks are often sluggish.

The headache is usually frontal. The vertex is also a common site. The pain is usually dull in character. It may occur every day, more often two or three times a week. Sometimes it is constant day and night. The pain, unlike that of migraine, is rarely severe. It is aggravated by fatigue and nervous tension. Vertigo is common. The memory may be impaired. Although usually of a phlegmatic appearance, these patients are extremely nervous; they are always tired. In cold weather they complain of inability to keep warm. Even in mild weather their hands and feet remain cold.

In all the cases the basal metabolic rate was found to vary between minus 2 and minus 20. This with the other symptoms and signs and with the rapid improvement following administration of thyroid extract, was considered suggestive. It appears that this condition resembles myxœdema in its milder state. It is evidently a condition of hypothyroidism. The frequency of infections, and the increase of nervous tension, are factors contributing to the depression of the thyroid gland.

In the majority of cases thyroid extract acts as a specific. In only a minority has it had no beneficial effect. When the basal metabolic rate is definitely subnormal the writer gives a grain of thyroid twice a day for a week, then one grain a day for the next 3 weeks. In most cases the effect is striking: the headache disappears, the temperature rises, the skin becomes warm and moist, energy returns, and the patient often says that she has not felt so well in years. Luminal is often a valuable drug in these cases. The patient should be urged to take some regular daily exercise in the fresh air.

Illustrative Case.—A married woman, aged 56, with two healthy children, never had had any severe illnesses. The periods were becoming very irregular. Headaches, for the last 8 years had been moderately severe, general in character, occurring 3 or 4 times a week, lasting from half a day to a day, not accompanied with nausea or vomiting. The patient was always tired. At times she complained of severe pains in the knees. The skin was dry. She was much overweight. She was sensitive to cold: the hands and feet were always cold.

Physical Examination.—An obese, intelligent woman, weighing 200 pounds; appears in good health. Temperature 97.5, pulse 70, blood pressure 130/70, basal metabolic rate minus 18. Urine and physical examination otherwise negative.

Treatment.—Two grains of thyroid daily for a week. This was reduced to one grain a day for a month. She improved remarkably. The headaches and pain in the knees disappeared about the same time. She has been observed for the last two years and when she leaves off thyroid for more than a month her symptoms recur.

Antisymphilitic Treatment During Pregnancy.—Klaften (*Archiv. f. Gynak.*, p. 136) holds that every pregnant syphilitic woman requires antisymphilitic treatment during pregnancy. This rule is independent of the duration, intensity and date of former treatment, each new pregnancy calling for a new course of treatment. Antisymphilitic treatment is necessary during every pregnancy because it prevents syphilitic recurrences before labour, causes a great increase in the production of healthy children and a diminished incidence of puerperal infection and thrombosis.

Klaften gives a statistical summation of the reports of various observers of the effects on infantile health of different treatments of the mother. Mercurial treatment in 354 cases before pregnancy

gave 6.7 per cent. of healthy infants and in 281 cases during pregnancy 50 per cent. Neosalvarsan during pregnancy in 412 cases gave 88 per cent. of healthy children. Combined bismuth and neosalvarsan treatment gave 85.5 per cent. and 32 per cent. of healthy children when done during and before pregnancy respectively. Klaften obtained 58 healthy children in 59 pregnancies where this combined method was used before and during the pregnancies. In untreated syphilis the percentage of healthy children varied from 4 to 20 per cent., with an average of 6.1 per cent. So far as the child is concerned, treatment during pregnancy is of much greater value than before conception; neosalvarsan is more effective than mercury and the best results are obtained by treatment both before and during pregnancy. Females are relatively more liable than males to salvarsan intoxication, and pregnant than non-pregnant women. Deaths can be prevented and toxic phenomena reduced if the maximum dose not exceed 0.3 gm., and a total of 1.2 gm. in 4 weeks. By administration of an initial test dose of 0.15 gm. idiosyncrasy can be discovered. Contra-indications to neosalvarsan therapy are severe organic disease, such as heart disease, nephritis or advanced tuberculosis, severe headache, pyrexia, rigors or vaso-neurotic symptoms appearing after a small test dose, the appearance of pyelitis, hæmorrhage from placenta prævia, polyneuritis and uterus, and acute intercurrent disease unconnected with pregnancy. Myosalvarsan can be given to patients who cannot tolerate neosalvarsan, and spirocid or stovarsol to those who cannot take myosalvarsan. The dose of spirocid is two tablets of 0.25 gm. given before food every second day with an interval of two weeks or more after taking 60 tablets. Whether neosalvarsan, myosalvarsan or spirocid is given, the course is combined with the administration of bismogenol, the total dose of which is 1.8 gms. spread over 14 weeks. Since this was substituted for mercury no case of jaundice has been encountered in pregnant women under antisymphilitic treatment.

Temporary Hæmophilia in the New-born.—Siedenbopf (*Zentrabl. f. Gynak.*, p. 1,068) records a case of prolonged bleeding from a scalp laceration in a full-time and otherwise healthy child. The etiology of the condition is obscure. Although there was no history of bleeders in the family the case appears to have been one of hæmophilia, though the œdematous state (without albuminuria) of the mother during pregnancy and the prolonged labour may have been contributory factors. The hæmorrhage continued four days and the child developed marked anæmia. Good recovery was

eventually made. It was difficult to appraise the value of the treatment adopted, which included injections of gelatine, of coagulin and of maternal blood, though no appreciable immediate effect could be detected.—*Medical Review*.

Alleviation of Labour Pains:—H. Nevinny (*Wien. klin. Woch. Epitome*, 1928, vol. i. para. 329) and analyses the results obtained by the administration of pernocton in 100 deliveries accompanied by severe labour pains. The drug, which is a 10 per cent. solution of a barbituric acid derivative, was given intravenously after the commencement of a pain, the dose being 1 c. cm. of the solution to 12.5 kilos of body weight; by slowing the rate of injection to two minutes for 1 c. cm. the symptoms of excitement and restlessness, which were observed in some other cases, were lessened or removed. The shortest action of the drug lasted half an hour, and in those patients who had not received the full dose it lasted on an average 1½ hours. Of the 100 patients 71 had complete unconsciousness and 22 almost complete unconsciousness throughout the labour; in one case no result followed the injection and in six the reaction was unsatisfactory owing to error in dose or in the selection of the site of the injection. In the majority of cases there was a marked fall in the maximum blood pressure after the injection, especially in patients with high blood pressure. The beneficial effect of pernocton on pre-eclamptic conditions has also been described by other observers. The respiration was deepened but not prolonged, resembling that of physiological sleep and the pulse was slightly slowed. No unfavourable symptoms were noted either in the mothers or the children during their stay in the clinic.—*B. M. J.*

A Record of Fifty Consecutive Cases of Pregnancy and Parturition in Patients with Crippled Hearts:—John Hay and Elizabeth Hunt *Lancet*, 224:271, 1928.

An added strain in pregnancy occurs with the increased weight, the enlargement of the uterus and breasts and the dilated vessels; and in the last third of pregnancy, with interference of the diaphragm, displacement of the heart, and chest changes. The effects are more noticeable in primigravidae, and the discomforts and difficulties increase with the advance of pregnancy.

The first stage of labour does not put a severe strain on the heart, even with exhaustion, but the second stage is the important phase. Because of the drop in the blood pressure, the patient may

relapse or may have a severe hæmorrhage immediately after delivery.

With auricular fibrillation the author does not induce labour until specific treatment with digitalis has failed. Generally, induction of labour is advisable over cæsarean section in any of the cardiac complications.

Rest and sedatives are valuable in the first stage, and instrumental help early in the second stage. During pregnancy rest with "specific treatment" is recommended.

The writer is not strictly opposed to pregnancies in cardiac patients, although there is an increased danger to the mother. The heart usually responds very well to treatment during gestation.—*Medical Women's Journal*.

Three cases of perforated uterus:—"Three cases of perforated uterus" are discussed, one as the result of attempted abortion, the two others in the course of curettage by medical men. The author lays stress upon the fact that on many occasions he has insisted upon the expediency of regarding it as an operation of considerable delicacy calling for much prudence and gentleness. Again, curettage is difficult because the uterus may be abnormal in shape, size and consistency, sometimes soft and flabby, as soft as butter, allowing the instrument to pass through its walls almost without any perceptible resistance. Nor is it necessary to remove every little vestige of placental tissue in the course of the operation. Furthermore, the warning is given against the use of unduly sharp curettes, of uterine sounds too sharply pointed, of toothed forceps that lacerate the uterus in attempting to seize fragments of the placenta. The author sums up the treatment: "When the peritoneal infection continues to make progress despite the medical treatment and curettage hysterectomy alone affords some chance of saving life. We must operate at once without unnecessary delay or we shall miss the favourable opportunity. Nevertheless, the operation is a grave one, which often proves a failure." Moreover, it involves a mutilation, sad for those who have to perform it in a young woman, but there is under the circumstances no choice. If nothing is done a catastrophe is certain. If we operate certain risks are sure, but life may be saved. When a gravely infected uterus is perforated the perforating instrument carries with it into the peritoneal cavity very virulent micro-organisms. In such cases hysterectomy requires to be performed at once.—(*Ed.*) *Franco British Medical Review*.

Hematuria as Symptom of Pregnancy:—Hydronephrosis. C. N. Swanson, Detroit (*Journal A. M. A.* Nov. 16, 1929), has

had the opportunity to observe and treat a patient with a marked hematuria which persisted during the last four months of pregnancy and the first two weeks of the puerperium, in whom no pathologic change other than hydronephrosis could be detected after several careful urologic examinations. It would seem that serious disease of the genitourinary tract has been eliminated as a possible explanation for the hematuria in this patient, and that a blood dyscrasia has been ruled out equally well. Whatever hypothesis may be offered cannot be substantiated, but one is led to believe that the blood vessels (capillaries) in the kidney pelvis must have undergone some temporary alteration (passive congestion), which made them permeable to blood cells over a considerable period of time, while the definite time relationship to gestation suggests that the pregnancy was actually a causal factor. The occurrence of hematuria with hydronephrosis, especially during pregnancy, in both mother and daughter suggests that this peculiarity may have been directly transmitted.—(North West medicine).

Acacia in obstetrical shock.—Contrary to the opinion of certain authors, L. M. Randall (*Journ. Amer. Med. Assoc.*, September 14th, 1929, p. 845) considers that there is no fundamental difference between obstetrical and surgical or traumatic shock, and that the symptoms and treatment are the same. One of the out-standing features of shock, as a rule, is collapse due to lack of fluid in actual circulation. Keith and others have pointed out that nature's first reaction to shock is to supply fluid, and not erythrocytes, to the depleted circulation. The intravenous injection of solutions of sodium chloride and of dextrose is not entirely satisfactory, since they only temporarily increase the blood volume; gelatin has been discarded because of the difficulty of securing sterile solutions. Bayliss, experimenting with acacia, found that a 6 percent solution was entirely innocuous, and was capable of raising the blood volume and maintaining it. This method has been much employed in the Mayo Clinic, and Randall strongly advocates its use. The need in shock is for fluid that will remain in the circulation, and acacia fulfils all the requirements for intravenous treatment of shock, except the provision of erythrocytes. It increases the volume of plasma and blood, and keeps it increased until the normal fluid-regulating mechanism of the body is restored. Randall believes that in many cases life has been saved by its early use and by the postponement of operative procedure until the initial shock has been controlled; he adds that as a preventive of shock, it is wise

to give an injection of acacia solution in cases of fatigued or debilitated patients when obstetrical operations are to be performed. Proper preparation of the solution is emphasized, and a method is described. The injection is performed much in the usual way. It is best to use a needle of large bore or a cannula; the gravity method of administration is good, and has the advantage of simplicity. From 25 to 40 c.cm. is given each minute, until from 500 to 1,000 c.c.m. have been injected. Since shock is often accompanied by or is due to haemorrhage, treatment must include haemostasis. Besides these measures, heat should be applied and the head of the patient be lowered. Morphine may be given if the patients are restless, and stimulants, such as epinephrine and caffeine, are often indicated. Two illustrative cases of shock in obstetrical patients are recorded to demonstrate the efficacy of acacia in this condition—B. M. J.

OPHTHALMOLOGY.

Angor Ocularis.—By E. AUBARET, M. D., Professor at the Marseilles School of Medicine, and JEAN SEDAN, M. D., Ophthalmologist to the Hospitals of Marseilles.

THE question of vascular spasm has of late occupied a good deal of attention, and more progress would seem to have been made in the domain of ophthalmology, because here alone the spasm is visible. The special symptomatology associated therewith has long been familiar to us. We have succeeded in defining an absolutely pathognomonic symptomatology dependent upon angiospasm, and to describe the fugitive or permanent changes which they determine. This constitutes a clinical syndrome to which we have given the name *angor ocularis*.

The first objection that suggests itself in this connection is that the vasomotor nerves have no action on the retinal vessels, but this objection must give way in presence of the fact, admitted by histologists, that there are special ramified cells in the capillary wall capable of modifying this wall, and consequently the lumen.

Then again, even if we refuse to admit any tangible modification of their lumen of capillaries, the vascular trunks which give origin to the retinal vessels are provided with a complete vasomotor mechanism, governed by autonomous centres of sympathetic origin in relation with the cervical sympathetic and the endocrine apparatus.

Whether the action is one set up by reflex at a distance, or by direct chemical stimulation, the fact remains that the circulatory

changes in the ocular tissues are fully realized, together with the symptomatology dependent thereon.

According to Ricker, vascular spasm may have two modes of origin—it may be of direct origin when the cause is at the precise spot where the vessel is contracted, or of indirect origin when the cause acts from a distance. The symptoms, for that matter, vary greatly according to the intensity of the stimulation.

The mechanism of this spasm is extremely complex, independently of the variable seat of the stimulation in relation to the vascular contraction, for we have to take into account the nature, the degree and the variations of intensity.

The earliest observations of retinal spasm go back to the seventeenth century. Stool drew attention to transitory amaurosis coinciding with lead colic. Since the plenty of cases have been placed on record, and the existence of temporary blindness in connection with various intoxications is well known, as for instance in plumbism and in intoxication with salicylate of soda, quinine, tobacco, coffee, &c.

There is a group of well-defined cases to which we feel justified in applying the term *angor ocularis*. These cases present features of anger and apprehension of imminent blindness. In paper read before the Congress of Oto-Neuro-Ophthalmology we commented upon the frequency of these phenomena among medical men. As the latter are good observers we get exact details of the crisis, and these we will now recapitulate.

The principal sign is a more or less opaque fog, coming on suddenly. It is very rarely total, but invariably quite sufficient to interfere with vision in reading or working. Its duration varies from a few minutes to several hours. If the subject happens, for instance, to be in his consulting room, he finds that the patient whom he is questioning, and the prescription which he is writing, disappear from view at the same time. The visual field may be contracted; reduced, it may be, to a mere point. The attack may supervene in a public thoroughfare, and the subject be unable to find his way, and he is fain to take refuge on the pavement or in a cafe. It is unusual for there to be any frontal or orbital headache at the same time, which suffices to distinguish this state from ophthalmic migraine with which one is tempted to confound it.

The essential characters that distinguish this *angor ocularis* from other forms of angiospasm, especially those of cortical origin, are the following; very frequent unilaterally, whereas bilaterally is constant in cortical accidents; the incomplete character of the

loss of vision in contrast with that resulting from a cortical lesion where it is absolute.

Ophthalmoscopic examination—rarely available during the attack—does not always enable us to observe any change in the calibre of the retinal vessels. We are for that matter more and more disposed to acquiesce in the suggestion that modifications in the aspect of the vessels are inconstant—due no doubt to the fact that the retinal circulation, like that of all nerve centres, possesses a very resistant regulating mechanism absolutely indispensable to the preservation of the very delicate histological elements in contact with the capillaries which could not resist too sudden variations of the circulation.

If however, we admit that the external calibre of the retinal vessels is rarely appreciably modified, we cannot deny that the circulation may be more or less markedly affected by vasomotor disturbances affecting arterial trunks in the neighbourhood, and that suffices to establish *angor ocularis*.

It is specially those who have had several consecutive attacks of this kind who know so well the terrible sensation of impending blindness which makes these attacks resemble the complications of angina pectoris. In one case the patient is apprehensive of heart failure, in the other of visual failure, whence the stage of *angor*.

As in angina pectoris, there are all gradations from trifling to quasi-complete.

There are disturbances met with in certain ocular affections in which angiospasm happens to be associated with chorio-retinal lesions, either previously or simultaneously. These awe-inspiring phenomena are met with most frequently in chronic glaucoma. The subjects who present ocular hypertension suddenly notice that visual acuity is diminishing during a crisis, and the fugitive amblyopia that results, and is classically attributed to the glaucoma itself, may be due purely and simply to passing angiospasm without there being any modification of ocular tension measured with the tonometre.

In retinitis dependent upon arteriosclerosis, or chronic local arteritis, attacks of temporary obscuration may be due to the same cause without the vascular or chorio-retinal lesion resulting therefrom having undergone the slightest change.

This fact is of some importance, because we are dealing with a phenomenon which usually makes one apprehend an aggravation of the retinal affection, whereas its essentially transitory charac-

ter enables, us to ascribe it to angiospasm. These are, after all, merely little warnings that disquiet the subject predisposed thereto, either by a sympathicotonic state, so common in glaucomatous subjects in particular, or by disturbances of various origin due to arteriosclerosis, or to some form of intoxication.

We propose to group these phenomena of symptomatic angor under the term *minor ocular angor*, in contrast with the *major ocular angor* referred to above, which is accompanied by more complete and apparently primary amblyopia.

The interest of the question lies in speculations whether subject who present more or less frequently these crises of angor ocularis are liable, sooner or later, to develop consecutive definitive lesions of the retina. Horniker, of Trieste, in 1927 described a form of central retinitis, which he called *capillarospastic retinitis*, met with in the subjects of vasotonic symptoms of sympathetic complications, viz., attacks of asthma, spasmodic enteritis, urticaria, hemicrania, angina pectoris, intermittent limp, &c. He managed to discover the ophthalmoscopic lesion by the aid specially of the method of endoscopic exploration described by Scheerer. This consists of very fine hæmorrhagic exudative lesions at the posterior pole, more particularly in the macular region. The coincidence of angina pectoris in some of these patients demonstrated the very characteristic analogy between angina pectoris and angor ocularis. It follows that attacks of angiospasm may in the long run give rise to retinal lesions.

It is obvious that these lesions depend upon the duration and intensity of the angiospasm, and, be this as it may, the data justify the hypotheses brought forward by several observers. Abadie, in particular, on the part played by angiospasm in the production of lesions of the optic nerve. Abadie went so far as to state that tabetic atrophy was due to permanent progressive contraction of the central artery which, in due course, determined complete degeneration of the optic nerve.

The therapeutical results obtained by surgical intervention on the one hand (cervico-dorsal laminectomy over the roots of the sympathetic) and, on the other, by injections of antispasmodics behind the globe of the eye (1 mgm. of atropine) appear to provide a serious argument in favour of the theory, which, however is strongly contested by various observers.

Investigation of the syndrome of angor ocularis presents an eminently practical interest. From the point of view of diagnosis

it is met with either as a complement or complication of a great number of ocular diseases, or as an autonomous syndrome which, in the long run, may give rise to grave ocular lesions.

In the subjects of high blood-pressure the supervention of these disturbances of vision may be due either to a defensive reflex of the vessels against too high a pressure, or to abnormal development of the muscular coat of the artery. However this may be, it is indispensable to have the notion of high pressure in one's mind in organizing the treatment of these patients.

Angor ocularis has been met with in the subjects of Raynaud's disease, e.g., local asphyxia of the extremities. Bard recorded such a case in a young man who died of angina pectoris. Angor ocularis may also supervene in hyper-sympathetico-tonics, especially in women. High blood-pressure usually coincides with deficiency of the antitoxic functions. However this may be, the attack of angor ocularis should direct the physician's attention to the internal secretions, the thyroid, ovaries and even the pituitary body, since the last-named may play a part in the genesis of arterial spasm, as we ourselves have had occasion to remark.

We need only mention the very similar troubles reported in connection with epilepsy; indeed, the syndrome of angor ocularis may affect the form of an aura.

It occurs most frequently in connection with intoxication, and, apart from quinine, lead and salicylate of soda, mentioned above, considerable importance attaches to coffee, alcohol and tobacco.

Angor ocularis then is possessed of considerable semeiological importance when well marked. The physician will find it a valuable diagnostic indication, and he will feel it incumbent upon him to forthwith deal with the question of treatment in order to attenuate, then neutralize, its redoubtable consequences.

Long before the question of angor ocularis had been threshed out therapeutists made use of antispasmodics, such as nitrate of amyl, which often does wonders. It is the heroic remedy in angor ocularis just as it is in angina pectoris. Among other remedies come nitrate of soda, trinitrine, valerian and even morphine.

Locally, dionine in instillations is regularly employed. Mention should also be made of subcutaneous injections of nitrate of pilocarpine, which determines generalized vaso-dilatation.

In conclusion, we must dwell particularly on the ætiological treatment, and when an exogenous or endogenous source of

intoxication can be shown to exist, it behoves us to use every possible means to get rid of it, not omitting specific treatment should there be reason to suspect hereditary or acquired syphilis, whether demonstrated or merely suspected.—*The Franco-British Medical Review Jan. 30.*

Correspondence.

U. P. MEDICAL COUNCIL.

The following is a copy of the letter of resignation of Dr. Kunj Behari Lal Varma L.M.P., Meerut, dated the 19th November 1929 to the President U. P. Medical Council Lucknow which is published for the information and elucidation of our readers:—[*Ed. Anti.*]

I have the honour to acknowledge the receipt, on 18th Nov. '29, of letter No. 1041 dated 12-11-29 from the Registrar regarding my being re-elected again unopposed from 15th Nov. '29, for which I am deeply indebted to my electors; but I very much regret to say that the Government have not been pleased up till now to grant one more seat to Agra L.M.P.'s although the Medical Council had unanimously recommended twice to the Government in November 1925 and November 1926 to grant them one more seat. The following figures, taken from the latest list of registered practitioners, corrected up to 1st June 1929, show that Medical Licentiates in spite of their numerical strength being more than double the Medical Graduates are very inadequately represented on the Medical Council *i.e.*, 2 seats against 12 seats allotted to Medical Graduates, six by nomination and six by election.

Medical Graduates in Government Service numbering 155-1 seats..

"	"	in Private Practice	"	... 221-2	"
"	"	of Lucknow University	"	... 274-2	"
"	"	Through Medical Faculty of Lucknow University	"	... 1	"
"	"	Nominated by Government including a President	"	... 6	"
				Medical Graduates...	650-12

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Medical Licentiates in Government Service numbering 537-1 seat.

" " in Private practice etc., including
Lady Doctors ... 819-1 "

Medical Licentiates...1356-2 seats.

2. The main function of the Medical Council is to register qualified Medical practitioners *i.e.*, Medical Graduates and Medical Licentiates and to exercise disciplinary control over them and when the minority of these registered practitioners is much over-represented while the majority is poorly under-represented, you can well realise its baneful effects on the morals of Medical Practitioners in general. The L. M. P. Private Practitioners alone numbering 819, specified in section 4 (1) (h) of the Medical Act, who out-number the total of all registered Medical Graduates and whom I had the privilege to represent during the last twelve years, since the inception of the Medical Council, have been given only one seat and it is high time that the Government give due consideration in the matter and grant us at least one more seat. Under these circumstances, therefore, it is my painful duty to refuse to accept the office of membership of the Medical Council until the Government accepted the unanimous recommendations of the Council referred to above.

3. It is my conviction that the Medical Council can serve no useful purpose in the interests of the Medical profession if its unanimous recommendations are not accepted by the Government. The non-acceptance by the Government of the Council resolutions recommending that Government may be pleased to order that medical certificates of illness granted by Registered Practitioners to non-gazetted officers "*shall be accepted*" by Departmental heads and not "*may be accepted*" is another instance of Government's indifference to the recommendations of this Council. In spite of the fact that the Medical Council is the chief advisory body of the Government in matters of Medical Education and registration, the Government's failure to consult the Council recently while drawing up the constitution of the State Medical Faculty, in spite of the repeated requests of the Council to that effect, is another serious matter. From all this it appears to me that the policy of the Government is to ignore or belittle even the unanimous recommendations of the Medical Council and it is up to you, Sir, to exert your influence as President in maintaining the dignity of the Council.

4. In the end I shall be obliged if you will convey my thanks to the members of the Council individually and collectively for the kind treatment I received at their hands during my twelve years' tenure of membership, and it is only in order to uphold the dignity of the Medical Council on the one hand and to protest against the indignity inflicted upon my electors on the other, who have reposed entire confidence in my humble services, that I have taken this action after mature consideration, under section 9 (1) (a) of the Medical Act and request that my seat be considered as vacant since 15th. November 1929.

Book Reviews

An Outline of Endocrinology:—by W. M. Crofton B.A., M.D., Published by L. & S. Livingstone, 16 and 17 Tevoit Place, Edinburgh, Second edition; Pages 163. Illustrations 53, Price 8/6 net.

Research work and therapeutic tests by eminent scientists have definitely established the relation of endocrine glands in the working of the human body. It is no longer a theory, but an established fact that the internal secretions can make or mar a man. Hyper-or Hypo-activity of any of these glands may so upset the human mechanism that life becomes almost impossible, and a co-ordinated-action of the glands is very important, as they are inter-related in their function. An outline of this important subject of endocrinology is discussed by the author in this small manual. It is brief, but complete, profusely illustrated, and contains a useful index. It is a useful book for the student to understand the subject easily and thoroughly, and for the practitioner to refresh his memories. Latest advances on the subject have been completely discussed in the book.

One chapter is devoted to each of the glands, as pineal, pituitary, suprarenal, thyroid, parathyroid and thymus. Under each a brief summary of histology, development and physiology of the gland are given; the pathology and the therapeutics are discussed in some detail. In the seventh chapter the functions of the ovary and Corpus Luteum, testes and prostate, with regards to their inter-

nal secretions, are dealt with. A brief discussion on the harmonie of the gastro-intestinal tract, internal secretions of the pancreas and liver is also given. In the last chapter supplementary notes on recent advances on the subject are given.—K. L. R.

Light Therapeutics:—by John Harvey Kellogg, M.D. Published by the Modern Medicine. Pub. Co., Battle Creek, Mich. Second edition. With Pages 210 and Illustrations 33.

The author of this manual is one of the earliest advocates of light therapy, and the first edition of this book appeared twenty years ago when photo-therapy was in its infancy; but today it forms an important branch of therapeutics in the treatment of ever so many conditions. The book contains the writer's experience in light therapy, extending over more than 50 years, and the important feature of the book is that more prominence is given to the practical side of the subject and the technique of treatment. The fundamental facts of light physics is discussed in a concise way, and a brief description of light appliances is also given. It contains also a summary of the progress in clinical light therapy which has been made in recent years. The uses of arc light, the incandescent light and the quartz light are also given. We are convinced that a practical knowledge of the subject is gained by reading this manual, and we highly commend it to all the students and the practitioners of medicine.—K. L. R.

The comparative Physiology of Muscular Tissue:—by A.D. Ritchie, M.A. Published by the Cambridge University Press, Fetter Lane, London: Pages 11, Price 7/6. The book contains four chapters. Under general characters of muscular tissues, types of muscle and chemistry of muscular tissue are described. Second chapter deals with chemical changes in active muscle. In the third chapter mechanics of muscle, theories of muscular contraction and muscular tone are discussed. Lastly, effect of environment including action of electrolytes and ions, on muscular tissue is given. It also contains a list of references after each chapter and a useful index in the end. Much useful and up to date information is given on the physiology of muscular tissue and will be of interest to the student of physiology.—K. L. R.

A Hand-book of Midwifery.—By Comyns Berkeley M.A., M.C., M.D., F.R.C.P., M.R.C.S., Published by Cassell and Company, Ltd., London; Seventh Edition, with Pages 575 and Illustrations 67.

The popularity of this Hand-book of midwifery is manifested by the number of reprints and new editions this book has undergone, since its first appearance in 1906. The present edition has been thoroughly revised and a good deal of new matter has been added, but at the same time good care has been taken to preserve the old dimensions of the book, so that it can be carried conveniently by the midwife for reference when attending to her patients. The book is chiefly written for the use of midwives, maternity nurses and obstetric dressers, and the subject is dealt with in a simple way containing useful and practical informations and suggestions. The book is thorough and complete, comprising the portion for the C. M. B. examination, and the book also contains chapters on bacterial infection and the anatomy of female organs and the child, and discusses both the physiology and pathology of pregnancy, labour, puerperium and of the new born child, and the management of the case in each of the conditions. We have no hesitation to assert that this book must be a companion for every midwife and maternity nurse both during her training and practice. K. L. R.

Diabetes Mellitus and its Dietic treatment.—By Major B. D. Basu I.M.S. (Retd.), edited by Lalit Mohan Basu, M. B., Published by Dr. L. M. Basu M. B. 35, Bahadurganj, Allahabad: Pages. 160 Price Rs. 2 Fifteenth Edition.

This is the fifteenth edition of the book by the well-known author and the historian Major B.D. Basu, and the present edition has been completely revised and brought up-to-date, and the editor contributes a new section on Insulin therapy. Etiology of the disease is discussed at great detail, and all views on the matter are given. Section on dietic treatment contains many useful and practical informations, and great prominence is given to the vegetarian aspect of the diet, which is very important for us, who are mostly vegetarians. Books from foreign countries give very meagre information on the vegetarian diet for diabetes. No pains have been spared to gather informations from various sources to make it complete and useful. We highly commend it as a useful book both for study and reference—K. L. R.

Diabetes.—By J. D. Norula, D. N. (Elmh.) Published by Bernard Palissy Company; Rawalpindi, Pages 128, Price Rs. 1-8. First edition.

The author is a great exponent of naturopathy and ridicules the drug treatment of disease in an explanatory note in the beginning of the book. The effect of naturopathy in the prevention and the treatment of diseases is recognised by all, but we believe that this is not the only cure for any disease, and has to be combined with other forms of treatment and no amount of fasting can improve diabetic course, but may aggravate the symptoms.

This is one of the series of books by the same author on different subjects, for the benefit of the laity than of the profession. With this view it is made cheap, simple and brief, as it is meant for the education of the general public on the causation and treatment of diabetes, which is very common, and can be prevented with certain amount of care and knowledge on the part of the patient. The publication of such health books needs to be encouraged in the interest of the suffering humanity.—K. L. R.

Consumption.—By J. D. Norula, D. N. (Elmh.). Published by Bernard Palissy Company, Rawalpindi. First edition. Pages 59.

This is the small pamphlet on the cause, prevention and treatment of consumption. It is simple and concise and written more for the use of the general public. Extensive propaganda and education of the people on the beneficial effect of natural forces, as sunlight, fresh air, plenty of exercise and good food, in the prevention and treatment of tuberculosis, are the best prophylactic measures. As such, a book of this kind will be very useful and deserves to be read extensively.

Piles.—By J. D. Norula D. N. (Elmh.) Published by Bernard Palissy Company, Rawalpindi. First edition. Pages 87, Price Rs. 1-8.

In this small pamphlet the author discusses briefly the causation and symptoms of piles, and deals with the natural ways of prevention and treatment of piles, by fasting, dieting, constipation and taking proper exercise. Lastly, he gives his own method of

the "Three-fold pile treatment." We are not going to discuss here the usefulness or otherwise of this treatment. In the end, allopathic, or as he puts it the artificial ways of treatment are given. The book might be of some interest to all.—K. L. R.

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].

(1) **The Rockefeller Foundation Annual Report for 1928.**—Published by the Rockefeller Foundation, 61, Broadway New York.

(2) **A Short Practice of Medicine for Students and Junior Practitioners.**—By U. P. Basu M. B. (Cal), M.R.C.P. (Ireland).—Published by the Kamala Book Depot Ltd., 15 College Square, Calcutta.

(3) **Medical Jurisprudence.**—By Kamath and Visvanathan Published by Messrs Butterworth & Co., 6 Hastings St, Calcutta, 3rd Edn. Price Rs. 4/.

(4) **The Expectant mother and her baby.**—By Bodh Raj Chopra. M.B., Ch. B. (Edin), Mela Ram Road, Lahore. Price Rs. 5/10.

(5) **Essentials of Physiology.**—By H. Hartridge M. A. M. D. Sc. D. F. R. S. Published by Messrs Longman's Green & Co. 39 Paternoster Row, London E. C. 4. Price Rs. 14 net.

(6) **Indigestion, its differential diagnosis and treatment.**—By Herbert J. Paterson M. D. Published by William Heinemann (Medical Books) Ltd., London. Price 7/6.

(7) **Ideal Marriage.**—Its Physiology and Technique, By Th. H. Von De Velde M. D. Published by William Heinemann (Medical Books) Ltd., London Price 25/

(8) **Radium and its surgical applications.**—By S. H. Souttar D.M. M.C.H. F.R.C.S. Published by William Heinemann (Medical Books) Ltd., London Price 7/6.

(9) **An Introduction to the study of the nervous system.**—By G. E. Heemer and G. M. Sandes. Published by William Heinemann (Medical Books) Ltd., London Price 21/.

(10) **Annual Report of the Society for the Prevention of Birth Control clinics 1928-29** From the Society, 153 A, East St. S. E. 17 London.

(11) **Snake-bite.**—By W. Banerji. Published by Messrs. Butterworth & Co., 6, Hastings St., Calcutta. Price Rs. 10.

(12) **Diabetes Mellitus and its Dietetic Treatment.**—By B. D. Basu and L. M. Basu. Published by the Manager, Panini Office, Bahadur Ganj, Allahabad. Price Rs. 2.

(13) **Anaesthesia and an Anaesthetics.**—By F. S. Rood, M.B. B.S. and W. N. Webber, M.B.B.S. Published by Messrs. Cassel & Co. Ltd., London. Price 14/ net.

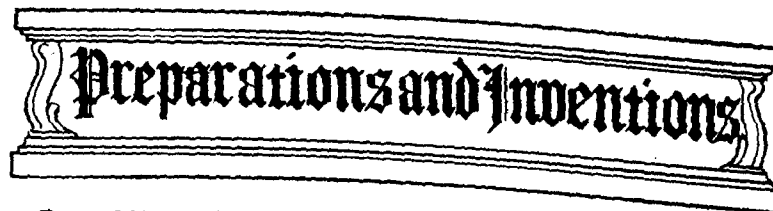
(14) **Gynaecology.**—A Text Book of the Diseases of Women. By L. L. Fulkerson. A.B., M.D., F.R.C.S. Published by Blackiston's & Sons, Philadelphia. Price \$ 9/

(15) **Surgical and Medical Gynaecology and its technic.**—By Thomas H. Cherry, M.D., F.R.C.S., Published by Messrs. F. A. Davies & Co., Philadelphia.

Acknowledgements

We acknowledge, with thanks, the receipt of a beautiful calendar, from Messrs Day and Night Pharmacy, Ramachandra Building Bombay, manufacturers of *Dental Varnish*, an ideal tooth and throat antiseptic and cleanser and a powerful germ destroyer. The picture portrayed in that calendar is that of Lord Ganesh the son of Siva, the destroyer of the universe after it has fully fallen into evil ways. No more apt illustration can be chosen, as Lord Ganesh is held to be the first and foremost deity, to whom the Hindu, to whatever sect, class or community he may belong, pays his humble homage and obeisance, as the remover of all obstacles and dangers that beset human beings in their onward march to their blissful seat in heaven. Likewise will this Dental Varnish,

we trust, prove to be an effective prophylactic against mouth, tooth and throat ailments, -the forerunners of all other diseases in the human system. We strongly recommend this calendar and this preparation both to the Medical profession and the lay public.



Dental Varnish.—Manufactured by Day and Night Pharmacy. Ramachandra Building, Bombay, 4. Price Rs. 0-12-0 a bottle. This preparation containing Iodine, Tannic acid, Thymol and menthol in glycerine is an antiseptic which can be used safely as gum paint as well as throat paint. It is both prophylactic and curative in case of Dental and Throat complaints, especially Pyorrhoea.

Notice.

ALL-INDIA OPHTHALMOLOGICAL SOCIETY.

The above society will hold its first annual meeting in Bombay on the 17th, 18th and 19th of April 1930. All medical practitioners who practise ophthalmology and those who are interested in ophthalmology are invited to become members of the Society. The annual subscription is Rs. 15.

The proceedings of the meeting will be published in a volume as soon after the meeting as possible, and will be sent to all members.

Those who are desirous of reading papers before the Society will kindly intimate to the secretaries as soon as possible. They should send a copy of their papers to the Secretary not later than the 1st of April, with a short abstract suitable for publication in the medical journals.

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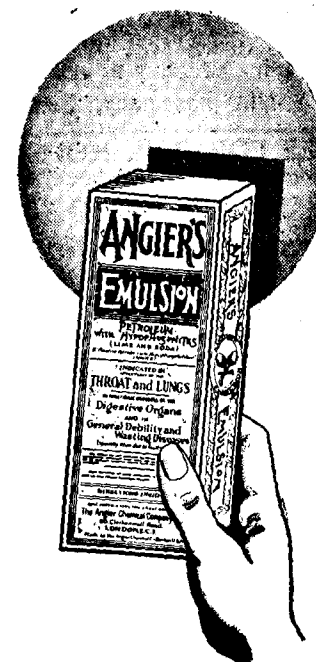
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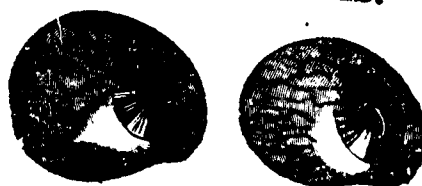
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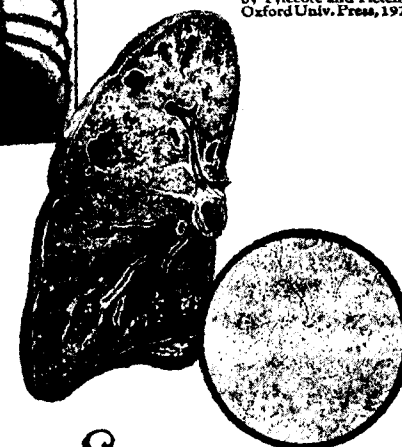
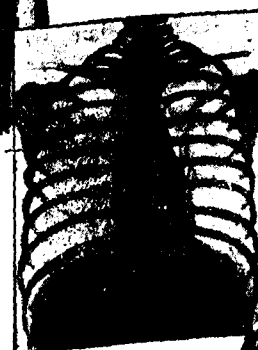
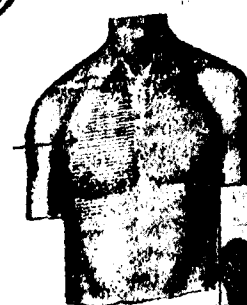
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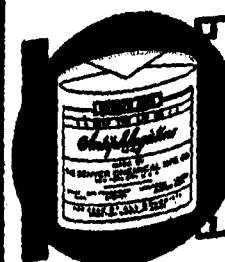
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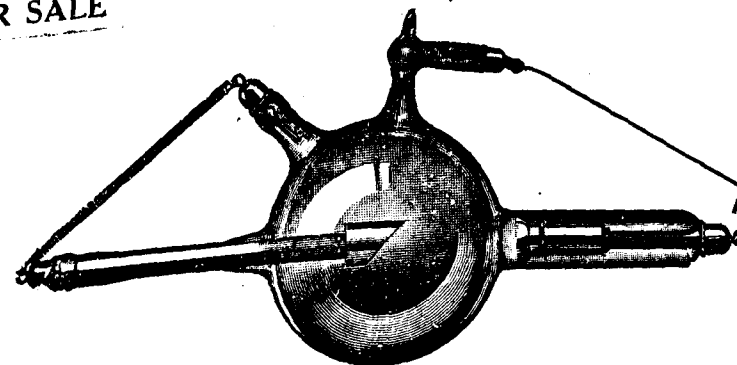
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