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The Antiseptic

A Monthly Medical Journal

Edited by

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

CONTENTS. PAGE.

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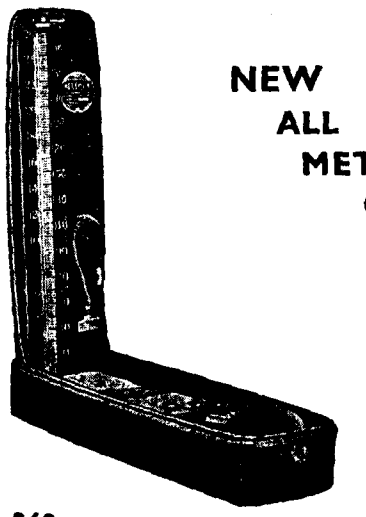

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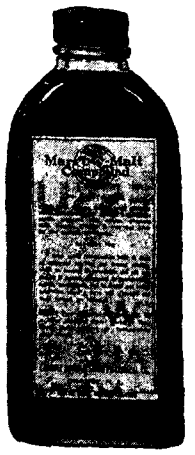

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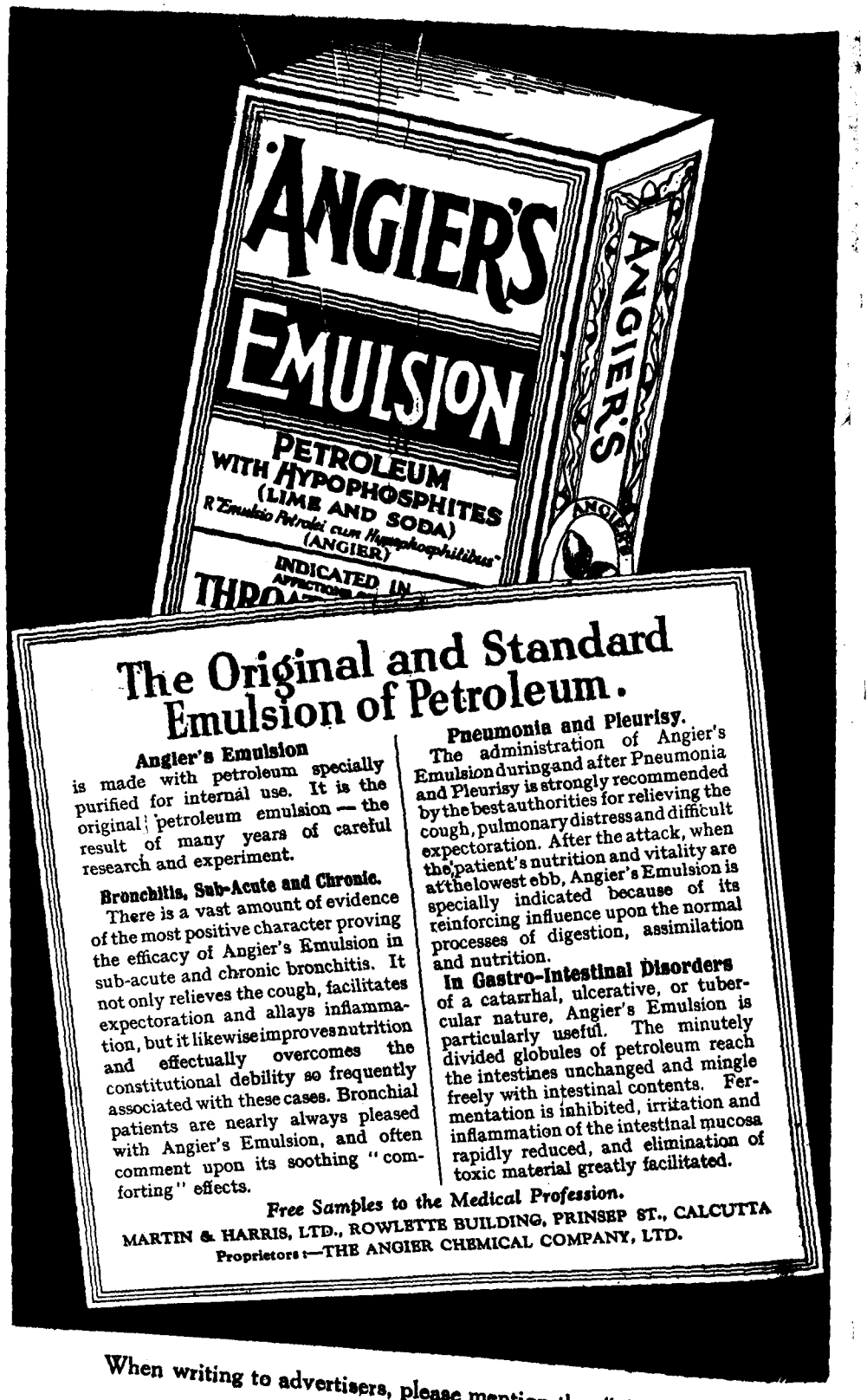

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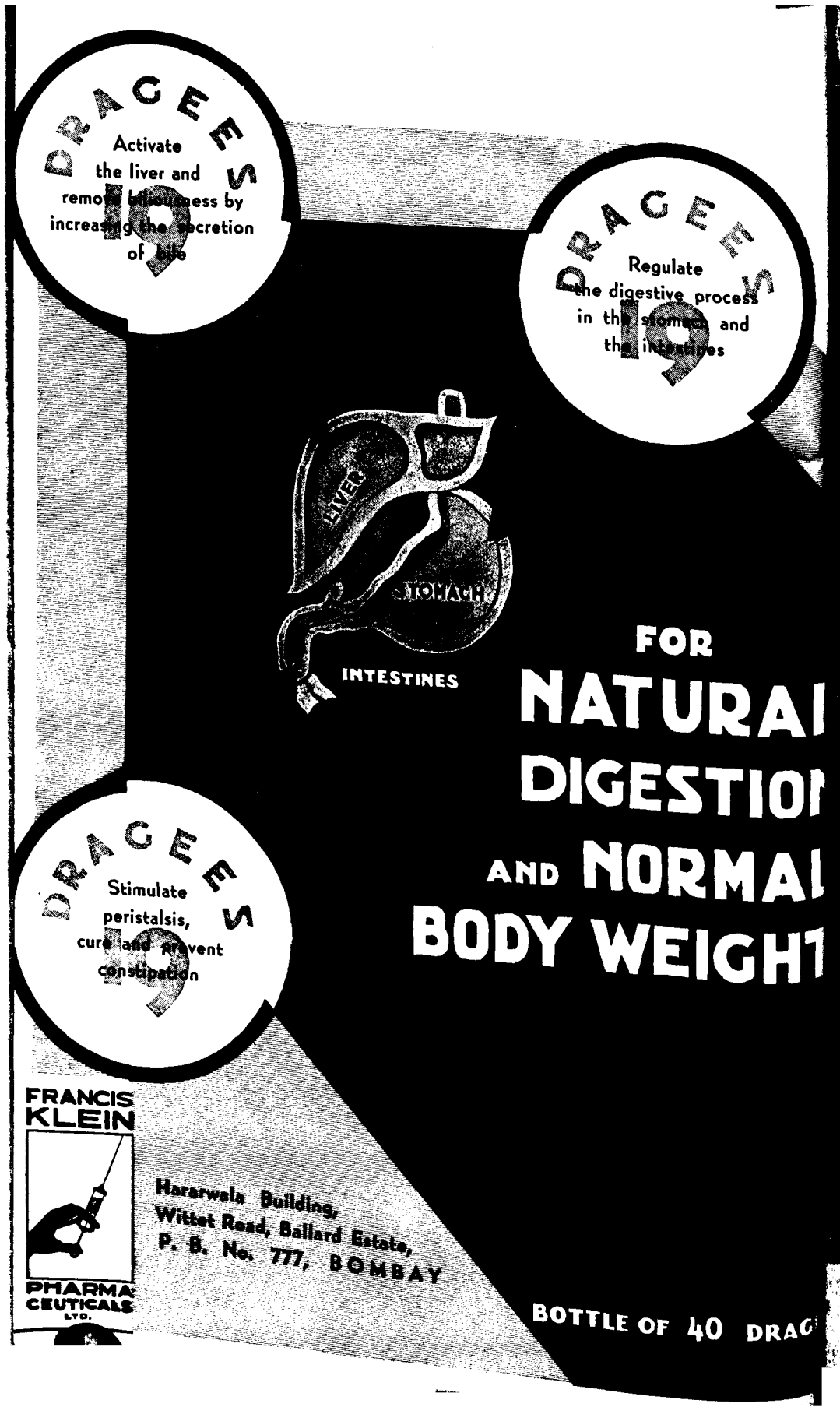

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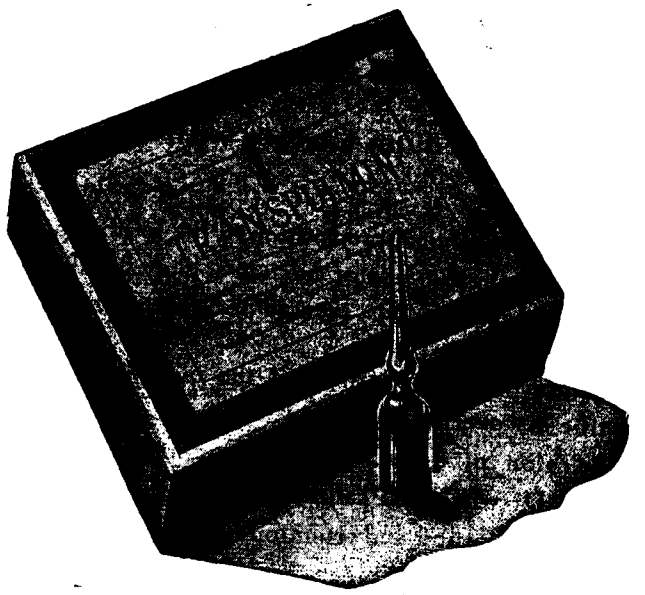

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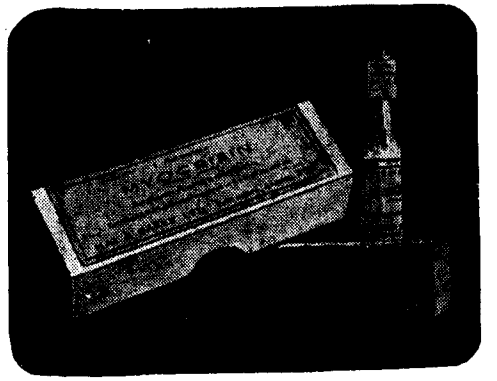

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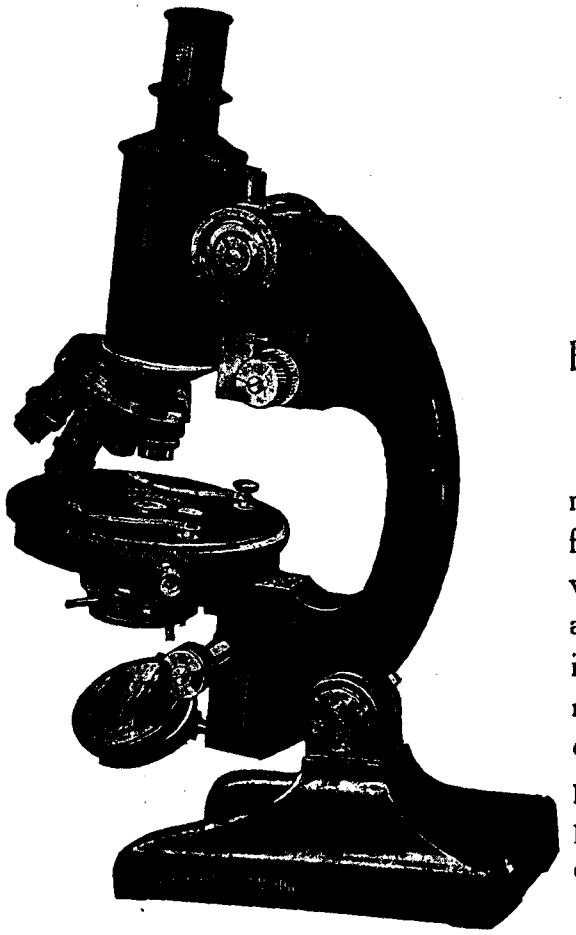

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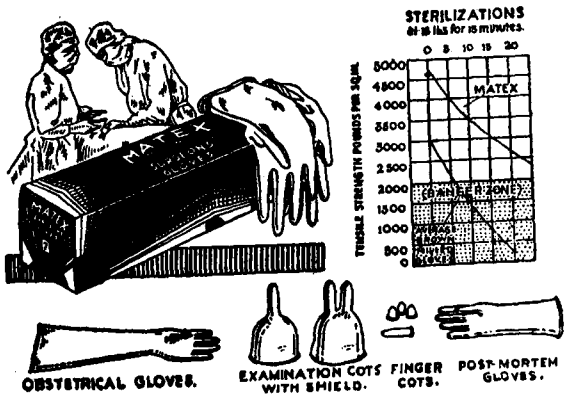

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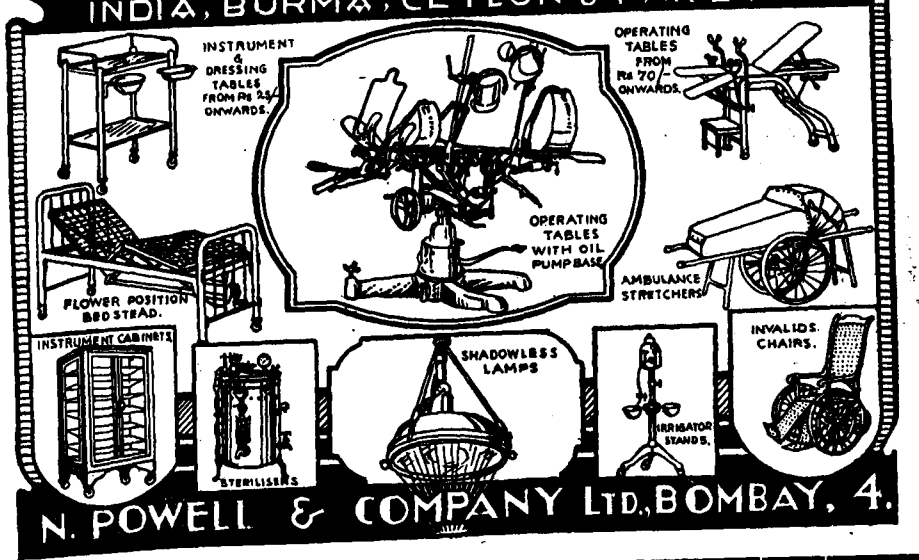

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ORIGINAL ARTICLES

I

Parkinsonism*

Some Rare and Peculiar Alterations in Motility

BY

EUGENE de THURZO†

Privat-Dozent at the University in Debrecen, Hungary.

Most patients with chronic encephalitis are not able to fold their tongues longitudinally; that is to draw up the sides of the tongue, making a trough-like groove in the midline. This peculiarity is caused by selective weakness of the fibers of the *musculus transversus linguae*. The normal person having been shown this movement can, with a little practice, perform it, at first within the mouth, and afterwards with the tongue protruding slightly. Patients suffering from Parkinsonism cannot do this even after trying for a long time. The so-called *"forme fruste"* and pseudoneurotic forms of chronic encephalitis show the same abnormality. This selective weakness of the transverse muscle fibers of the tongue often manifests itself in that the upper surface of the protruded tongue of the patient is not slightly convex but has a small groove behind the apex. (*See figure 1.*) I have made these observations on many chronic encephalitic cases but I have never seen them described.

* Specially contributed to 'The Antiseptic'.

† At present Rockefeller Research fellow. From the clinic for nervous and mental diseases of the Istvan Tisza University in Debrecen—Director Professor, Ladislas Benedek.

The "restlessness of the muscles" which compels these patients to change their position continually, is described by *Charcot* as "impatience musculaire". In some cases I have also observed the "akathyzia" phenomenon described by *Haskovec* in psychoasthenic patients. The encephalitic patient cannot sit still long in a chair but feels impelled to spring up. According to my observations it is in the so-called pseudo-psychoasthenic (so-called by *Economo*) forms of juvenile encephalitis (5 to 10 years of age) that this symptom can most often be observed.

Astwasaturow reported the "palaismatokinesis" symptom (palaisma is a trick). This very interesting manoeuvre consists in that the patients with Parkinsonism can rise from the sitting position only with great difficulty on account of rigidity, but if they cross their legs they can stand up much more easily. Similar tricks are used by patients handicapped by rigidity in walking. One patient of *Astawasaturow* could walk only when he held in one hand a stick which had a perpendicular extension near the lower end. He held this stick alternately in front of the right and then the left foot, always stepping over it, and so facilitating his walking. (*See fig.* 2).

There are other manoeuvres used not only to overcome akinetic disturbances of their movements but also hyperkinetic disturbances. For example, one of my patients could prevent spasmodic torticollis by lifting his arms. Another opened his mouth as wide as possible to stop spasmodic closing of the eyelids. Another who had blepharospasms on voluntary movement of his eyes could stop, or even offset, this spasm by grasping his nose. (Benedek-Thurzo Rev. Neur. 1930.)

The "gluteal signe" of *Rouquier* (*signe de la fesse*) is based on the increasing irritability of the gluteal muscles. This symptom is elicited by tapping the gluteal muscles slightly (4 to 6 times with a reflex hammer or, better, with the fingertips) causing a contraction of the gluteal muscles. This contraction can be best observed by palpation. In my opinion this phenomenon is of pathognomic value if it is considerably more marked on one side. In such cases the contraction of the muscles is much more intense on one side and the slight tappings are rebounded from the contracted gluteal muscles as from an elastic ball, and the hardening of the muscles can be felt with the finger-tips.

A very interesting symptom in Parkinsonism is the *cladzomania*, or howling attacks (Schreianfalle), described by *Benedek*. This is a hyperkinetic symptom too. The patient may start

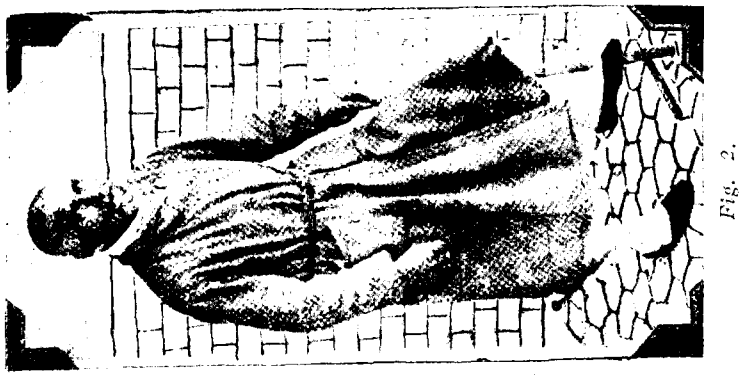

Fig. 2.
The "Palaismatokinesis" symptom of Astwasaturow. A peculiar disturbance of the walking. The patient can walk only using a finesse.

—*Dr. Eugene de Thurzo.*

Fig. 1.
The protruding of the tongue is almost impossible at 'Parkinsonism'. Behind the apex of the tongue we see a small groove.

howling spontaneously or after some rather insignificant stimulus. At the same time the patient shows marked anxiety. Cladzomania has since been mentioned by many other authors. *Sterling* and *Kroll* corroborated the observations of *Benedek*.

II

Chronic Encephalitis*

Sensory Disturbances

Pain

SENSORY disturbances in postencephalitic conditions are of a subjective nature. The most common of these is pain. This can be so pronounced in the diseased picture, that we are justified in speaking of an independent algesic disease form. Even the light pseudoneurotic forms are always accompanied by pain. The pains have an individual character. They do not tend to be severe, but are, however, tenacious; not continual but intermittent. They usually appear in the upper part of the body, in the region of the mastoid process, in the arms or neck, and are rarely observed in the lower extremities. The pains often appear in plaque-like distribution. Italian authors customarily speak of the so-called "placca sacrale" and "placca occipitale". The quality of the pains may resemble those of myalgia and neuralgia, but most of the time they are not definable. We can best compare the pains with sympathicalgesias. According to the observations of *Calligaris*, the post encephalitic pains are of sympathetic or thalamic origin and not root or peripheral pains. It is just such cases of encephalitis, accompanied by pain and taking a pseudoneurotic course, that lead to diagnostic mistakes. The patient comes to the doctor because of the pains, which to him are paramount, and the small signs that point to an encephalitis are usually overlooked.

A few patients mention pin-prick-like pains, that persist with varying intensity for years. In such cases the patients are usually in treatment for an apparent neuralgia, myalgia or rheumatism. Many such encephalitic cases were observed at our clinic, and had, according to the past history records, been treated unsuccessfully for rheumatism for years. The various analgetics were as non-effective as the narcotics. In pains of uncertain and

* Specially contributed to the Antiseptic, by the same author.

tenacious nature, that are not influenced by long treatment, we must, ex juvantibus, think of the possibility of a chronic encephalitis. In most cases the pains are intensified by the various physio-therapeutic measures such as thermophoric, mud baths and electric treatment. Rheumatic pains, on the other hand, usually show improvement with thermophoric and balneological treatment. Postencephalitic patients usually complain more after such balneological treatment than they did before. The usual methods of treatment in rheumatism resulting in hyperemia serve only to increase postencephalitic pains.

Calligaris also mentions unilateral pains of the face. In such cases, the pains are usually confused with toothaches. In two cases, the greater part of the patients' teeth were removed. Hemilateral pains may be confused with a dry pleuritis. *In encephalitic pains, it is quite characteristic that the nerve trunks and nerve points are not sensitive to pressure, so that no sense of pain results from pressure exerted on the muscles or from the contractions of the muscles. The existing pains are not exaggerated by pressure or percussion of the irritable points. Even the passive movement of the joints does not cause pain.* From all these signs we must draw the conclusion that the character of these pains does not show any special properties. *Strauss* mentions that the skin is hypersensitive to external stimuli. The hyperaesthesias of the skin have as much of a manifold localization as the pains themselves.

From a diagnostic point of view it is quite important to ask the patients if they do not feel any shock-like twitchings in the concerned area or part of the body when these pains come on suddenly. Many of our patients have described to us undetermined "internal shocks" and "internal trembling or shock-like feelings". On such occasions we must think of algesico-myoclonic symptoms. In general it is quite characteristic for these, as well as for the encephalitic pains, to appear in a hemilateral way. Usually, these pains are already present in the early stage of chronic encephalitis. In the further course of the disease we see that, after the cessation of the pains, the former painful areas are succeeded by myoclonic twitchings. Headaches of undetermined nature that are usually limited to the parietal region often present themselves in the initial stage of the disease. In contrast to the subjective pains, the objective sensory deviations completely recede into the background. The posterior roots and centripetal nerve tracts are not affected in cases of encephalomyelitic disease forms.

The Paraesthesias

Various paraesthesias are among the most commonly occurring symptoms in postencephalitic conditions. These paraesthesias may entirely resemble those that neurasthenic individuals of nervous constitution complain about. Patients often talk about a peculiar emptiness of the head (the "testa vuta" of Italian authors) that often extends to all parts of the body. According to our observations, the "Kriaesthesia" in encephalomyelitic forms is very common. In a few cases there is a rapid interchangeability of hot and cold. "Now I feel"—in the patient's opinion"—as though my feet were surrounded by a peculiar kind of cold, and then a feeling of warmth is present". Tingling feelings, numbness, stinging and cutting pains along the nerve fibers often occur. Complaints of internal shock and trembling are also made. These undetermined sensations often manifest themselves while walking, and in addition, the individual parts of the body feel peculiarly heavy.

Various disturbances of *Cenaesthesia* may also be observed very often. Under the name of *Cenaesthesia, Dewy* and *Camus* have described peculiar feeling, by means of which we are made aware of our body and its existence, independent of tactile and other senses. These feelings are conveyed to us by means of the deep sensibilities of the organs, which, under normal conditions, affect the consciousness only to a very minor degree, originating in the viscera, internal organs and body tissues. German authors speak of the negotiation of the body pattern, the localization of which is to be found in the thalamus. The disturbances of Cenaesthesia are quite uncertain and peculiar phenomena. The feeling of emptiness in various parts of the body, the receptive uncertainty that a change has taken plaee in them, as well as a peculiar feeling of annihilation are parts of the cenaesthetic disturbances. *Calligaris* has also seen cenaesthetic hallucinations in postencephalitic conditions, similar to those that Bechterew named "pseudomelia paraesthetica". One of his encephalitis patients complained of a strange feeling: as though his head were missing over his mouth, another time he felt as though his nose and teeth were especially long. More recently he was able to observe a pseudomeliac paraesthesia in six cases of encephalitis-post. The paraesthesias often come on in the form of attacks. In a few cases they begin at certain times of the day, or after meals. There is also a certain relationship to the emotional life. *It is very characteristic of postencephalitic paraesthesias to be localized to the same area, for example to one arm, one hand or just*

one finger. The paraesthesias of postencephalitic patients are also of a very tenacious nature, and in spite of years of treatment persist unchanged. A few patients complain of dryness in the throat, feeling of pressure on the thorax and of laryngospasm.

The great irritability of the organs of hearing as well as tinnitus should be mentioned as a rare symptom. A subjective feeling of vertigo may also manifest itself. A few of our patients also complain of funny tastes in their mouths, "bad taste to the saliva." and the bad "smell" of it. Others feel an itching of the nostrils, "they are stopped up", as well as unexplained fits of choking. One of *Calligaris'* patients complained of intermittent colds that lasted for a short time only, appearing suddenly and disappearing just as quickly. This was a case of secretion disturbance.

Photophobia and frequent winking (nictatio frequens) are also observed very often. In addition, the patients often complain of the feeling of having peculiar foreign bodies in the orbita and under the eyelids, and of burning, itchy feelings. The feeling of heaviness of the eyelids (the so-called Gravedo palpebrarum) may also occur.

III

Chronic Encephalitis and the so-called Pseudo-Neurotic Forms*

Some Interesting Reflex Phenomena

THOROUGH investigation of reflex phenomena in Parkinsonism as well as in the pseudoneurotic forms of encephalitis establishes a deviation in reflex behaviour in practically every case. We see an enlargement of the reflexogenic zone in the patellar reflex in about 80—90 % of cases. Active adductor and crossed adductor reflexes also occur quite often. In 10—15% of cases, the flexion reflex of the foot (flexion reflexe du pied) can be elicited from the lower third of the tibia. In the patellar reflexes, the components of the Interosseus also manifest themselves. This can best be observed if the patellar reflex is excited while the upper part of the foot rests on the ground; in this way the patient's toes are easily fixed to the ground, and we notice a slight spreading of the toes in addition to a flexion movement. In a few cases this phenomenon can be obtained not only from the adhesion zone of the Quadriceps tendon, but from other parts of the tibia as well.

* Specially contributed to 'The Antiseptic', by the same author.

Pousepp's phenomenon, the discoverer of which described it as the sign of an extrapyramidal lesion, is also, in our opinion, a part manifestation of the increased excitability of the interosseal muscles. In Parkinsonism and the pseudoneurotic disease forms this can very often be observed. The pathodiagnostic value of this is, however, diminished by the fact that this sign can be present in neuropathic cases as well as in pronounced pyramidal lesions. A certain significance may be ascribed to Pousepp's sign if it can be observed on both sides of the body to a varying degree, thus presenting a hemisyndrome.

The plantar reflex also shows a similar irregular behaviour. We have often observed the appearance of irregular flexion and extension movements, as well as a socalled mute sole (Stumme Sohle). In some cases we found pronounced spastic symptoms in Parkinsonism. *Cruchet, Montier* and *Calmette, Abadie* and *Landie* have already described hemiplegic forms of epidemic encephalitis. These were, however, more or less cases of hemipareses that did not have any permanent character.

These incomplete and passing hemiplegias manifested themselves mostly in the initial stage of encephalitis and showed a cortical character. Of course pronounced hemilateral spastic signs were found on such occasions. In less pronounced form, these spastic symptoms may appear in the absence of a hemiplegia. In addition, we observed *Bing's* paradoxical reflex, *Benedek's* fascia cruris reflex, and (in a minimal number of cases) the toe flexion reflex described by *Schukowsky*, which is obtained by percussion of the middle of the sole. Since these reflexes may also be present in neuropaths, it is very important from a differential point of view, to know that the crural fascia reflex in encephalitic patients can also be elicited in an abdominal position. These signs point most usually to subacute encephalomyelitic disease forms, to which the French authors give the name of "subacute neuraxitis." (Neuraxon signifies the central nervous system,—brain and spinal cord together).

According to our experiences with sporadic cases of encephalitis, the latter give the impression of such a subacute encephalomyelitis rather often. *Economo* had already pointed out that during the great epidemics of 1918-1919, the hyperkinetic amyostatic forms occurred more frequently, whereas the sporadic cases appearing in later and at the present time have atypical features in that they show a less characteristic somnolent-ophthalmoplegic phase of short duration.

In the excitation of the plantar reflex, we commonly see an

active and flighty reaction in the form of a triple and quadruple flexion of the lower extremity. We made the medio-pubic reflex of *Guillain* and *Alajouanin* the object of our investigations in encephalitic patients. This reflex, as is well known, is obtained in such a way that the patient is placed in a dorso-supine position, and then percussion of the pubic bone by means of the reflex hammer. We then observe the adduction movement of the thigh musculature on the lower extremity, the so called "crural answer" of the reflex (reponse inferieur), and the result of the contraction of the abdominal musculature, the so-called " upper or abdominal answer " (response superieur). According to my observations it occurs very often a disassociation of the crural and abdominal answers of the Guillain-ala-Jouanin reflex with encephalitic patients. We see very often the exhaustion of the abdominal reflexes after eliciting those repeatedly.

In our encephalitic cases we saw the naso-palpebral reflex as well as the naso-oral reflex recently described by *Benedek* and *Kulcsar*) rather often. The latter is produced by a short energetic tap on the tip of the nose, resulting in a contraction of the musculature around the lips. The contractions of these muscles also extend to the M. Mentalis so that quick contracting jerks of the skin on the chin result. The most characteristic thing in Parkinsonism is really the isolated and quite superficial contraction of the chin muscle: this is what we call the naso-mental reflex. The latter is also found in the pseudoneurotic form of encephalitis.

Zylberblast-Zand described phenomenon in connection with the naso-palpebral reflex, the importance of which was due to the fact that by means of it, postencephalitic Parkinsonism could be differentiated from the actual Parkinson's disease. This phenomenon is obtained in such a way that we unexpectedly approach the eyes of the patient with some kind of an object, whereupon very quick wink movements of the eyelids will follow, similar to the eyelash flutter phenomenon. According to the author, this symptom is not present in arkinson's disease, whereas it can always be obtained in postencephalitic Parkinsonism.

According to my experiences, the *Zylberblast-Zand* phenomenon belongs to the " oppression reflexes " and we must regard the course of the reflex arc as optico palpebral. The phenomenon can not be obtained in Parkinson because the muscle rigidity and amimia in this disease are more pronounced and also because the affective-motor demands are less. In postencephalitic Parkinsonism and pseudoneurotic forms, there is, on the other hand,

an increased affective-motor demand as well as the tendency of the facial muscles towards Polykinesia

The loss of the light reflex with preservation of the accommodation reaction is the so-called Argyll-Robertson symptom (pronounced Argail, which is a county in West Scotland). Douglas Argyll Robertson, the famous Scotch doctor, described in 1869 "On an eye symptom in spinal diseases " (In French the sign is mispronounced as signe d'Argyll Robertson—" Arzsill Bobertson'). *Hudovering* also describes several such cases. Minimal anisocoria and loss of the round contour of the pupil, but very wide pupils, occur more commonly. Completely fixed pupils are observed as a unilateral symptom. In the somnolent—ophthalmoplegic disease forms, the greater part of the eye symptoms are regularly found. The most common pupillary phenomenon in postencephalitic conditions, in my experience, may be called the pupil symptom or play, whereby the light reflex contraction of the pupils (as a result of production of the light reflex by means of illumination of the eye with a glaring light) is followed by a hippus-like play of the pupils, whereby the pupils contract and dilate in quick succession. This symptom can often be seen only on the illuminated side and does not have a very marked consensual effect. *Weiner and Wolff* in 1915 described a hippus-like play of the pupils in cerebral arteriosclerosis as a characteristic symptom of increased blood pressure. In my experience, this sign in arteriosclerotics is rarely seen, at most in more youthful patients who are at the same time suffering from a vasomotor neurosis.

In marked Parkinsonism, as well as in the lighter pseudoneurotic forms we see a reflex action of the auricle of the ear in about 80% of cases, which was not known before. The reflex is produced by introducing a small cotton swab (previously saturated with Ether) into the external meatus of the ear, producing an irritation, whereupon the auricle retracts backwards and superiorly. I named this reflex the " retraction reflex of the ear ". The afferent leg of the reflex arc is the trigeminal nerve (for a part of the auditory meatus,the vagus nerve) and the efferent one,the facial. A cold stimulus is the most effective for the production of this reflex phenomenon. In cases of pronounced Parkinsonism as well as in Parkinson's disease, the reflex can be actively produced by means of mechanical irritability, such as the handle of the reflex hammer on the auricle of the ear. In order that this phenomenon may take place, the polykinetic tendency of the facial muscles to stimuli in postencephalitic conditions play a certain part.

The bulbo-mimetic reflex described by Wagner can also be observed in Parkinsonism. This reflex can be obtained by exerting a moderate degree of pressure on the bulbi of the half closed lids, and then observation of the contractions of the mimetic muscles. In a few cases the retraction reflex of the ear can be observed at the same time that the bulbo mimetic reflex makes itself manifest.

The motory phenomenon described by *Wagner* in 1908 has a certain relationship to the retraction reflex of the ear. It deals with associated movements of the eye and the auricle of the ear. In an extreme side-glance of the eye, we notice a retraction of the auricle in the direction of the glance, as a sort of synkinesia, even in perfectly healthy individuals. This synkinesia, however, manifests itself in the other auricle to a lesser degree.

M. Gerstle and Paul Wilson have recently made the oculo-aural movement the object of thorough investigations. They attach great importance to the necessity of having two examiners in this method. The one holds the side glances of the patient fixed with appropriate finger manipulations, while the other follows the movements of the auricle of the ear. In Bell's paralysis the synkinesia is absent on the side of the lesion, while in Parkinsonism this synkinesia manifests itself in an enhanced degree.

The retraction of the ear may also be observed if we ask the patient to show his teeth (due to the polykinetic tendency of the facial musculature), resulting in a strong parting of the angles of the mouth. This symptom also occurs in neuropathic individuals and in less pronounced form even in healthy persons, but in Parkinsonism it is present to a greater degree. I was also able to determine the lingual-mental reflex. This symptom can be produced in two ways. In the first method the tongue is gently pressed down with a throat stick and then one weak tap on the latter with the reflex hammer, during which the mouth of the patient should be completely open. With this stimulus, active contractions of the M. Mentalis result. In the second method the reflex is obtained with the mouth of the patient completely closed, taking care, however, that the throat stick does not touch the lips, so that the reflex is produced purely by means of the sensory surface of the tongue. According to my observations to date, this phenomenon can only be obtained in Parkinson's disease and in Parkinsonism.

The Problem of Venereal Diseases in an Eastern City*

BY

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It is generally admitted that owing to the backward state of education in the East and the lack of statistical information, the seriousness of the problem of venereal diseases and their ultimate effects in producing morbidity and reducing the economic value of the individual is hardly realized. The facilities for proper treatment do not exist beyond a few places that can be counted on finger tips and the effects of such small facilities as exist are greatly nullified by the imperfect appreciation on the part of the public that disappearance or amelioration of troublesome symptoms is not the same thing as cure.

It is now universally recognised amongst venerologists that the strictest test should be advised before a person is declared as cured and allowed to take his place in society as he is not only a potential source for the spread of infection but his thoughtless actions result in the creation of a type of population which not only fills Mental Hospitals and institutions for the care of mentally defectives but causes an avoidable drain on the resources of society—resources which could be deflected towards more desirable ends.

The satisfactory solution of this problem has baffled all thinking persons. On one side are those who, oblivious of the weakness of human nature, press that the only proper remedy is the strict denunciation of the victims of such diseases, tabooing all devices and talks on the prevention of venereal diseases, treating the prostitute as a social outcaste beyond all hopes of redemption and segregating her in a quarter where vice may be freely indulged in by those who choose to do so. There are others on the opposite side, perhaps more practical, who realize that human nature cannot be ignored and that improvement may be expected to come not only by setting up a high standard of morality before the public but also by realising that there is a large number of members in the society who must ultimately find it difficult to follow a high moral code and for whom remedies have to be suggested that would suit them.

Composed as the society at present is, of persons with varying degrees of education, moral equipment and economic means, there can be no universal remedy for this social evil and if any success

* Specially contributed to 'The Antiseptic'.

is to be obtained in the eradication of this canker which is eating into society, the problem must be tackled in all its aspects.

Any country which pretends to be civilized in any manner now maintains health services of some kind or other and those who are connected with such services have an ever growing appreciation of the necessity of doing something, however little in the matter. Before any definite proposals can be made, some accurate information should be available with regard to incidence of these diseases on which to base the scheme for the control of Venereal Diseases. The paucity of any kind of reliable information regarding the state of illness of the population as a whole is the first difficulty that confronts a worker in the East. It is true that a similar difficulty although to a lesser extent exists in the West but in the latter place, owing to the interest which many public spirited citizens take in the object of social hygiene, a mass of useful information and suggestions are available. An attempt was made to get some kind of reliable information in Rangoon and with that aim in view, letters were addressed to 222 registered medical practitioners requesting them to state the number of patients treated by them for Venereal Diseases during the past three years, how many of them had applied early enough for treatment with reasonable chance of cures and how many went through the full course of treatment. They were also requested to say what percentage of the population of the city was, in their opinion, afflicted with these diseases and if they were on the increase. Unfortunately only 71 of these practitioners could be found at their last known addresses and of these only 27 replied. Statements of the number of patients treated for Venereal Diseases during the last three years were obtained from the twelve public hospitals and dispensaries of the city including the Rangoon General Hospital which is the premier medical institution of the Province.

The information supplied by the medical practitioners may first be considered in general. An undertaking was given to them that all particulars supplied will be treated as confidential. Nearly all of them with a few exceptions stated that they had maintained no records in the past. Some of them have kindly offered to keep such records for a period of 6 to 12 months, if necessary, from any date required so that reliable statistics may be available.

A few have given such figures as were available, but they are not of much value. With regard to the incidence of venereal diseases, majority of the medical practitioners have given their opinions that it is not increasing. Some, however, think that it is

increasing amongst the labouring classes. One of the practitioners stated that, in his opinion, 90 per cent of the Indians and 40 per cent of Burmans and Chinese were afflicted with these diseases. This perhaps is an example of an extreme view. One of the most experienced physicians who commands a large practice in Rangoon gives it as his opinion that 90 per cent of the male and 20 per cent of the female population of adult age have sometime or other in their lives suffered from Venereal Diseases and the females that came under his observation were mostly those infected by their husbands. Some of the practitioners remarked that the number of patients treated by them for such diseases had been decreasing during the last few years and they ascribed this to the more frequent use of the Venereal Disease Clinic started at the Rangoon General Hospital. There is a consensus of opinion that so far as the schools and colleges are concerned, there is no more Venereal Disease in the student population than there is in the lay public.

The number of patients treated in the public hospitals and dispensaries of the City was 13,417 in 1931, 14,295 in 1932 and 15,344 in 1933 (vide Table below).

Year.	Syphilis.	Gonorrhoea	Other diseases of Venereal Origin.	Total.
1931	7,591	5,085	1,741	13,417
1932	8,029	4,234	2,032	14,295
1933	8,480	4,705	2,159	15,344

In the year 1933, nearly 15,344 persons of the city availed themselves of the facilities for treatment in public institutions, but this by no means represents the total number suffering, as a good many must have been treated by the private medical practitioners. A considerable number of patients also falls into the hands of unregistered medical practitioners and quacks. It is impossible to estimate the number of persons afflicted with Venereal Diseases in the city with any degree of accuracy but such figures as are available for European cities may, however, enable us in forming some idea of the state of affairs that might be expected out here.

The Royal Commission on Venereal Diseases that was appointed in England in 1913 estimated that the number of

persons infected with Syphilis whether acquired or congenital, could not fall below 10 per cent of the whole population in large cities and the percentage affected with Gonorrhoea must greatly increase this portion. Many Venerologists are of opinion that Gonorrhoea is 6-8 times more frequent than Syphilis. This is not borne out by the statistics of the hospital patients here and the reason appears to be that the majority of Gonorrhoea patients probably prefer treatment elsewhere, whereas the free injections for Syphilis which are expensive outside, attract patients to the Venereal Clinic. Major-General Sir John Megaw, I. M. S., Director-General, 1933, after an investigation in 571 villages situated in various parts of India computed that the average number suffering from Venereal Diseases was : Syphilis-15.6 per 1,000 and Gonorrhoea-21.5 per 1,000. In the towns the incidence must be higher. If we assumed that the relative prevalence of Syphilis and Gonorrhoea were 1:2 here and that the number of persons treated for Syphilis in the public institutions was double of that treated outside by various agencies, we would have nearly 13,000 cases or 3.5 per cent of the population affected with Syphilis and 26,000 or 7 per cent suffering from Gonorrhoea. Those two diseases will thus claim between them 40,000 victims out of the total population of 400,000 of the city or nearly 10 %. This will perhaps be an under-estimate. Hansen estimates that 10 per cent of the adult male population of U. S. A. is definitely syphilitic, whereas 50—60 per cent of the adult males have had Gonorrhoea according to Morrow and Forcheimer. In France, Fournier believes that 15 per cent of the adult male Parisians have suffered from Syphilis. Neisser calculated from the clinical data that 12 per cent of the adult male population of Berlin is syphilitic. In this city where facilities for the treatment of Venereal Diseases are meagre, the percentage of persons suffering from Syphilis and Gonorrhoea cannot be less. Such statistics for mortality from Syphilis as are available here and in other countries cannot be relied upon for forming an estimate of the incidence of Venereal Diseases as other causes of deaths are shown for fear of hurting the susceptibility of relatives. For example; deaths due to Locomotor Ataxy, General Paralysis of the Insane, Aneurism of the Aorta represent some of the diseases which are directly attributable to Syphilis although placed in other categories in official classification. Similarly, Apoplexy, Angina Pectoris, Paralysis in persons under 40 years of age are probably syphilitic in origin and 10 per cent of the deaths due to Kidney and Heart Diseases are attributable to the same cause. The

Royal Commission on Venereal Diseases estimated that 25 per cent of the cases of congenital deafness was due to congenital syphilis; 24 per cent of the blindness is caused by Ophthalmia Neonatorum which is invariably due to Gonorrhoea. Imbecility, Idiocy, Paralysis and Fits, Abortions, Miscarriages and Still-births are some of the effects of Syphilis. These instances are quoted to show that the toll exacted by Venereal Diseases in causing mortality and morbidity is much greater than disclosed by any statistics.

Methods for the control of venereal diseases followed in one country or the other fall under the following headings :—

(1) Efforts to reduce the amount of extra-marital intercourse.

(2) Regulation and control of Prostitution.

(3) Use of preventives against contact with infectious secretions during sexual intercourse.

(4) Disinfection of the parts exposed to infection.

(5) Prophylactic general treatment before or after exposure to infection.

(6) Treatment of carriers.

Efforts to reduce extra-marital intercourse are more sociological than medical problems and some authorities are of opinion that these mostly arise from boredom of life and the increasing use of alcohol. The remedy naturally lies in the provision of healthy recreation and better education which would create wider interests in the affairs of life. The experience in the Army lends support to this view. There is no doubt that there is great need for the education of the society as a whole, with regard to the proper relationship between the two sexes. There are many who deplore that the laxity of the present day morals is due to the materialistic nature of the modern civilization and the unnatural conditions of life in towns. The cost of living in urban areas is higher and in bigger towns, beyond the economic capacity of many who, besides these difficulties find their existence a dull, monotonous routine with ever increasing desire for thrills and excitement. These naturally lead to immorality.

Prostitution is intimately connected with venereal disease and its regulation by registration and periodical inspection of prostitutes as one of the means of controlling the spread of these diseases is often advocated. But one country after another has been giving up this method—a notable example being that of Germany in 1927.

A strict regulationist policy has some disadvantages. It always results in a great increase of clandestine prostitution so that for every registered prostitute undergoing periodical examination there may be two or more secretly practising their profession in the guise of shop-girls, singing girls, domestic servants, etc. When the latter get diseased, as sooner or later they must, they tend to conceal their ailments for fear of coming under the notice of the Police and become inscribed. Under a system of regulation the latent prostitute is a greater menace to society than the patent. It is extremely difficult to say that a prostitute is free from infection even after half an hours's examination and having taken the precaution to obtain specimen for bacteriological examination. Even after this, there is no guarantee that she will not get infected the next day.

Regulation may work with perfect control, sufficient medical staff, liberal provision of prophylactic disinfection on the premises and a thorough control of the population and the problem depends upon the amount of control to which a community is prepared to subject itself. In Rangoon there is a unanimity of opinion that the number of brothels has decreased but views differ whether prostitution has increased or decreased. The houses of assignation have undoubtedly increased with the decline of brothels. The influence of prostitution both open and clandestine is considerable in the causation of venereal diseases but there appears to be no solution to this problem at present.

There is a section of opinion which realizing that promiscuous sexual intercourse and prostitution must remain necessary evils in society presses forward the view that if the public health authorities encourage and recommend some definite measures for disinfection after exposure to infection or for the avoidance of infection, much may be achieved in the matter. Effective disinfection is not easy, the instruction of civil population is difficult and it is only useful in well disciplined communities. Men are usually too drunk or too stupid to follow the instructions given just at the moment when they ought to be otherwise. It is true that in the Army in Europe since the provision of facilities for disinfection the incidence of Venereal Diseases has greatly decreased but this probably is not the only factor. Education has become more widespread, facilities provided for the recreation of man increased and the consumption of alcohol and incidence of Venereal Diseases in the civil population has also decreased. All these factors have been at play. It has, however, been observed that the same troops provided

with the same outfit for disinfection and well instructed in the methods of use have shown different rates of incidence when posted to different parts of the world. The Report of the Army Medical Department for the year 1932 shows the following rates of incidence per 1,000 for British troops stationed in different places:—In England 11.2; India 37.7; Aden 61.3; Ceylon 95.2; China 182.9; Egypt 41.9; Malay 42.7. The only conclusion to which one can come to from this is that the ideal disinfectant or prophylactic is probably not yet known.

Prophylactic Chemo-therapy is advocated by some for the prevention of Venereal Diseases but it is mostly applicable to Syphilis. Prophylactic injections of arsenic or bismuth are given to those likely to be exposed to infection but these leave the person in a fool's paradise by giving him or her a false sense of security by preventing the development of chancre.

Most countries now rely on the satisfactory cure of the carrier for the reduction of Venereal Diseases. This method was first adopted by Denmark in 1778 and Sweeden in 1817. The two conferences held in Brussels in 1899 and 1902 focussed public attention to the seriousness of the problem in Europe. Nothing definite was however done in England till the year 1913 when the Royal Commission on Venereal Diseases was appointed. Its report was submitted in 1916 and soon after this the Local Government Board (now Ministry of Health) introduced the Venereal Diseases Scheme which is based on the principle of preventing the spread of these diseases by bringing the largest number of sufferers, under treatment till permanently non-infectious and for this purpose there are now in England and Wales, 186 treatment clinics, 87 laboratories and 13 hostels for housing homeless girls suffering from these diseases.

There appears to be ample evidence that of all the various methods for the prevention of venereal diseases, the most practical and the least controversial is the one relating to the provision of ample facilities for the free treatment of carriers under such conditions as ensure privacy and due regard to the patient's feelings. The only clinic in Rangoon where treatment is offered, is the one in the General Hospital and it cannot be enlarged for lack of funds although the number of patients is increasing. The Corporation has already provided funds for the establishment of a Venereal Clinic in the Rama Krishna Mission Hospital in East Rangoon and this should be ready before the end of the next year. Beyond these no other facilities appear to exist. The treament of sufferers from Syphilis in public dispensaries should not be

a difficult matter if necessary funds are provided for purchase of medicines. It may be possible to come to some agreement with public laboratories in big towns for the examinations of blood. But the treatment of Gonorrhœa in ordinary dispensaries will not only require considerable equipment but also some alteration or addition to the buildings. The staff will also require training in the proper methods for the treatment of Gonorrhœa which is very complicated and requires considerable skill as it is extremely difficult to make a patient, suffering from Chronic Gonorrhoea, free from infection and the staff without adequate training would not be able to tackle these cases successfully. The services of a Venereal specialist would be invaluable in the early stages. In those cities that desire to launch a scheme for the prevention of Venereal Diseases the following measures may be considered for the amelioration of the existing state of affairs:

(1) Provision of funds for medicines in existing dispensaries.

(2) Necessary alteration in the plan of the building and its equipment with instruments, etc., for the treatment of Gonorrhoea.

(3) Training of the dispensary staff at suitable institutions and the employment of a venereal specialist.

(4) Facilities for treatment of such women suffering from syphilis as attend Infant Welfare centres wherever they exist.

(5) Education of the public regarding the dangers of Venereal Diseases and the need for early and complete treatment by means of lectures, posters, charts, articles in public press, etc.

(6) A hostel for housing homeless women suffering from Venereal Diseases. In this matter the help of public societies or organizations interested in social hygiene or vigilance work may be sought.

In the present state of society in some of the Eastern countries separate clinics for the treatment of Venereal Diseases may not be necessary as they are likely to be unpopular owing to the lack of secrecy. A dispensary where other diseases are treated will be more popular and easily resorted to by the public for treatment of Venereal Diseases as no one there need know the diseases for which one is being treated. In a separate clinic, the diseases treated are only too obvious.

Sixth Venereal Disease*

BY

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THE sixth venereal disease is the name given to a pathological condition which is known as "Lympho-granuloma" in the West and "Climatic Bubo" in the Tropics. The identity of both these conditions has now been fully established. Although this disease is not described in our text books on venereal diseases, a good deal of literature has been published both in foreign and local journals and moreover a monograph under the same title has recently been published by H. S. Stannus who has collected all known facts regarding the condition. The choice of this name is justified by the facts that this disease is also acquired by sexual contact, that the other name 'Lympho-granuloma' is liable to be confused with the condition known as 'Granuloma Genito-inguinale', the nodular, serpigenous ulceration of the genitals, and by the existence of five other venereal diseases due to the same mode of infection, namely Syphilis, Gonorrhœa, Chancroid, Genital infection by Vincent's Organisms, and 'Granuloma Genito-inguinale.'

This disease is fairly common in our country, as the majority of the buboes that we come across in our practice come under this category. Out of 2306 cases of V. D. treated during 1934 in the male V.D. Clinic of the Govt. Hd. Qr. Hospital, Madura, there were 95 clear cases of Lymphogranuloma. Out of these 50 cases were associated with other venereal diseases, Syphilis and Gonorrhœa. In my opinion, this number ought to be bigger, as doubtful cases have not been included and as we have not been able to do the new diagnostic Frei's intra-dermal test in the clinic. With the advent of this Frei's test, which I shall describe fully below, the following conditions which were unrecognised or wrongly labelled previously *e.g.* pseudo-elephantoid conditions of the genitalia, chronic ulcers of the vulva, stricture of the vagina, pappilomatous growths hanging down from prepuce of clitoris, chronic ulcers of the anus, rectum or both at the same time with polypoid growths, thrombosed external pile-like masses around the anal margin, stricture of the rectum within reach of the examining finger, fistula-in-ano, recto-vaginal fistulæ perimetritis, parametritis with salphingitis and the complete genito-anal rectal syndrome or

* Specially contributed to 'The Antiseptic'

Esthiomene of Hugier have now been classified as late manifestations of the sixth venereal disease.

Etiology

The disease is caused by an ultra-microscopic, filter-passing virus which has a predilection for the lymphatic system where it induces characteristic changes. There is a marked disproportion of even 50 to 1 in the sex incidence of the climatic bubo. This was well marked in the series reported by Dr. R. V. Rajam. The two explanations put forward for the rarity of the condition in women are (1) the virus may exist in the genitals of women as saphrophites without giving rise to any disability or symptoms though these women are infective to male-contacts, (2) this disease is often not recognised in women, as the inguinal glands are rarely infected in them, due to the peculiarity of the lymphatic drainage. In women, only the upper half of the vulva and clitoris have lymphatic connection with the groin glands, while the lower part of the vulva, vagina and cervix drain into the pelvic and peri-rectal lymphatic glands. The age in which the disease occurs varies from 15 to 60 years, majority of cases are seen between 20 and 30 years of age.

The primary lesion in this disease is a trivial papule or a superficial herpetiform ulcer, small, painless, non-indurated and evanescent, that the patients do not notice it. The lesion appears from 3 days to 3 weeks after exposure and the lymphadenitis also starts from a few days to 6 weeks, the average incubation period being 7 to 10 days. The common sites for the lesion are the corona, glans penis or the prepuce in the male and the cervix fornices or some site in the posterior vaginal wall in the female. The primary lesion may some time be an abacterial urethritis. In many cases, the lesion may altogether be absent.

In the majority of cases, the bubo is unilateral but in a few cases bilateral also. In a few cases, the iliac glands are also affected. The climatic bubo may co-exist with other venereal diseases and is not in any way modified by them.

The onset of the disease is usually slow and insidious. The bubo developes with a characteristic subacute or chronic inflammation of the lymph glands and surrounding connective tissue. Only rarely we meet cases with an acute onset also. In the course of one or two weeks, the glands become matted together by the periadenitis, losing their individual identity and tend to adhere to the overlying skin. The overlying skin becomes œdematous with a false feeling of fluctuation probably due to the

inflammatory exudate. The oedema subsides in a few days and in course of time, the gland mass suppurates. But the nature of the suppuration is distinctly peculiar, as scattered circumcised areas of suppuration over the area. This beaded suppuration distinguishes it from the chancroidal bubo. These multiple areas of suppuration break down discharging small quantities of thick creamy pus and leaving multiple sinuses. In badly neglected cases, the whole groin becomes riddled with sinuses. But the Iliac glands although involved, rarely undergo suppuration.

Constitutional Symptoms

The patient feels out of sorts at the outset attended by any of the following symptoms, such as malaise, headache, lassitude, fever, rigors, sweats, anorexia, vomiting, abdominal and rheumatic like pains and rarely a skin rash. After a few days, these symptoms subside but the evening rise of temperature continues for sometime.

Pathology

The capsule of the gland gets thickened and fibrous. From the capsule strands penetrate into the parenchyma which shows certain amount of congestion and inflammation. The essential change consists in small pin pointed epitheloid formations scattered all over the gland. These are made up of masses of epitheloid cells, nucleated cells and typical giant cells. These minute granulomata coalesce, later degenerate producing a necrosed centre surrounded by a thick layer of epitheloid cells. Migration of other cells takes place and minute abscesses are formed. The abscess cavity contains mono-nuclears and polymorphos which contain certain chromatin staining bodies, semilunar, dumb-bell or pear-shaped in appearance and these have been called "Gama bodies". The cellular exudate consists of lymphoid cells. plasma cells, monocytes, fixed connective tissue cells, plasma cells, polymorphos, basophiles, macrophages, and true giant cells.

Diagnosis

This is simple in uncomplicated cases. The presence of a trivial penile primary lesion, subacute lymphadenitis with a tendency to beaded suppuration and Iliac adenopathy are very characteristic. The diagnosis is confirmed by Frei's intradermal test or by the pathological examination of the gland.

Frei's Test

In this test, the antigen is prepared from the pus aspirated from a typical case of climatic bubo. The bubo must be softened,

but not burst. The patient from whom the antigen is prepared, should be free from Tubercle, Syphilis, Gonorrhoea, and Chancroid past or present. In this country, he should be free from Filariasis also. The test is done by injecting intra-dermally on the anterior aspect of the fore-arm 0. 1 c.c. of the antigen and with normal saline on the opposite side as control. One or two healthy people should also be tested as controls. The result is read at the end of 48 hrs. A positive reaction consists of a red papule of not less than 1/2 to 1 cm. in diameter. The positive cases also develop in many instances a feeling of itchiness over the infiltrated area 24 hrs. after the test.

Prognosis

As regards life, this is good. The chronic morbidity associated with the condition, the occurrence of the anorectal ulceration and inflammatory stricture of the rectum in a proportion of cases, especially in women and the want of a specific remedy for the disease make it rather a serious condition to tackle with.

Treatment

During the acute stage, rest in bed has to be enforced and saline purgative ordered. Locally Icthyol Glycerine 20% is applied and bandage put on. Triple sulphate mixture is a suitable prescription in these cases, when there is slight fever.

In both acute and subacute cases, products of antimony (Sodium or potassium antimony tartarate 1% to 2% solution) every other day in increasing doses intravenously are found to be useful. In this connection I may mention "Fouadin", a new product of antimony prepared by 'Bayer' which can be administered intramuscularly every other day in increasing doses.

Excision of the glands is not undertaken at present, as this might predispose to the production of Elephantiasis. When the bubo suppurates, it is aspirated. This may have to be repeated a few times.

There is no remedy for this condition and we have found nonspecific protein shock therapy by products like Lactolan, Casenosol or Aolan very useful in sub-acute cases.

References:—

1. *Medical Annual 1934.*
2. *"Glandular Swellings of the Groin" by Dr. V. Govindan Nair, "Journal of the Madura Medical Association".*
3. *"Climatic Bubo" by Dr. R. V. Rajam, "Indian Medical Gazette".*

Local Anaesthesia and its Advantages*

BY

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It is unnecessary to write the history of Local Anaesthesia at length in a short space like this. Suffice it to say that in 1853, Alexander Wood of Edinburgh, first discovered that the hypodermic injections could be given by means of a hypodermic needle which led to the introduction of drugs beneath the skin. The second most important step, came in 1884 with the introduction of Cocaine by Carl Kollar. Shortly after the introduction of this drug, many minor operations were performed without pain to the patients but the toxicity of the drug was a great drawback and accounted for many unhappy results. Then came the third step in the history of Local Anæsthesia in 1900 by the introduction of Novocaine by Einhorn. Further Braun pointed out that the potency and length of activity of Novocaine could be increased by combining it with Adrenalin. Novocaine is much less toxic than Cocaine and is most extensively used as a local anæsthetic. To-day, there are many such preparations on the market but my experiences are only confined to Novocaine and I have found it to be the safest and the most satisfactory drug in my surgical work, though little.

Novocaine Hydrochloride:—Is a white crystalline powder and is soluble in equal part of cold water with a neutral reaction. Its formula is as follows: CH_2 (C_6H_4. NH_2. COO). CH_2 N (C_2H_5) 2—HCL. It is slightly antiseptic and can be sterilized by boiling without undergoing any change. Its anæsthetic action is intensified by the addition of Adrenalin. It is stated in text books on this subject that a 10 p. c. solution of the Novocaine may be injected into the tissues without causing any irritation and 20 grains can be injected without fear of intoxication. I have always used the solution in a strength of 4 grains to the ounce (a little above .7 p. c.) with two drops of Adrenalin Solution 1 in 1000, to each ounce. So far I have injected three ounces (90 c.c.) at a time, *i. e.* 12 grains of Novocaine and never met with any symptom of intoxication. Novocaine, like all other drugs, should be injected preferably in a weak solution and the dose should be measured in the strength of the solution rather than in its total amount by weight. It should be remembered that the

* A Paper read at the Third Social Gathering of all Medical Practitioners of Khandesh on 20th January 35 at Amalner and sent to the Antiseptic for publication.

toxicity of the drug depends upon the rapidity of absorption. The addition of Adrenalin, as stated above, retards its absorption and the anaesthesia produced is intensified. In addition to this, the following principles are to be observed for preventing its rapid absorption :

(1) Injection to be given slowly.

(2) Introduction of solution directly into the blood stream to be avoided. The following technic may be observed to fulfil the above most important point.

(*a*) Before injecting the solution, withdraw the piston of the syringe, keeping the needle stationary, in order to ascertain whether the point of the needle is in a blood vessel or not.

(*b*) The needle should be constantly moved to and fro while the solution is allowed to run.

(*c*) The tourniquet to be applied whenever possible.

There are some special equipments such as operating table, syringes and needles for the use of Local Anaesthesia. They are of course very useful when local anæsthesia is extensively used in big Hospitals but I have remained contended with only 10 c. c. Record syringe with finger bars and two long flexible needles and two short and stiff needles and I think, nothing more than that is required to carry on the small surgical work at a moffusil Dispensary.

Before coming to the technic of injecting the anæsthetic solution, I would like to say a few words as to the relative pain sense of various structures of the body.

The skin is the most sensitive structure of the body. The subcutaneous fat is insensitive though it carries the nerve supply to the skin. The fascia is very sensitive in some regions. Muscular tissue is insensitive except where the larger sensory nerves lie. The tendons are insensitive and so the bones but the periosteum is very sensitive and the endosteum is likewise sensitive, but to a lesser degree. Cartilages are insensitive and the lining membranes of joints are sensitive structures. The mucous membranes of the mouth, nose, eyes, bladder, urethra, vagina etc. are all more or less sensitive. The mucous membrane of the gastro-intestinal tract is entirely without pain sense. The brain except the lower attachment is insensitive and the dura of the spinal cord is very sensitive. The parietal pleura is a very sensitive structure while the visceral pleura is more or less insensitive. The blood vessels accompanied by sensory nerves are sensitive. Round

ligaments of the liver, all mesenteries, the round ligaments of the uterus and the peritoneum in cul-de-sac are most sensitive structures.

It is important to note that inflammation increases the sensitiveness of all structures.

Technic.—The method of inducing Local Anaesthesia may be divided into two types.

(1) Infiltration and Infiltration Block.

(2) Regional or Conduction Anaesthesia.

(*a*) It is very difficult to attain the accuracy of injecting the solution within the nerve sheath but more or less general infiltration, in the approximate regions in which nerves are known to lie can be easily done and this is called Infiltration and Infiltration Block.

(*b*) Anaesthetising the nerves at any point along their course proximal to their peripheral endings, has been termed Regional Anaesthesia, such as Venous Anaesthesia, Arterial Anaesthesia, Intraspinal Anaesthesia, Sacral Anaesthesia etc.

I will describe here fully the technic of Infiltration and Infiltration Block only, as I am practising it for about ten years. It is a very easy, simple and safe method. The list of operations performed by me under this method, is given at the end of this paper and every time the anæsthesia was quite successful. On a few occasions, out of diffidence, all necessary preparations for General Anæsthesia were kept ready but in no instance it was required.

There are two methods generally advocated for inducing Infiltration Block, (1) intradermal and (2) subdermal. Out of these two the latter method is found to be altogether painless and could be carried out more promptly than the former and hence I have adopted the latter method, the technic of which is as under :—

Before making the initial wheal, the patient is informed that a hypodermic injection is being given to him and that he would not feel more than a needle prick. This caution keeps the patient steady, otherwise, the patient is surprised and some movement on his part is likely to dislodge the needle point, thus making it necessary to repeat the procedure. The Novocaine solution of the strength stated above, after boiling for ten minutes and adding two drops of Adrenalin, is drawn up into 10 c.c. Record syringe

with a long flexible needle. The needle point is introduced beneath the superficial layers of the skin and keeping the needle nearly parallel with the plane of the skin, the solution is allowed to run into the layers. This procedure is termed, the initial skin wheal. Through this skin wheal the needle is advanced beneath and parallel to the skin, the solution being deposited as the point of the needle is advancing, until the entire length of the needle is submerged. If a longer area of the skin is to be anaesthetised, a secondary subdermal skin wheal is made from beneath at the point of the submerged needle, before the needle is taken out. This secondary wheal is carried out by depressing the skin with the tip of a finger just above the point of the needle and at the same time, the point of the needle is just pushed upwards as if to bring it out through the skin and depositing the solution there into the superficial layers of the skin. The needle is then withdrawn and inserted again through the secondary skin wheal and advanced further as stated above. By this method, an area of any length can be anaesthetized with speed and ease and the necessity of pricking the unanaesthetized skin again from above, is avoided altogether.The procedure is a painless one. After the outline has been made upon the skin, the needle is introduced into the deep layers such as fascia and muscle and is advanced slowly, with a constant flow of the solution, till the operation field area is saturated. If broader area is to be anaesthetized, the needle is to be withdrawn up to its insertion and then to be advanced on either side as above. Then comes the third stage in Infiltration Block method. Either the peritoneum or the periosteum comes next to the deep layers which requires to be anaesthetized. The long flexible needle is to be replaced by a short stout needle after finishing the anaesthesia of deep layers. The needle is pushed perpendicularly till it approaches the preperitoneal tissue, if laparotomy is to be performed. This tissue is the most sensitive and is therefore to be entered with a constant stream of the solution flowing from the needle. After depositing the solution there liberally, the needle is withdrawn, its direction changed and new fields are anaesthetized by a repetition of the above procedure. In the same way the periosteum can be anaesthetized.

It is not possible to give here the technic in detail, for different operations, which very slightly differs. In this paper, I have tried to give a general outline of one method only, of the local anaesthesia, which has proved every time successful, in my attempts so far, and I am sure, this will help and encourage a beginner in this subject For details, a reference to text books

on Local Anaesthesia is urged. I would like to recommend "Practical Local Anaesthesia" by Farr, which gives the simple and practical aspects of the problem.

It has been my usual practice to give Morphia ½ gr. combined with Atropine 1/100 Gr. hypodermically, an hour before the operation, while doing major operations.

Advantages of Local Anaesthesia.—The patient's safety is without question the most important factor but at the same time the efficiency in the operation is not to be overlooked. The patient's safety is paramount but the surgeon is responsible to finish the operation with dispatch and completeness and without embarrassment. Unless an operation can be carried out with efficiency under Local Anaesthesia, General Anaesthesia is obviously indicated. The Local Anaesthesia gives the patient a larger margin of safety than that given by the orthodox method of administering General Anaesthesia, provided, the hints given in para 2 of this paper are strictly adhered to. The surgeon is obliged to complete the operation at a top speed when the patient is put under General Anaesthesia as he is inhaling the poison into his system and hence operation accidents and errors are much more likely to occur under General Anaesthesia than Local Anaesthesia, which allows the surgeon to carry out his work with utmost deliberation. The surgeon will have the advantages from the co-operation of the patient and in some cases, the permission of the patient can be obtained for performing the additional operation at the same time for some unexpected diseased condition of some organ found out by the surgeon during the operation, which will save the anxiety and trouble of the patient of undergoing a second ordeal. Under Local Anaesthesia, pre and post operative starvation will be unnecessary. His heart, lungs, liver and kidneys will not be taxed. Vomiting and consequently wound strain and pain will be absent and the probability of death will be almost nil. Leaving aside the surgical work done in the cities where all facilities including the parade of a trained staff, are available, the Local Anaesthesia will reduce the number of personnel required for the operation which will be welcomed by the surgeon, doing the surgical work in small towns and taluka places where the number of trained personnel is a dearth. In such places whenever a medical man, either in service or in practice, happens to see a case requiring some surgical help even of a minor nature, he gets nervous, not because that he is not able to do that much but for want of a reliable general anaesthetist. The anaesthesia

gives more anxiety to the operator than the operation. The first difficulty to be solved by him is, to whom the work of anaesthesia could safely be allotted. Even, if a compounder, who is the only person on the staff generally, is given the duty of an anaesthetist, nobody is left to assist the surgeon and on the contrary, the surgeon has to assist the anaesthetist in addition to his own work. On a few occasions, I had to leave the surgical field and had to give artificial respirations, hypodermic injections etc., while doing an operation under General Anaesthesia, administered by the compounder, the best personnel available to me. In fact more attention of a surgeon is required to be paid to respiration, pulse etc., of the patient than to the operative work. What could give the surgeon more satisfaction than the reply " Achha-he-sab" (alright sir) given by the patient undergoing an opertaion under Local Anaesthesia. It is a common place in surgical practice especially in Taluka places that the General Anaesthesia is the greatest handicap.

In addition to all these, economy is not to be neglected in these days of financial stringency. The maximum cost per one major operation under Local Anaesthesia would be annas 3/ only while under General Anaesthesia, the minimum cost would be Rs. 6/-.

I think, it is high time, that the art of Local Anaesthesia should be taught to the students at the Medical Colleges and Schools, by an anaesthetist well experienced in this art, which will help those students when they come out as doctors, to take up surgical work, at least of an emergency nature which would save a human life on some occasions where the death is a destined thing if the operation is not taken up immediately.

The following list of operations shows that a variety of representative surgical conditions have been successfully dealt with, by the Infiltration method as described above.

Removal of T. B. Glands; Removal of Tumours and Cysts; Removal of sequestra; Setting of fractures; Amputations of extremities; Paracentesis of Pleural cavity; Radical cure for Inguinal Hernia; Radical cure for Strangulated Hernia: Laparotomy; for Fistula in Ano; Excision of Piles: Amputations of Penis; Repairs to ruptured Perineum; Incision and drainage of Liver Abscess; Radical cure for hydrocele; Castration and many minor operations such as incision of abscess, removal of F. B., incision of Mammary abscess, circumcision etc.

CASES AND COMMENTS

Haemoglobinuria as a Complication of Malaria

BY

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Darjeeling Himalayan Rly. Hospital, Siliguri, Bengal.

THE following two cases of interest came under my observation recently :—

Case I.—Naroo, a Hindu boy aged about ten years, son of a railway employee, residing almost from birth in Terai, one of the hyperendemic malarious districts in Bengal.

The boy got high fever and came under my observation on 29th October,1934. The temperature ranged from 101°F. to 103°F. without intermission. Spleen was two fingers below costal arch. Any rise of temperature was associated with severe cold and rigor. Patient constipated, there was slight tympanitis, urine free. The patient was put on alkaline mixtures followed by quinine ten grains a day for the first two days.

On the 31st October, the temperature rose to 106° F. in the morning. This waved between 104° to 106° F. during the whole day though application of ice on the head was continued and cold sponging done several times during the day. The temperature came down to 100° F in the next morning.

On the 1st November, seven and a half grains of quinine was given preceded by usual alkaline mixture. As the bowels did not move, one grain of hydrarg. Subchloride was given in 8 doses ($\frac{1}{8}$ grain every 15 minutes). After this, the bowels moved twice.

The patient passed urine once at about 6 P. M. in the evening. The urine was bright red in colour and was brought to me immediately for examination. The urine appeared to contain haemoglobin in solution and the party became much afraid as occurrence of black water fever is a common thing at Siliguri. However, I assured the relations that it was not a pure black water fever case and there may be appearance of haemoglobin in urine both after high temperature like this in the previous day as well as after administration of quinine.

I went to see the boy and found him in the following condition :—Temperature 101° F., pulse 96, respiration 25, tongue clean, abdomen slightly tympanitic, spleen and liver tender to touch. No pain or tenderness in the renal region nor jaundice. Patient comfortably lying on bed. In the meantime the patient again passed urine, which was bright, but light red—of the colour of glycothymolin.

I advised them to administer plenty of liquids such as whey, glucose water, barley water, green cocoanut water, plain boiled water etc. The patient was prescribed a mixture containing Sodii citras, sodii bicarb, liq. Ammon citratis, liq. hydrarg, perchloride and also atebrin tablets from next morning.

The next morning, urine was clearer, and plenty but still contained a little haemoglobin which cleared up by the evening. The rest of the recovery was uneventful.

Case II. Mr. R. R. D. was suffering from malaria and came under my treatment on the 22nd November, 1934. He was suffering from occasional fever and was himself taking quinine irregularly. As the fever did not abate, he was put on alkalies with saline and quinine.

The fever did not stop even after three days' treatment with quinine and the patient became impatient as he had some private engagements. So ten grains of quinine bihydrochloride was injected intragluteally in the morning of the 25th November, when he had a temperature of 100°F.

In the evening the temperature rose upto 101°F. and patient began to pass bloody urine. On examination urine was found to contain haemoglobin in solution. The colour of urine was bright red and there was dull pain in both the renal regions. There was no jaundice.

On enquiry, the patient gave history of having had a similar attack about seven years ago, which lasted for about three days despite treatment. But the patient could not give a definite history as to whether the attack was precipitated by administration of quinine.

The patient was put on plenty of fluid and alkalies and altogether passed urine three times during the night. Temperature came down to normal by the next morning. The morning urine was comparatively cleared, and of brown tint, which became absolutely clear by the evening. He was advised atebrin, one tablet three times a day. The rest of the recovery was uneventful.

Comments

Both these cases were encountered in Siliguri, a sub-Himalayan hyperendemic malarious region. Such cases of haemoglobinuria as well as cases of typical black-water fever are not a rarity here. Here in *Case I*, the attack was perhaps caused by a very high rise of temperature 106°F. on the previous day, which might have caused severe haemolysis in the system, whereas in *Case II*, the appearance of haemoglobinuria was definitely brought on by an intramuscular administration of quinine. In both the cases the urine cleared up by simple treatment with plenty of fluid intake and administration of alkalies. Both of them tolerated atebrin nicely, which completed the cure

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EDITORIAL

The Madras Medical College Centenary Celebrations

THE Centenary of the Madras Medical College was celebrated with much eclat at the College premises on the evening of 4th November 1935, His Excellency Lord Erskine presiding. Her Excellency Lady Marjorie Erskine was also present and there was a large gathering of medical practitioners besides past and present students of the College. The College premises was tastefully decorated with flags and festoons and the new building presented a picturesque appearance.

Sir Mahomed Usman, President of the General Committee of the College Centenary celebrations welcomed their Excellencies in a nice little speech. Lt. Col. Clive Newcomb, Principal of the Medical College, then addressed the gathering and in a brief and lucid speech traced the history of the college and its progress during the past one hundred years. Started at first as a Medical School on the 1st of July 1835 with the object "to afford better means of instruction in Medicine and Surgery to Indo-British and Indian youths entering the Medical branch of service in this Presidency', it rose to the status of a Medical College on 1st October 1850. The School had, at first a strength of only 10 apprentices and 11 pupils with a staff of four members, a superintendent, an assistant superintendent and two assistants. Since then, the College had gone on from strength to strength until at the end of March 1935 it could boast of 890 students of whom 89 were lady students, with a staff of 90 Professors, Asst. Professors and Lecturers. This is indeed a creditable record, especially for a province where religious

scruples and caste prejudices still reign supreme and people are too poor to meet the high cost of a medical education. The General Hospital, the Women and Childrens' Hospital, the Ophthalmic Hospital and the Mental Hospital afforded ample facilities and enough material for clinical study and these institutions are now world-known and world-famous.

Little wonder, therefore, that the alumnii of the Madras Medical College, trained under able Professors and Lecturers, both European and Indian, had not only established a lasting name for themselves, in all the various branches of Medical Science but also brought indelible fame to their Alma Mater. In the field of research, the name of Lt. Col. Donovan, the discoverer of the causative organism of Kala-Azar, is associated with the college with which he was for many years connected. The Madras Medical College was the first, in India, to throw open its doors to women students. The Madras Medical College was the first in this country to recognise the importance of Preventive Medicine and to impart instruction to young men and women in hygiene, sanitation and sanitary engineering. The Health officers, Health Inspectors and Sanitary Inspectors who are the products of this college are now acting in the first line of defence, successfully preventing the onslaught of epidemics, which carry heavy tolls year after year. As has been rightly observed by His Excellency the Governor, 'the history of the College is in fact the history of Medicine in South India, until to-day it stands as a noble monument to one hundred years of steady and devoted service in the history of humanity. Attached to it, is a wide range of clinical institutions as up-to-date and efficient as any in India; and amongst those in charge of them, are men whose reputations are world-wide'.

Certainly no greater tribute can be paid to the college and its staff and we may here be permitted to add our own humble tribute and mead of praise to all concerned, past and present, who have had a share in shaping the destinies of this college and in making it an efficient and glorious Institution.

Coming to the Centenary Fund, we are glad to note the munificent gift of Rs. 50,000 by Mrs. Kamala Rangachariar for founding scholarships in the name of the late lamented Dr. Rangachariar, her husband. No better means of perpetuating the memory of this reputed Surgeon can be conceived and that this gift should synchronise with the Centenary Celebrations of the Madras Medical College, of which he was Professor for a long time, enhances its value manifold and serves as an incentive for others to follow the

noble example of the donor. The public and the medical profession owe a deep debt of gratitude to Mrs. Kamala Rangachariar for advancing the cause of medical education in this Province by her princely gift. We are compelled at the same time to strike a note of disappointment and dismay at the poor response that has been received for the Centenary Fund. The sum of Rs. 14,000 so far collected, is quite inadequate to meet the growing demands of this robust centenarian which, unlike the human centenarian, will need more and more money to sustain itself as age advances and Science progresses. "The Government in the past dealt generously by the College and I would now urge that the college deserves generously at the hands of the public," so has His Excellency said and we too think it is too much to expect the Government any more to shoulder the entire responsibility for running the college on sound and up-to-date lines. The Centenary Fund is open for a year more from now and we hope and trust that the purse would swell to such a big size as to be worthy of remembrance of this unique occasion and productive of immense benefit to the medical profession and the general public.

The public at large must have been benefited in diverse ways and at various times by the children of this centenarian. So we hope that the appeal of the parent will not go unheard. We trust that the public of Madras in particular and South India in general will rise to the occasion and show their appreciation by contributing liberally to this Fund. As we have said on a previous occasion, the form of the Centenary Memorial will, to a great extent, depend on the funds collected. There are many suggestions. None of these can be said to please everybody. The Medical profession is practically unanimous that there should be formed an organization to facilitate research and post-graduate study, in memory of this very unique occasion—not an organisation which will relieve unemployment by giving a living to one or two individuals but one which, as in other countries, will aim at enabling medical men and women to have a higher standard of medical knowledge by the institution of post-graduate study.

The other activities of the Celebration Committe consisted in the publication of a souvenir describing the varied progress of the college during the hundred years of its career, and in the organisation of a sanitary and scientific exhibition. The exhibition continued for 5 days from the 5th of November, one day being set up for ladies. Cinema films were also shown on those days. It speaks volumes of the skill and organising capacity of the Com-

mittee and we are sure that the public and the profession would be greatly profited by these shows and exhibits

On the night of the third day of the Celebrations, a dinner for the old boys of the college was arranged at which Dr. C. Natesa Mudaliar presided. It was quite a pleasant function and a happy occasion for the old boys to meet and exchange greetings. We wish this old boys' dinner is repeated annually, in the interest of the profession.

Thus ended the Centenary Celebrations and we take this opportunity of congratulating the Principal of the Medical College and the Executive Committee on the untiring energy and the arduous zeal which they had put forth in bringing the Centenary Celebrations to a successful termination.

Proceedings of the Madras Medical College Centenary Celebrations

THE Celebrations were marked by scenes of great enthusiasm, and were attended by a large gathering of people representing all phases of public life in this Presidency. The Medical College and its precincts were tastefully decorated for the occasion.

His Excellency the Governor and Lady Marjorie Erskine on arrival at the porch of the new Pathology Block of the Medical College Buildings were received by Lieut.-Col. Clive Newcomb, Principal of the College, and Sir Mahomed Usman, President of the General Committee of the Centenary Celebrations.

The Medical College detachment of the University Training Corps commanded by Lieut. K. S. Viswanathan provided a Guard of Honour, which the Governor inspected. Sir Mahomed Usman introduced to the Governer members of the Exceeutive Committee of the Celebrations.

His Excellency, Lady Marjorie Erskine and others then moved to the examination hall on the second storey of the building, and took their seats on the dais which was specially decorated and the distinguished visitors were garlanded by representatives of the College students.

Governor Welcomed

Extending a hearty welcome to the Governor and Lady Marjorie Erskine, Sir Mahomed Usman said :

" As President of the General Committee for the Centenary Celebrations of the Madras Medical College it is my privilege to offer your Excellencies a most cordial welcome on this historic occasion. Your Excellencies' presence in our midst to-day has greatly enhanced its value. On behalf of the Committee I beg to convey to Your Excellencies our most grateful thanks.

" The Madras Medical College, which was originally established as a school and later developed into a college, has earned a high reputation as one of the most efficient institutions imparting medical instruction in the Empire. It has supplied the country during these hundred years with thousands of trained and qualified medical practitioners who have been imbued with a high sense of professional honour and prestige.

" The relief, these successive generations of the alumni of the College have brought to the people of this Presidency and its adjoining Indian States, cannot be measured by mere figures, but is reflected in the general well-being of the population and in scores of ways.

Standard of Accuracy

" The College has always set a high standard of accuracy and thoroughness in the instruction imparted ; in fact the Madras Medical College course and the Madras University examination in Medicine have not been regarded as suitable for easy-going students. The products of the College have held their own in coping with the obligations of any situation to which they were accredited.

" The College has a great future before it with the rapidly advancing march of Science in many directions and the rapid extension of these buildings is an evidence of the expansion in the curriculum of studies and the larger influx of students seeking admission. We cannot forget on this occasion the illustrious men of Science who held professorial chairs in this College from time to time, several of whom were experts of world wide reputation in their departments of study and added to the sum total of medical knowledge.

Reward for Labours

" It is very gratifying that this celebration has not been confined to medical men alone but has been extended to obtain the valuable support of the general public also. After all it is the public for whom institutions of this kind exist ; and to the extent to which they meet with the approbation of the public the institutions will feel rewarded for their labour.

" I am not therefore hoping in vain that the public will pronounce their verdict of appreciation by making a generous response to the call for funds for the advancement of post-graduate research in the College as a fitting momento of this unique event.

We are confident that our appeal will not fail to secure us a lakh of rupees, a very modest aspiration. It has been decided by the General Committee to keep the fund open for a period of one year from to-day and I venture to say that the value of a fund is rightly judged by the promptitude of the response it receives from the public.

"Before concluding I should like to take this opportunity of thanking Lieut.-Col. Newcomb and his Executive Committee for the valuable services they are rendering in making the Centenary Celebrations a striking success".

History of College

Lieut.-Col. Clive Newcomb, Principal of the Madras Medical College, who has been appointed Surgeon-General for this presidency, gave an account of the history and progress of the Madras Medical College during the past hundred years. He said:—

"The Madras Medical College whose centenary we are met here to celebrate, to-day, was founded as a medical school by the Rt. Hon'ble Sir Frederick Adam, under an order of Government dated Feb. 13, 1835 and the school began its first session on July 1 of that year. The object of the school in the words of this order was "to afford better means of instruction in Medicine and Surgery to Indo-British and Indian youths entering the medical branch of the service in this Presidency". The curriculum of studies extended over two years and the staff consisted of four members— a Superintendent, an Assistant Superintendent and two Assistants.

"The activities of the school were soon extended and on Oct 1, 1850 the school was raised to the status of a college. The School Council now became a more formal College Council with a nominated president and rules of procedure laid down for its guidance. In 1852 the College was for the first time granted the privilege of issuing diplomas to its students who passed out successfully, and enjoyed this privilege for about 15 years when its diploma became merged into the degree of the University of Madras.

Vested in Principal

"In 1858 the Government of the College was for the first time vested in a Principal and the College Council was reorganised into a body to advise the Principal. At this time the College was responsible for several grades of medical instruction. There was a senior department for the training of candidates for University degree in Medicine, a junior department for the training of Apothecaries and a third department for the instruction of candidates for the grade of Hospital Assistants.

"In the sixties of the last century Universities were first established in India and claimed the exclusive privilege of granting Degrees and Diplomas. In consequence in 1863 the privilege of granting a diploma to the highest class of medical students was transferred from the College to the University. After this the senior department of the College was limited to those seeking a University Degree, but the College for many years continued to grant diplomas to Apothecary and other students.

Reputation Enhanced

"This affiliation of the College to the University of Madras far from being to its detriment enhanced its reputation and prestige. Shortly after this the College began to be heard of abroad and was recognised by the Royal College of Surgeons and by the Faculty of Medicine of the University of Edinburgh and it is on record that many of its past students who proceeded to England for further studies were particularly successful in gaining higher qualifications in the Universities there.

"An important step was taken in 1875 largely through the exertions of Surgeon-General Balfour, of admitting lady students to the College to qualify for degrees in the Madras University.

> "*The Madras Medical College was the first College in India to open its doors to women students and one of the earliest Colleges in the world to adopt this course, at a time when there was considerable controversy as to the desirability of women becoming doctors.*

Famous Woman

"The first batch of lady students to pass out of the College included Mrs. Scharlieb who afterwards as Dame Marie Scharlieb became famous amongst the women practitioners in Medicine.

"Another change for which the same Surgeon-General Balfour was largely responsible was the inception in 1875 of the Degree of Licentiate of Medicine and Surgery. This degree after many changes was finally abolished by the University in 1924. In 1902 the third department of the College for the training of the grade of Hospital Assistants, now known as Sub-Assistant Surgeons was transferred to the Royapuram Medical School.

"During all these years, since its foundation the number of students of the College has tended steadily to increase, the curriculum of studies has tended. to become more and more elaborate and the staff and accommodation have been increased to meet

these needs. The school started with a staff of 4 which increased in 1867 to 8 departments with 5 Professors and various Assistants and in 1901 to 17 Professors and Lecturers besides 8 qualified Assistants.

The Staff To-day

"To-day the qualified teachers of the College, Professors, Lecturers, Assistant Lecturers and Demonstrators, Tutors and others make a total of 90. The increase in the accommodation has more or less kept pace with the growth of the College

"The Medical School was originally constructed in 1836 at a cost of less than Rs. 10,000 and consisted of 4 rooms. It was enlarged from time to time but it is not till 1870 that extensive alterations were undertaken and the centre block of the College buildings was fashioned substantially into the form it now has. The block now occupied by the Anatomy and Physiology departments was completed in 1911 at a cost of 2½ lakhs and the handsome block in which this meeting is being held and which houses the Departments of Pathology, Bacteriology, Bio-Chemistry and Chemistry together with the Library, the Examination Hall and various lecture rooms and class rooms was only occupied in July this year. This building was erected at a cost of about 12 lakhs and was built as part of a large scheme of reconstruction of the General Hospital and College.

Affiliated Institutions

"In addition to improvements to the College itself we are fortunate in having very excellent affiliated institutions in which the students are trained in the clinical part of their studies. I refer to the General Hospital, the Women and Children Hospital, the Ophthalmic Hospital and the Mental Hospital.

"When the reorganisation of the General Hospital has reached completion it will be found that it has materially contributed not only to the comfort of the patients but also to the facilities for clinical studies of the students. The Ophthalmic Hospital due to the enthusiasm and ability of a succession of Superintendents is world-famous for the quality of the teaching and the research that is done there. The Maternity Hospital largely due to the efforts of the late Major-General Giffard is as well equipped a hospital as you could find.

" The students of our College are very fortunate in having three such institutions to pursue their clinical studies.

" Thanks to the trained and experienced staff the College possesses to-day, we expect our students who proceed to higher

academic qualifications in other countries to meet with more than average success and in this we are proud to say that they do not fail us. The staff are proud of the remarks expressed by Government in reviewing the last annual report.

Sustained Effort

' In reviewing this report, Government wish to place on record their appreciation of the very useful work done by this pioneer institution during the one hundred years of its existence.

> *'The period was a century of sustained effort and marked progress, and the appreciable advancement of medical knowledge in South India generally, was mainly due to the efficiency maintained by this institution during its long period of existence.'*

" It is our hope that the progress which has been made in the past may be continued into the future and that the College will continue to advance from strength to strength so that it may be said of its Alumni that there are no better products of Medical Education in India or elsewhere.

Governor's Address

His Excellency the Governor then delivered his address inaugurating the centenary celebrations. He said :

" Sir Mahomed, Mr. Principal, Ladies and Gentlemen,— Speaking on behalf of Lady Marjorie Erskine and myself, I should like first to thank you for the kind welcome which you have given us this afternoon, and to tell you how much we appreciate this opportunity of sharing in so happy an occasion as the centenary of this College. We deem ourselves fortunate that so memorable a date should have fallen within a year of our coming to Madras, and have been looking forward to it with very pleasurable anticipation.

Everyone knows that medical colleges, no less in this country than in my own , are homes of good cheer, and the medical student an hilarious fellow who uplifts a merry voice in our streets and displays himself to great advantage on the fields of sport. I confess I find the reason for this hard to understand. It passes my comprehension why to spend a major portion of one's time dabbling in the insides of very dead frogs should be conducive to hilarity; or how eyes accustomed to spend long hours searching for unmentionable things through microscopes can be equally skilled at watching the flight of hockey balls.

"But such is the reputed effect of medical schooling, and if ever there were an occasion for cheerfulness, it should be this.

Strength and Vigour

"It is the custom the world over to shower congratulations upon the centenarian, but all too often the recipient of those congratulations is some mere decrepit mortal who can at best anticipate the dragging out of a few more years of useless and unhappy existence.

"Not so this College. Here we have a centenarian not only in full possession of his faculties, but actually showing every sign of increasing strength and vigour and with every right to look forward confidently to many a hundred years yet of healthy life and growth. Surely this is nothing less than another of those miracles of modern medical science.

"I must confess, ladies and gentlemen, that in matters of Medicine and Surgery I am the merest layman. I am aware that there are certain portions of the human anatomy which, for reasons partly known to the medical profession but best known to themselves, are accustomed from time to time to go wrong and to have to be removed.

"I believe, too, that the human body is a mass of tiny organisms, so extraordinarily small as to be quite beneath one's notice, if it were not for the fact that they frequently make their presence felt in sundry unpleasant ways.

No Finer School

"I am afraid that you will not consider the extent of my knowledge very great, but this I do know, that man, being the unreasonably frail and complicated animal that he is, is in constant need of skilled medical attention, and that for the training of his skilled attendants there is no finer school than the Medical College, Madras.

"At the time of the foundation of this college, medical science can scarcely be said to have been in existence. There was practically no certain knowledge of the causation of disease and the results obtained by the methods of treatment at that time in vogue, were not unnaturally equally uncertain. Medicine was then an art, not a science, and was learnt as an art by apprenticeship. I think I may say that there is still quite a lot of art in it, but it is now much more a science and the method of its acquisition very different. Then the would-be physician picked his knowledge from washing his master's medicine bottles, and the budding surgeon sharpened the kitchen chopper which was about to hack off a limb.

Valuable Research

"In the absence of anaesthetics and antiseptics none but the most rudimentary operations were possible, and those, apart from being too horrible to contemplate, were very often fatal.

"The very existence of bacteria as the cause of disease was unsuspected. Indeed it was not until some years after the foundation of this College that the great discoveries in these fields were made which gave to medical science an impetus which it has never since lost. The College cannot, I fear, take credit to itself for those discoveries, but it was not slow to take advantage of them, and much valuable research work has been done here in addition to the practical instruction which has been imparted.

> "*We may point with pride to the discovery in 1903 by Donovan, a Professor of this College, of the parasite of one of the then most deadly diseases prevalent in South India—kala-azar—paving the way for the subsequent introduction of a treatment which has reduced the death-rate of that disease from 100 per cent to almost nil.*

"The progress of medical science in the second half of the last century was indeed rapid, and no less rapid since 1900. With every step forward, its complexity has increased, and parallel to it has been the growth of this College.

Devoted Service

"The history of the College is in fact the history of medicine in South India; until to-day it stands a noble monument to one hundred years of steady and devoted service in the interests of humanity. Attached to it are a wide range of clinical institutions as up-to-date and efficient as any in India, and amongst those in charge of them are men whose reputations are world-wide.

"At the recent F. R. C. S. examination, held for the first time in India at this College, Madras candidates secured better results than their fellows from all parts of India, and I may fairly claim that the reputation of our medical profession is second to none.

"A word, too, of congratulation to our lady students. For is it not the fact, and justly so, that they who first stormed the citadel of male prejudice here in Madras are still able to hold their own in competition with the so-called sterner sex?

"Ladies and gentlemen, we are met to-day in an institution of which any city in the world might well be proud. It is an ever-growing institution and this fine building in which we now find ourselves is the latest addition to its requirements.

Needs yet Many

"But its needs are many yet. I think I am entitled to say that my Government have in the past dealt generously by the College, and I would now urge that the College deserves generously at the hands of the public. That the Madras public can be generous is shown by the example of a lady who has within the last few days offered an endowment of fifty thousand rupees for the institution of scholarships tenable in this College.

> *"I refer to Mrs. Kamala Rangachary, and it gives me great pleasure to take this opportunity of expressing to her the gratitude of my Government for her munificent gift.*

"The President of the Centenary Celebrations Committee has informed you that a Centenary Fund has been opened and will be kept open for a year from this day. I understand that subscriptions to it already total Rs. 14,000 apart from Mrs. Rangachary's gift. I warmly sympathise with this undertaking and I confidently appeal to you and to the public at large to give it your generous support, for no worthier object for your charity could be found.

"In conclusion, ladies and gentlemen, I would like to assure you that the interest taken by Lady Marjorie Erskine and myself in this College is deep and abiding. This afternoon will long remain amongst our happiest memories of Madras. We wish the College and its Centenary Celebrations all possible success".

Lieut. Col. R. E. Wright on behalf of the Centenary Celebrations Committee and the large number of graduates of the Madras Medical College expressed his gratitude to His Excellency the Governor and Lady Marjorie Erskine for gracing the occasion with their presence. He then presented the Governor with a copy of the centenary volume, an attractively got-up book containing the history and achievements of the Madras Medical College during the past century.

The party then adjourned to tea in the spacious lawns of the Medical College, which were decorated.

Medical College Centenary

Exhibition Opened

"The Medical College Centenary Exhibition was opened this morning at the new Pathology Block by Lt. Col. C. Newcomb, Principal of the College, in the presence of a large gathering of the staff and students.

The exhibition which is arranged in the first floor of the Block consists of interesting exhibits on popular lines. It has been divided into many sections, viz., tuberculosis, anatomy, chemistry, bio-chemistry, physics, bacteriology, pharmacology, X-Ray, etc. The exhibits in the Hygiene and Public Health Sections present an attractive appearance and would appeal very much to the public. There is a chart showing the progress in preventive medicine especially in relation to water, nutrition, air and ventilation, cleansing and the spread of disease by germs.

There are also exhibited posters giving instruction on the essentials of diet, food grains, vegetables, dairy products, right type of cooking appliances, contributing to comfort and cleanliness in the kitchen. There are also models of filters for water purification and water softening appliances suited to domestic requirements. The following are also exhibited: Chart representing the deadlier nature of insects than wild beasts, modes of transmission of important insect-borne diseases. Malaria—actual mosquitoes, their breeding habits and control by fish, oils and other chemicals. House fly—actual breeding of flies and control. Louse—How to avoid louse-borne diseases. Disinfection—Objects and modes of disinfection which could be practised by ordinary laymen. Posters on small-pox and vaccination. Model of damage caused by rats. Charts of important worm infections and instructions for control. Insects and germs of some diseases under microscopes".

GLEANINGS FROM MEDICAL PRESS

Medicine and Therapeutics

The Diagnosis and Surgical Treatment of Chronic constrictive Pericarditis.—Dr. Paul D. White, Mass, in an article in *Guy's Hospital Gazette*, 28-9-35, gives a summary of the diagnosis:—

Summary of Diagnosis.—To summarise, it is obvious to us now that this condition is not extremely rare, certainly not so rare as we were formerly led to believe. There are probably cases of this condition hidden about in "chronic" hospitals or at home, not acutely ill but requiring occasional paracenteses: cases in whom a correct diagnois has not been arrived at, and for whom the treatment which is available has not been realised. Usually the diagnosis made is that of heart disease or cirrhosis of the liver.

As to ætiology, not one of our fifteen cases had rheumatic fever. Tuberculous, post-pneumonic, or septic infections of the

pericardium had been present in some of our cases; in others the aætiological factors were obscure. Of our fifteen cases, besides the six cures and the one other patient considerably helped, the patients died from the severity of the disease itself (two post-operatively), three others died of complications post-operatively, and two are in a mediocre state of health (not operated upon).

The age incidence of chronic constrictive pericarditis ranges from extreme youth to middle age, or even older. Males are somewhat more frequently affected than females.

The most important points in the diagnosis of chronic constrictive pericarditis are the gradual onset of trouble, otherwise unexplained dropsy, and no evidence of heart disease.

Chronic constrictive pericarditis is sometimes confused with mitral stenosis, although the latter should be easily distinguished. We have had two such cases sent for decortication, although they had no chronic constrictive pericarditis; our ante-mortem diagnosis of mitral stenosis was confirmed at necropsy. We did not operate on these cases because a mitral diastolic murmur was present, heard well out in the axilla. This murmur had not been found previously as the other examiners had not listened in the right place. If one finds mitral stenosis in a suspected case the diagnosis of chronic constrictive pericarditis practically ruled out. With regard to the size of the heart, while in mitral stenosis with congestion the heart is moderately enlarged, in our cases the enlargement was never so great.

True portal cirrhosis of the liver may be confused with the condition we are discussing, but in such cases the age incidence is higer, the histories are different, and there is no engorgement of the veins of the neck.

By some polyserositis, and Pick's disease are considered to be synonymous, but they are not; they may and frequently do coincide. Pick's disease may sometimes be confused with tricuspid valvular disease.

Historical notes.—Now I will give you a few names of historical interest in this connection, before closing with the moving picture film illustrating the operative procedure.

Of Galen, 160 A.D., it was said that he removed the vertex of the pericardium in the case of a young man who was injured in the games at the Circus at Rome. In that case the sternum was infected, and two incisions had been made without success; Galen was called in consultation, and said that something more radical must be done. He removed a piece of the bone, and exposed the heart and pericardium, and found some of the anterior surface of

the pericardium infected; he removed a bit of that. I don't know how much of this was really so. At least Galen knew of pericarditis in animals; he found a pericardial effusion in a monkey and scirrhous pericarditis in a cock.

Lower, in 1669, described "callous pericarditis," and interference with and compression of the heart by pericardial effusion. His term, "callous", is quite a good one, and has been used by various writers since, especially by Kussmaul.

Lancisi, in 1728, gave a good clinical picture of chronic constrictive pericarditis in a case in which a thick adherent pericardium was found post-mortem.

Morgagni described several cases of chronic pericarditis. Although so able a pathologist, he led the world astray on this condition for a hundred years; he described a number of cases of chronic adhesive pericarditis and said that the condition did not interfere as a rule with the patient's life, and he mentioned among others the case of an active fisherman in support of his contention.

And then, fortunately, there appeared a man at Guy's in 1842 named Chevers who gave to chronic constrictive pericarditis its worth; his observations were so important that I shall read you a short paragraph from his work:—

"The principal cause of dangerous symptoms in cases of the above description appears to arise from the occurrence of gradual contraction in the layer of adhesive matter which had been deposited around the heart, compressing its muscular tissue and embarrassing its systolic and diastolic movements, but more particularly the latter".

Hope had said that a big heart results from pericardial adhesions. Chevers said that that was at least sometimes not true; in his first patient reported in this connection there was a congested liver, a thick adherent pericardium, and no heart disease.

In 1870 Wilks wrote an excellent and very illuminating paper on this same subject in the *Guy's Hospital Reports*, and shortly after these same dates (1842 and 1870) two Germans, evidently unaware of the work of the Englishmen, put forth their views on the subject: Griessinger (1854) and Kussmaul (1873). Then came Pick with his emphasis on the liver enlargement and ascites in 1896. Amongst other important contributors was Delorme, in 1898, who, as I have already mentioned, said that the condition could be cured; for three years he had been trying to persuade his surgeon to operate on the condition by resecting the pericardium, but they had not followed his lead, and so finally he published his advice to the world. Finally the Germans came forward again,

and in 1913 Rehn and Sauerbruch carried out the first pericardial resections. The last important step to date has been the classical paper by Volhard in 1923 on the diagnosis of chronic constrictive pericarditis.

In the United States we have three centres which have taken a special interest in this subject: Cleveland with Dr. Beck, Nashville with Dr. Burwell, and Boston with Dr. Churchill and myself. I understand that Mr. Roberts, at St. Bartholomew's Hospital here in London, has successfully operated on a case recently.

Hints on Diagnosis and Treatment.—*Glandular Fever*—This disease was described more than forty years ago by Pfeiffer. It begins suddenly with fever, redness of the throat, discomfort and difficulty in swallowing, swelling of the glands of the neck, and enlargement of the spleen and liver.

The fever gradually subsides and the symptoms disappear. The prognosis is favourable. This disease is generally epidemic, affecting especially school children, and is spread by them and by those persons in contact with them, but seldom by adults over forty.

Glandular fever appears in different forms and in cases of "fever" the possibility of glandular fever should be kept in mind.

Diagnosis is confirmed by examination of the blood. The septic form begins with high temperature; two or three days later swelling of the lymphatic glands and spleen. In the anginal form tonsillar changes are to be seen, and a pseudo-diphtheritic membrane is not uncommon. On this account serum injections have been given.

In the pharyngo-laryngeal form sore throat and difficulty in swallowing are outstanding features. In the tracheal form the enlargement of the lymphatic glands at the bifurcation of the trachea gives rise to symptoms.

The abdominal form may be mistaken for appendicitis but when the glands removed by operation are histologically examined, the diagnosis is determined.

The subacute form of glandular fever runs its course without high temperature but with the other signs of infection. In this form the patient often gives the impression of influenza until on the second or third day the diagnosis is made from examination of the blood. The majority of the lymph nodes enlarge, even those in the mediastinum. The spleen as a rule is felt, one or two fingers' breadth below the rib margin.

Jaundice sometimes appears in consequence of damage to the liver cells.

Blood examination reveals a normal number of erythrocytes and thrombocytes, while the leucocytes are in the neighbourhood of 10,000–15,000, seldom 20,000 or more. The majority (50 per cent. to 80 per cent.) of the leucocytes are monocytes. They are best demonstrated from the third to the tenth day of the disease. After three or four weeks the blood changes entirely disappear.

The duration of glandular fever is short and as stated the prognosis is good.

From a study of the symptoms it is supposed that glandular fever may be an infection with an unknown "lymphotrope" virus and that it has an incubation period of 5-8 days.

Diphtheria, influenza and leucaemia have to be excluded before arriving at a diagnosis.

Treatment is for the most part symptomatic.

Pyramidon is given, the pharyngitis treated and hot compresses applied over the enlarged glands.—*Medical World.*

Oestrin in Vulvo-vaginitis.—Nabarro and Signy (London) report treatment of twenty cases of gonococcal vulvo-vaginitis in children by means of oestrin. The dosage employed was 1000-2000 units daily by intramuscular injection or 4000 units daily by mouth—the oral route proved the more satisfactory of the two. The change in the clinical picture was striking: the typical thick purulent flux of acute gonorrhoea changed to a slight dry white discharge, which was microscopically free from gonococci, and the health of the patients improved greatly. The average length of treatment was 73 days. Relapses were not uncommon, but these responded readily to further treatment. The treatment proved successful also in a few cases of non-gonococcal vulvo-vaginitis which had failed to respond to ordinary methods. Adjuvant treatment was given in the form of iodine douches—60 grains in a pint of water.

Nabarro, D., and Signy, A. G. Treatment of vulvo-vaginitis with oestrin. *Lancet*, 1935, Mar. 16, 604-606.—*The Prescriber.*

Acriflavine Emulsion: A Simple Formula.—By J. Walker Tomb, O.B.E., M.D., D.P.H., Cairo.

An elegant and highly antiseptic emulsion of acriflavine (1 : 1000) can be prepared readily, simply, and cheaply by dissolving acriflavine in equal parts of lime water and arachis or olive

oil. Though insoluble in oil, acriflavine dissolves readily in lime water. The formula is as follows :—

Acriflavine, B. P.	...	1 gm.
Lime water, B. P.	...	500 ml.
Arachis (or olive) oil, B. P....		500 ml.

Dissolve the acriflavine in the lime water, add the oil, and shake thoroughly.

Acriflavine is acid in reaction, but its solution in lime water in no way diminishes its efficacy as an antiseptic whatever chemical change may occur through its solution in an alkaline liquid. As is well known, its bactericidal action is increased in the presence of serum, also an alkaline fluid.

While acriflavine is freely soluble in water (1 : 3) and in alcohol, it is highly insoluble in fixed oils and other organic solvents; on account of this insolubility in oils various methods have been devised to make an emulsion of it. So far the methods advanced have been more or less complicated and time-consuming. The Extra Pharmacopoeia gives three formulae all of which involve an elaborate process of preparation *secundum artem*. In one of these the drug is to be mixed with alcohol in a sterile mortar while wax and liquid paraffin are being melted and heated to a certain temperature. The warm liquid is then to be added to the solution of acriflavine with constant stirring. The other formulae both involve heating and stirring until cold. The formula in the British Pharmaceutical Codex looks somewhat simpler, but this also involves elaborate manipulation.

The emulsion made with lime water and arachis or olive oil is simply and quickly prepared; it ensures complete solution of the acriflavine, and provides an elegant and highly antiseptic preparation which is particularly soothing and healing in cases of burns of lesser degrees and of scalds. It is also of great value in the treatment of severe burns after preliminary treatment with tannic acid.

Though stable, the component parts of the emulsion tend to separate slightly after some time, and the bottle should be shaken thoroughly on each occasion before use.

The emulsion is very cheap, a litre costing about two shillings which suggests its use as a universal first-aid dressing for wounds and abrasions as well as for burns and scalds—*The Prescriber*.

New Treatment for Anterior Poliomyelitis and Encephalitis and its Experimental Basis.—The experiment of Royle shows that, following the high division of the cord in poliomyelitis, the activity of that organ can be maintained by the administration of ephedrine. He has observed in actual experiments that ephedrine constricts the capillaries. This is followed immediately by a dilatation of the arterioles and venules, so that there is an increase in blood supply. In large doses ephedrine so constricts the capillaries that it leads to a temporary cessation of blood flow in spite of the concomitant dilatation of the arterioles. The consequent anoxaemia excites the cord to hyper activity, as shown by the increase in plastic or postural tone. Small doses of ephedrine (0.0075 gm.) increase the blood supply by what the writer describes as the arteriolar capillary reaction : when the capillaries are constricted, the arterioles and venules dilate and, when the capillaries are dilated, the arterioles and venules are constricted. Ephedrine, in addition to keeping up the activity of the spinal cord, also controls wasting and, if given frequently enough, should be effective in the wasting following the oedema of the cord in poliomyelitis. It would be easier to prevent the onset of paralysis than to deal with it when present, because the paralysis represents the result of damage to the anterior horn cells from oedema. If this oedema is long continued, the effects on the anterior horn cells may be permanent. Ephedrine should be given in the post paralytic stage to keep up the nutrition of the muscle until recovery has taken place. Four illustrative cases are added.—*N. D. Royle : Medical Journal of Australia. April 26, 1935, p. 486.—Thr' Medical World.*

Peptic Ulcer ; Nature and Treatment, Based on a Study of One Thousand Four Hundred and Thirty-Five Cases.—by Edward S. Emery. Jr., and Robert T. Monroe, Arch. Int. Med. (1935) 55 : 271-291.

This study of a large group of patients with chronic peptic ulcer of the stomach or duodenum over a long period of years shows that the disease tends to persist throughout life when once it is established. It is caused by some factor or factors which are not yet known. More appears to be involved than the local lesion in the mucous membrane, which heals spontaneously or under treatment and then breaks down again. The disease is rarely fatal and does not generally shorten life. Although it is subject to certain complications, in the average case it does not tend to become worse as time goes on.

It is demonstrated that none of the present methods of treatment do more than assist in the induction of remissions, no matter how strict the medical schedule or how radical the operation. Surgical procedures produce longer periods of freedom from symptoms than does medical treatment ; but the former also carry a definite threat to life and often produce mechanical situations which make subsequent attacks difficult to control. A plan of conservative treatment is offered which seeks to produce the best possible results with the least cost to the patient. Its most important aspect is that it seeks to govern the patients' total situation, trying to prevent or minimize factors which may cause relapse. The most important offenders known are fatigue, worry, and infection. Surgical intervention is resorted to for definite purposes; namely, to close a perforation, to overcome a permanent obstruction of more than 40 per cent as seen by flouroscopic examination six hours after a meal of barium, and to attempt to overcome a hæmorrhagic tendency. It is also resorted to in cases in which there is reasonable suspicion of cancer or malignant degeneration. The operation of choice is that which accomplishes the specific purpose in view and interferes as little as possible with the physiologic action of the stomach. Subsequently the patient is to be treated as all other patients with ulcer who have not been operated on. During periods of hypersecretion the patient is to be treated with particular care medically; operation at such time is disastrous.—*P. I. M. J.*

Therapeutic use of Gold.—Gerald Slot, M.D., M.R.C.P., D.P.H., in a paper read at the Chelsea Clinical Society, Feb. 19th '35 writes:—The use of gold, however, dates back many centuries. Shakespeare alludes to gold treatment of tuberculosis while many of the older physicians from Paracelsus recommended a compound of gold and mercury as a panacea for life in 1500, though the alchemists have discussed the use of gold. It can be said, however, that chrysotherapy, as we now know it, started in Copenhagen in 1924 when Professor Mollgard demonstrated after four years' prolonged researches that the double third sulphate of gold and sodium destroyed Koch's bacillus and modified the changes which normally occur in tuberculous tissue: he embodied his hopes in the name of the preparation Sanochrysin (*Chryos Gold* ; *Sanare*, to heal).

Later Lumiere discovered a new organic preparation allochrysin which was used in tuberculosis and following him Feldt discovered solganal and many other similar preparations followed. My experience has been confined to three salts ; Oleosanocrysin which is an oily preparation of a double thiosulphate of gold and sodium, Solganal B introduced by Feldt which is an aurothio glucose and Myochrysin and which is an auro-thiomalate.

The technique of administration is the usual technique of an intramuscular injection.

Action :—The absorption varies with the method of injection. Various workers have stated that after intravenous injection 40% of the Sanocrysin has disappeared from the blood. On elimination one part is fixed and the other is excreted chiefly through the urine. Like other heavy metal it is fixed in all body tissues—skin, bones, hair, mucous membrane. It is fixed in the liver and is retained in the lungs. It may be stated at once that the precise mode of action of gold is unknown and there are of course many hypotheses. In tuberculosis, KOCH stated that the double cyanide of gold and potassium inhibited the growth of tubercule bacilli on a potatoe medium and stated that in an injection of tubercule bacilli which had previously had 24 hours contact with Sanocrysin proved fatal to Guinea pigs. The conclusion drawn from much experimental work is that gold exerts its action less by bactericidal power than by some direct action on the organism. It is thought that it helps the tissues and especially the reticuloendothelial system to fight infective processes.

It is possible, as Franklin has suggested, that gold, when introduced in the body, forms a compound with tissue proteins which has a lethal effect on a variety of organisms.

Feldt and Ostwald have suggested a catalytic action of gold salts. Under the influence of gold the active products of disintegration and cellular debris amongst which are anti-bacterial lysins are released and dissolved the pathogenic agents.

Gold like every other potent drug must be used with care. Dosage is of great importance. Coste states that with Oleo Solganal the number of unpleasant reactions is reduced to a minimum and this has been our experience. Among accidents may be mentioned shock, which has been noticed immediately after administration of gold in a few cases. (2) Rise of temperature:—occasionally a temperature of 101 or higher may occur on the day of injection. Particularly with larger doses. (3) Gastro Intestinal disturbances: we have had none. (4) Liver :—Cases of acute yellow atrophi are described, as after any heavy metal therapy. Mild jaundice has occurred in one of our cases and in a number of cases symptoms of bilious attack in the evening of

the injection —Anorexia, Nausea, and vague abdominal pain with a bitter taste in the mouth. (5) Renal troubles :— Many believe that albuminuria occurring during treatment as an indication to cease gold therapy. We have no evidence that the kidneys are involved, although in gold poisoning kidneys bear the brunt of the damage. The chief accident is in the mucous surfaces. Dysphagia occurs in a few cases and in one case the sense of taste was lost for four weeks,—this has now completely returned. We have not met with any serious conditions of buccal shock. (6) Skin Reactions :—In any large series of cases these are sure to occur. The oommonest type are erythrodermia where a rash similar to scarlet fever covers the whole body. Desquamation occurs in three or four weeks. In some cases papules develop on the arms, leg, trunk and forehead.

Pruritis and urticaria may also be troublesome in some cases. They may make their appearance in a sensitive patient within a few hours of the smallest dose and I feel it is always wise to warn the patient of the possibility of such developments.

Other reactions that have been described are " focal reactions and bronchitis". Coste Forestier and Bourderon have described this biotropic accident.

More serious perhaps are the blood crises. An ordinary case will get a mild leucocytosis, but some cases of leucopenia and a granulocytosis have been described.

Let me say at once that all these accidents are very rare except the skin reactions. I shall deal later with the method of prevention and contra-indications.

My experience with gold therapy has chiefly been concerned in arthritis and I have had the advantage of seeing at Aix and discussing with Forestier, who did a great deal of the pioneer work on the subject, the details of treatment.

We have had cause to modify our technique—but I still say that gold therapy offers us the best remedy in certain groups yet available.

We have used it in polyathritis, multiple swellings of the small joints in patients of all ages as the accompanying schedule shows :—

The technique we now employ is to give small doses intramuscularly at intervals. We start with .01 gr. of solganal or oleosanocrysin; in 4 days we repeat this dose. 4 days later, .05 grs.—then .05 grs. then ·1 gr. .1 gr. at weekly intervals. .2, .2, .2, ·2, gr. making a total dosage of 1.2 gr. for the first course. There is then 3-4 weeks rest and a second course is

administered. A further 3-4 weeks rest and then a third course. If there is any untoward reaction after any dose either the interval is prolonged and the dose is not increased.

Criteria or Cure.—Practically every patient needs more than one course. If at the end of two or three courses, improvement such as diminution of swelling and pain and increase of movement is not present as Forestier has suggested, we tend to increase the dose; per contra, if there has been improvement we remain on the smaller doses and diminish the dose.

When to stop treatment is a difficult question to answer. In infective conditions there is nearly always a rise in the S. R. and this gets smaller as the case improves. Many hundreds of these curves are now available and they allow us to draw this inference that we may safely use the S. R. as a reliable clinical guide, if we realise that an intercurrent infection such as influenza may give one a wrong figure. Clinically patients may improve enormously on gold therapy but will relapse. As Forestier has pointed out only the blood reactions and a long experience will guide us in this direction. As the clinical records show we have used this treatment in osteoarthritis with beneficial results. There has been increase of movements, diminution of pain and decrease of deformity in several of our cases. I have had personal experience of treating one case of gonococcal rheumatism in a young woman who had a severe arthritis of both her knees and my experience in this direction confirms the favourable results obtained by other workers

The use of gold in tuberculosis is a very long subject but it is of proved value in the right type of case. This is the early case, affecting one side, with tubercle bacilli in the sputum. Here it can be used together with pneumothorax as a method of treatment and most observers in France and Scandinavia are agreed that by this method the sputum is rendered tubercle-free far sooner and the general condition of the patient more rapidly restored to normal. It is of little value in the cases with cavitation and excessive destruction of the lung though even in these it does at times tend to reduce the amount of sputum and cough. Again, the doses should be small and persistent and graduated.

There is great improvement recorded in the treatment of laryngeal tuberculosis with gold salts especially in combination with light therapy.

In pleural effusions good results with gold therapy are reported by Legrant and Rembert, while different workers have used the treatment successfully in glandular tubercle, and especially in

intestinal tuberculosis. Bittorf and Lunderman record its value in arresting diarrhœa in such cases. All workers are, however, agreed that in tuberculous arthritis gold therapy has proved disappointing. In renal and genito-urinary tuberculosis their reports are now unanimous. Gold has also been used extensively in diseases of the skin. In lupus vulgaris and genuine tuberculides it has proved disappointing. Franklin, however, in a review of 50 cases of lupus erythematosis in which sanocrysin has been used intravenously concludes that it is a very powerful agent in the treatment of this condition and adduces evidence that some patients successfully treated remain cured. We have had some good results in such cases with Krysolgan and with Franklin. I want to emphasise the need for continuing with a course of injections to prevent relapses in apparently "cured" cases. Franklin goes on to say that gold therapy should be tried early in every case of lupus erythematosis. Gold has also been suggested by various workers for use in disseminate sclerosis. I have had no success in three cases in which I have tried it, undulant fever, asthma and infective lymphogranuloma. One or two good results have been claimed in asthma and I am trying it out but am not yet in a position to give any detailed results.

To sum up, in arthritis we have a very valuable new therapeutic aid; when used as suggested in this paper, there can be no doubt at all of its value in many cases.

Surgery

Cancer of the Cheek.—H. Martin and O. Pflueger (*Arch. of Surg.*, May, 1935, p. 731) review ninety-nine cases of carcinoma of the cheek which occurred in the five-year period from 1925 to 1929. The series included all cases, however advanced, in which there was histological proof of the presence of cancer, and the end-results are based on the histories of patients observed for five years or longer. Cancer of the cheek is chiefly a disease of old age, and is nine times as frequent among men as among women. The mid-portion of the cheek, opposite the occlusal level of the teeth, is the most common site, although the disease may appear anywhere on the buccal mucosa or in either of the bucco-gingival grooves. Direct local extension of the primary growth into the adjacent soft parts may take place at an early stage of the disease, and was seen in over 60 per cent. of cases. Chronic irritation to the buccal mucosa by sharp or broken teeth, ill-fitting dental appliances, syphilis, and tobacco is the most obvious aetiological factor in carcinoma of the cheek. There was evidence of dental irritation in twenty-three cases. Leukoplakia was found in about 70 per cent. of cases. Cancer of the cheek is found to be epidermoid carcinoma in 95 per cent. of cases. The disease is symptomless in the early stages, and appears at first as a small, ulcerated, indurated mass, which may or may not protrude above the surface of the mucosa. Unless the lesion begins in the centre of the cheek the tendency is towards an early invasion of the upper or lower jaw, the lateral pharyngeal wall, or the palate. As the tumour enlarges it becomes fissured and necrotic, infection takes place, followed by swelling of the cheek and tenderness or pain. Metastasis, usually to the submaxillary lymph nodes, occurs comparatively late in the course of the disease. The most successful treatment was found to be a combination of irradiation and surgical intervention. Of the group under review twenty-eight patients have been free from disease for from five to eight years.—*B. M. J.*

A Diagnostic Sign in Peptic Ulcer. — F. Oefelein (*Klin. Woch.*, June 29th, 1935, p. 928) describes a sign which he has found present in a large series of peptic ulcer patients. The patient lies in the prone position with the arms close to the body. He must be completely relaxed, and his mind taken off the test. The muscles of the back are then gently stroked from the periphery towards the spine or parallel to it, from the seventh to the twelfth thoracic vertebra. In positive cases a unilateral reflex occurs in the back muscles, sometimes extending to the extremities. In gastric ulcer the reflex is usually on the right, in duodenal ulcer on the left side. The reflex is more marked in males than in females, and in young than in old patients. In carefully controlled cases Oefelein found that during improvement of the ulcer the intensity of the reflex diminished, and when healing took place it disappeared altogether. In a large series of healthy persons—nurses and soldiers—the unilateral back reflex occurred only as a great rarity. The author regards the reflex as one of the many vegetative stigmata of peptic ulcer patients. It is probably due to disturbances of conduction leading to changes in muscular tone.—*B. M. J.*

Back Strain and Sciatica.—Frank R. Ober, Boston (*Journal A. M. A.*, May 4, 1935). points out that when roentgenograms of the sacro-iliac and lumbosacral joints are presented which show no evidence in this region of any pathologic condition, either congenital or acquired, it would seem difficult to make a positive diagnosis of either sacro-iliac or lumbosacral strain. One is frequently troubled by the fact that there is a negative roentgenogram of a patient whose clinical signs and symptoms are those of extreme irritation in the sacro-iliac or lumbosacral joints. As a result of observation and examination of a number of cases of this type, it has been discovered that the iliotibial band is an exceedingly important factor in the occurrence of lame backs, with or without an associated sciatica. It has been observed in many patients with low back disturbances that the iliotibial band is extremely tight and prominent when the patient is lying on his back, with the knees together, or when he is in the erect position. The band is very rigid, almost bonelike in consistency, when under tension, usually about one-half inch wide, and is raised above the level of the fascia lata, with which it connects anteriorly and posteriorly. Patients who have this contracture complain of the low back pain as a sensation of strain in the lower part of the back in the region of the lumbar and sacral bones or in the sacro-iliac articulations. Severe sciatica is associated quite often with the condition and there also may be pain along the lateral femoral cutaneous nerve and occasionally along the distribution of the femoral nerve. Those who have the double contracture may show sciatic irritation on one side or both sides, or alternating attacks. The author concludes that the contracted fascia lata is a common cause of lame backs and has been unrecognized. If this is so, it would seem, in the presence of normal roentgen studies, that fusion of the sacro-iliac or lumbosacral regions should not be done. When the fascia lata is contracted, it must produce bad posture. Therefore, apparatus designed to hold the abdomen or the back, or exercises given to straighten the back will be ineffectual against such severe contractures. The treatment of this condition is the relief of the contracture. In those cases in which there is no sciatica or other pain, the low back pain may be relieved by stretching exercises and in those cases in which there is a severe sciatica, operation is indicated and the method of procedure is given.—*Medical Times.*

Obstetrics and Gynaecology

Treatment of Dyspareunia and Vaginismus—A. Olsen (*Hospitalstidende*, June 25th, 1935, p. 16) considers dyspareunia a rather common ailment. When vaginismus is secondary it responds satisfactorily to dilatation, excision of painful scars, or the healing of fissures and diseases of the uterine appendages; when primary, and mainly or exclusively of psychic origin, its treatment is more difficult, and the prospects of a cure are smaller. Dilatations and plastic and other operations are usually worse than useless, and it may even persist after pregnancy and labour. The importance of the psychic factor has been demonstrated by the complete disappearance of the vaginismus with a change of husband. Subconsciously the patient feels she is the victim of an assault, and is unable to treat coitus as a co-operative act. The author finds a solution to this problem in his interpretation of it; the patient must learn to co-operate not only in the sexual act itself, but also in the treatment of the condition preventing it. Under a general anaesthetic, a Hegar dilator, No. 50, swathed in gauze and well lubricated with vaseline, is inserted into the vagina and left there for the patient to remove herself when she recovers consciousness. Next day, in the gynaecological posture, she is taught to introduce the Hegar herself, a No. 20 being chosen to avoid any possible failure The size is increased on each occasion, but not up to a pain-provoking size. Every day this procedure is repeated, the patient beginning with a smaller number than that with which she concluded on the previous day. In this way she learns to tolerate a Hegar No. 60 without pain. The risk of her learning to masturbate is negligible. Compared with vaginismus it is the lesser evil.—*B. M. J.*

Insulin Treatment of Menorrhagia and Metrorrhagia.—E. Klaften (*Zentralbl. f. Gynak.*, June 29th, 1935, p. 1512) summarizes the favourable results of others, and describes his own, from insulin treatment of excessive uterine bleeding. His best results were obtained: (1) in menorrhagia in young subjects, in whom not infrequently the intermenstrual interval could be increased from about two to four weeks, and the duration of bleeding reduced to one-half; and (2) in the continuous profuse bleedings of metropathia haemorrhagica of puberty. Functional bleedings in older subjects were less constantly responsive to insulin treatment, but a particularly favourable type of case appeared to occur in women in the fourth decennium who had

lost weight, had suffered from peptic ulcer or gall-stones, and had normal or high normal blood sugar percentages with diminished basal metabolism In menorrhagia and metrorrhagia due to adnexal inflammation insulin treatment was ineffective ; in those due to pre-climacteric metropathia it was uncertain, and if successful, prone to relapse. As a special feature of his treatment Klaften recommends " prophylactic ", intermittent insulin injections, beginning five days before the date of expected menstruation, carried on until the delayed bleeding begins, and then suspended. The initial doses may begin with 10 units twice daily, increasing to 20 or 30 units : a low blood sugar level calls for smaller doses. Sugar and starches are given in considerable amounts. Simultaneous administration of ergot, which increases insulin sensitiveness, is contra-indicated.—*B. M. J.*

CORRESPONDENCE

Natural Vitamin D in Infant Feeding

Messrs H. J. Foster & Co., Ltd., Bombay, write, in their letter of 18th Oct. '35, as follows :—

Our attention has been directed to the notes that appeared under the caption of "Natural Vitamin D in Infant Feeding" in the August issue of your paper.

Is Vitamin D a natural constituent of cows' milk as the author of those notes would have us believe, or of Foods made from cows' milk? The answer would seem to be given in the following extracts which have been taken from such authoritative publications as The Medical Research Council's "Vitamins—A Survey of Present Knowledge", and the "British Medical Journal" :—

The Significance of Vitamins in Practical Experience.—*Brit. Med. Journal*, August 26th, 1933, p. 369: "The administration of irradiated ergosterol is probably the most certain routine method so far available for preventing rickets. When dealing with the less intelligent class of patients, however, and also to save labour, there would seem to be some advantage in prescribing a food, such as sunshine glaxo, in which a standardised amount of irradiated ergosterol has already been incorporated. Any possibility of hyper-vitaminosis is thereby ruled out".

Vitamins : A Survey of Present Knowledge, p. 55.—" The known poverty of some samples of cows' milk in respect of Vitamin D may well be a factor in determining the incidence of human rickets. Milk is at no time a rich source of this vitamin and skim milk contains mere traces of it. The fact that rickets is common in some districts among infants whose diet consists largely of cows' milk, is therefore compatible with the view that the absence of a sufficient supply of vitamin D is responsible for the occurrence of human rickets".

Vitamins : A Survey of Present Knowledge, p. 54.—"It is well known that breast-feeding itself is by no means a certain safeguard against the development of rickets, whereas giving vitamin D to infants affords a much more reliable degree of protection".

Vitamins : A Survey of Present Knowledge, p. 59.—" The fact that rickets occurs in infants who are receiving the bulk of their food in the form of milk, suggests that neither calcium nor phosphorus deficiency plays any determining role in the causation of the human disease ".

The Significance of Vitamins in Practical Experience.—Leslie J. Harris, D.Sc., Ph.D., *Brit. Med. Journal*, August 26th, 1933, p. 367. " Since we know that rickets was prevalent at a time when all babies were breast-fed, it is clear that breast milk is in itself an inadequate and uncertain antirachitic agent. This is confirmed by experimental animal feeding tests, which show that there is surprisingly little vitamin D in either human or cows' milk ".

And by the same author in the same article, and on the same page : " No common foodstuff, not excluding milk itself, contains sufficient of the antirachitic vitamins to secure certain protection from rickets ".

Medical Licentiates and the Corporation of Madras

The Secretary, All India Medical Licentiates' Association, Madras Branch, writes :—

One cannot fail to observe the most useful and hard work that is being turned out by medical licentiates under Madras Corporation service. The medical needs of the suffering public who daily attend the Corporation dispensaries in large numbers both in the morning and in the evening, unlike the attendance, which has been restricted to 2 hours in mornings, of the out patient departments of Government Hospitals in the city, are attended to with great care, patience and perseverance. In addition to their duties as medical officers, other works such as of cholera and vaccination are also being done by them regardless of the status and salary assigned to such duties.

How far the Corporation authorities have recognised the good work turned out by the medical licentiates under their service and how their pay and prospects are conducive to the nature of the work turned out, are questions which one interested in the welfare of the medical licentiates, at large, would be eager to get answered.

As far as information goes, I am led to believe that the pay and prospects of the medical licentiates under the Madras Corporation service are not at a par with the qualifications they possess. The authorities seem to ignore the gulf of difference between the qualifications of an L. M. P. and a Sanitary Inspector.

Appointment of medical licentiates for cholera and vaccination work on a salary similar to, sometimes less than that of a Sanitary Inspector, has become a matter of routine in the Corporation.

Influences seem to take a prominent part in the matter of some appointments and promotions. Instances are not wanting where junior medical men with hardly any service and experience to their credit have been appointed as medical officers in charge of dispensaries in preference to senior men with much experience and long years of service under the Corporation.

In the matter of appointment of medical Inspectors of schools, though there is nothing in the rules to prevent L. M. P's to hold such posts, in practical politics others are being chosen except in places where lady medical licentiates are required.

To give the designation of a medical vaccinator to L. M. Ps. is rather unknown and uncommon.

Facilities for post-graduate study and study-leave for higher qualifications, as it has been in vogue in Government service, seem to be unknown in the Corporation administration.

It may not be out of place, if I were to point out to the authorities concerned, that one of the objects of the All India Medical Licentiates' Association, which has been in existence in the country for over a quarter of a century, is to uphold and promote the interests of medical licentiates. Hence on behalf of the Madras Branch of the All India Medical Licentiate's Association, I, while bringing to the notice of the authorities concerned, the foregoing points which go against the dignity of the profession to which the medical licentiates belong, earnestly hope that absolute obedience and hard service would be rightly appreciated and that equity, justice and fairness would be the governing principles in the matter of medical appointments and promotions in the Corporation of Madras.

PROCEEDINGS OF SOCIETIES, ASSOCIATIONS, ETC.

The Tinnevelly District Medical Association, Palamcottah.

Centenary Celebration at Palamcottah

The Centenary Celebration of the Madras Medical College was held under the auspices of the Tinnevelly District Medical Association on Monday the 4th November 1935 at the Centenary Hall, Palamcottah, along with the monthly meeting of the Association. Members numbering 75 including some lady doctors gathered from all parts of the District. Some of the officials and non-officials were also present. Lieut. Col. K. V. Ramana Rao, I.M.S., District Medical Officer, Masulipatam, was present on the occasion. After tea and sweet melodious vocal music by M. R. Ry. V. Venkateswara Iyer, Avl., B.A., B.L., of Ambasamudram and Mrs. Shastry, wife of the District Medical Officer, the meeting began under the presidentship of D. D. Warren, Esq., I.C.S. Collector of Tinnevelly.

Lieut. Col. L. S. Shastry, I.M.S., the President, welcomed the gathering.

A very interesting and authoritative account of the History of the inception and evolution of the Madras Medical College and a stirring appeal for its support was prepared by Dr T. N. Govinda Ayyar, M.B. & C.M., and read out by Dr. P. Janardhana Rao, L. M. & S., Ambasamudram. Lieut. Col. K. V. Ramana Rao, I.M.S., joined in paying a high tribute to the teaching and training of the Madras Medical College and said that the 'Madras' men are second to none, and can compare very favourably with any other medical men in the world. Dr. Appavoo Pillai, L.M. & S., who joined the Medical College 51 years ago, traced the development of Medical Science and offered thanks to the non-medical gentry who graced the occasion with their presence. Mr. Avudiappa Pillai, B.A., B.L., Public Prosecutor, expressed on behalf of the non-medical public, his appreciation of the good work of the Medical Profession and thanked the President and members of the Tinnevelly District Medical Association for their courtesy in inviting them to join the Centenary Celebrations.

Mr. D. D. Warren, I.C.S., expressed his deep appreciation of the good and systematic work of the Tinnevelly District Medical Association under Colonel Shastry's guidance, in promoting comraderie and esprit-de-corps among the various grades of medical men, in promoting their knowledge and in organising Health Exhibitions. He congratulated the President and members of

the Tinnevelly District Medical Association on the happy idea of celebrating at Palamcottah the Centenary of the Madras Medical College and wished the College every success.

At the beginning of the meeting resolution of condolence and sympathy was moved from the chair and passed *nem con* all the members standing, in connection with the sudden demise of Dr. G. S. Krishna Ayyar of Pettaikulam.

The Tinnevelly District Medical Association Monthly Meeting

The ordinary monthly meeting of the Association was held under the Presidentship of Lieut. Col. T. S. Shastry, I.M.S., Dr. N. Isaac, L.M.P., the Secretary, read the minutes of the last meeting held at Tuticorin in September last, which were passed. Dr. Ian M. Orr, M.D., CH.B., (Glas), F.R.C.S (Edin), delivered a most interesting lecture on "Orthopaedic and Plastic Surgery" wherein he explained most lucidly by means of X-Ray pictures and illustrations, the main advances in Bone and Joint and Plastic Surgery outlining Winnett Orr's and Bohler's and Gillies's poch-making methods. Dr. Miss. Lazarus, L.M.P., gave an interesting and exhaustive lecture on "Uterine Fibroids." The meeting proper was very instructive and informing.

Colonel Shastry, I.M.S., offered thanks to the lecturers, to the non-member visitors, and to the organisers and brought the meeting to a close after a common dinner.

Central Medical Association of South India, Trichinopoly

A meeting of representatives of District Medical Associations of Tinnevelly, Chettinad, Madura, Trichinopoly, S. Arcot, and Salem was held at 4 P.M. on Saturday the 19th October '35 in the Pethachi-Hall, National College, Trichinopoly.

It was unanimously resolved, that the above Association be formed representing as many District Medical Associations of South India as possible. The Coimbatore District Medical Association had written approving of the formation of the Central Medical Association and agreeing to be a member thereof.

It was unanimously resolved that all those present then with power to co-operate do form the Executive committee.

Dr. C. E. R. Norman was unanimously elected as the President and Dr. P. A. S. Raghavan as the Secretary of the Central Medical Association. A Sub-committee consisting of the President, the Secretary and Capt. Sangham Lal, Dr. R. Kalamegham, and Dr. R. Sambasivan, with power to co-opt was formed to draft the rules and bye-laws for circulation amongst the various District Medical Associations for approval.

The Trichinopoly District Medical Association (Registered.)

A monthly meeting of the above Association was held at 5 P.M., on Saturday the 19th October '35 at the Pethachi Hall, National, College, Trichinopoly when about 60 members were present. Medical officers of the Srirangam Government Hospital, were 'At Home' and Dr. C. E. R. Norman presided.

Dr. Y. G. Henry of the Fort Railway Dispensary demonstrated an interesting case of Chenopodium poisoning in a child aged two years. Dr. Raghavan read extracts from Sajou's on the toxicology of chenopodium. Dr. Narasimhalu Naidu of Siruganoor gave his experiences of a similar case of chenopodium poisoning. Capt. Sangham Lal, demonstrated two cases :—one of Pancreatic cyst operated upon by him some time back and another of a tumour of the jaw which is awaiting operation.

Dr. Raghavan delivered a lecture on 'Electro-Therapy' explaining the various diseases in which electro-therapy was useful or acted as a specific. The lecture was accompanied by the demonstration of the working of various machines and was much appreciated.

Dr. T. N. Subramanyam and Dr. R. Sambasivan gave their experiences of the specific action of Diathermy and ultra-violet-ray in cases of Pneumonia and Erisepalis respectively.

In his concluding remarks Dr. Norman made a few remarks about the various cases demonstrated and with a vote of thanks to the Lecturer, the Hosts, and the Authorities of the National College, for lending the Hall, the meeting terminated at a late hour.

BOOK REVIEWS

Modern Treatment in General Practice, Volume II.—*Edited By C. P. G. Wakeley,* D.SC., F.R.C.S., F.R.S.E. 382+xxvii pages. Illustrated. Butterworth & Co, (India) Ltd.

This is the second of two companion volumes and consists of forty articles on various aspects of medicine, surgery, gynaecology and paediatrics by distinguished authorities. These appeared weekly in the well known Medical Journal "The Medical Press

and Circular" and as a result of popular demand are published in book form. Sir William Willcox writes on gastric ulcers, Sir Harold Gillies on the repair of facial injuries in road accidents, Lockhart Mummary on cancer of the rectum, Hamilton Bailey on acute retention of urine, Burrell on asthma and many other distinguished writers on equally important subjects. Most of these articles are written in a brief and simple manner, without detriment to the matter. The illustrations are very good and the printing and general get up of the book is commendable. In a book which is composed of articles as they appeared in a medical journal, arrangement of the subject matter is not possible; but apart from this very minor defect we have nothing but praise for this very useful book, which we wholeheartedly recommend to the general practitioner and medical man who has no time to attend refresher courses but who still wants to keep himself abreast of the times.

The Indian Dental Review.—*Edited By M. K. Patel*, D.D.S.(Penna, U. S. A.), F.I.C.D., Dr. Med. Dent. (Germany). Published by the Indian Dental Review, Karachi, India.

This is a quarterly journal of practical dentistry devoted to the advancement of Dental Science in India. The present number is Vol. ix, No. 3 and contains many useful information. Highly practical and instructive articles are written by Howard R. Raper, D.D.S., Israel Nathanson, D.D.S., Sterling V. Meax, D.D.S., and Bernard B. Badanes, D.D.S., Ph.G. The printing and get up is good. We are sure it will be useful to all dental students and practictioners.

CORRIGENDUM

'The Antiseptic', October '35 issue page 722, under the heading "Relapse" line 7, *for* 'Palentol' *read* 'Pabutol.'

INDEX TO ADVERTISERS.

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The Antiseptic

A Monthly Medical Journal

Edited by

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

CONTENTS.

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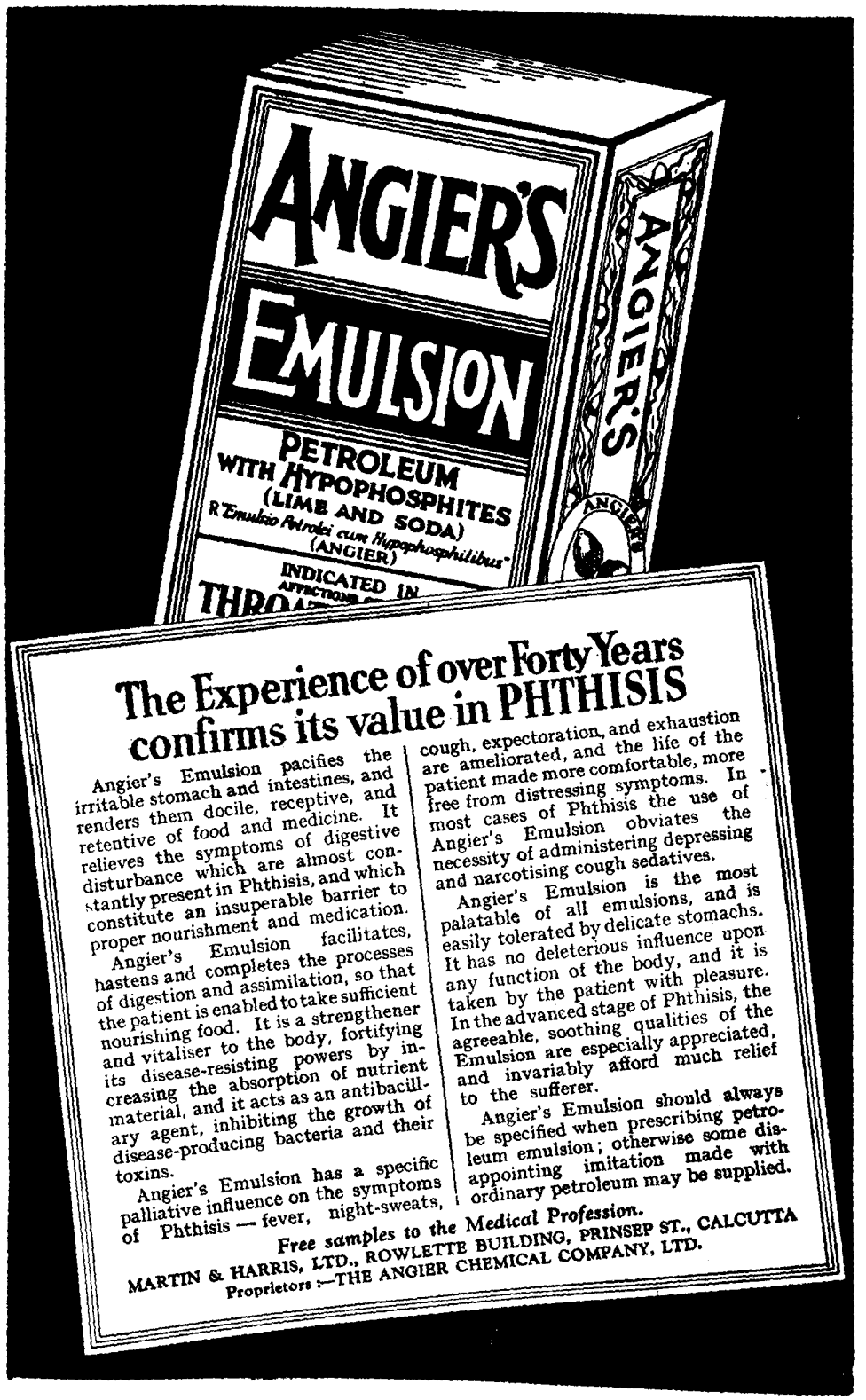

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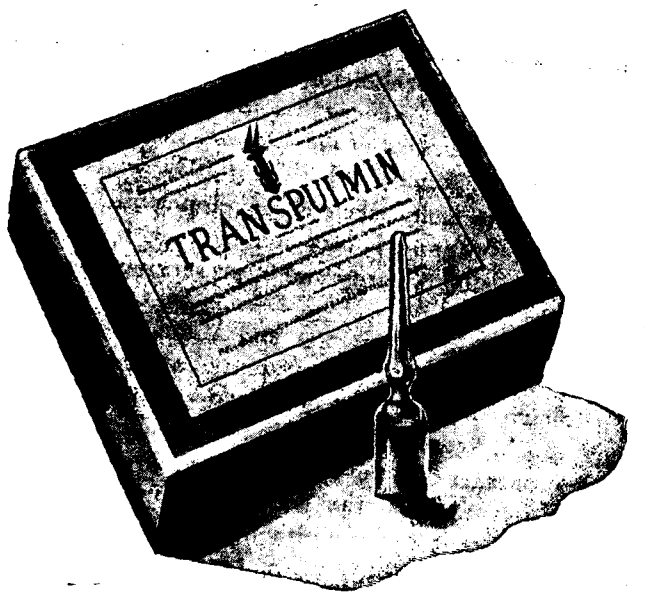

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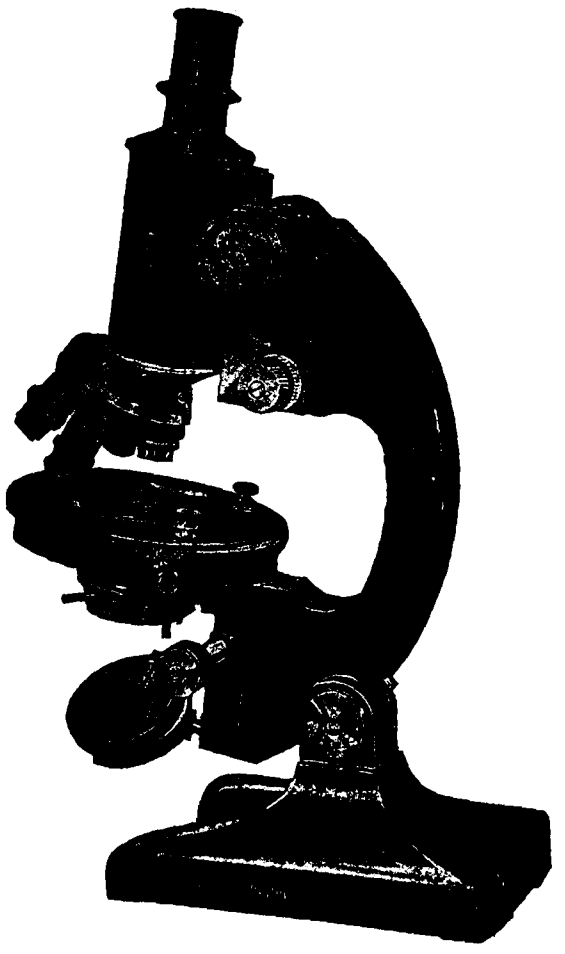

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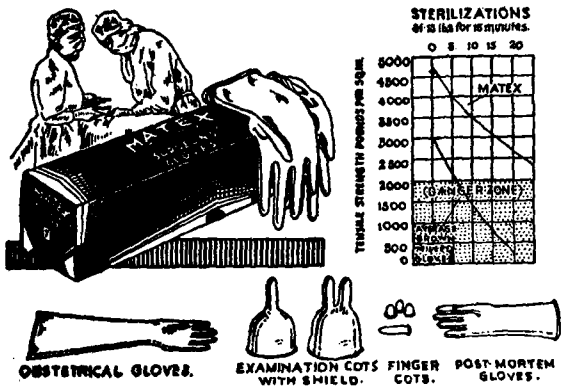

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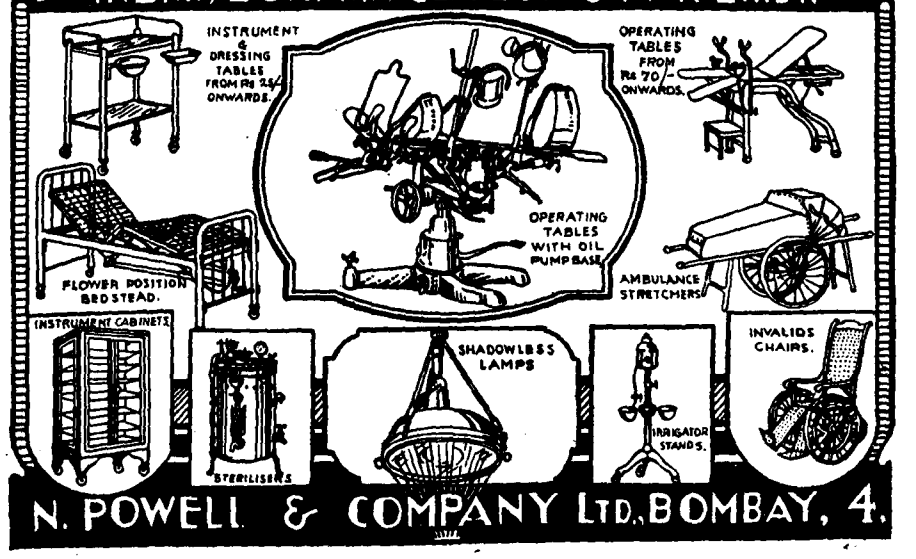

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ORIGINAL ARTICLES

On the Mass Chimioprophylaxy of Malarial Areas and its Practical Results

BY

COL. I. FROILANO de MELLO,

Director-General of Medical Services, Portuguese India, Nova Goa.

THE chimioprophylaxy through mass quino-plasmoquination of rural areas has been extended in our territory to a number of villages ; (provinces of Sanguem, Quepem and Canacona). Its practical results, the difficulties for its execution, and the lines to be followed by a malariologist working in a region like this part of our territory—(mountains and valleys everywhere, breeding places of anopheles in the valleys and borders of the rivers, rudimentary stage of civilisation and houses with the roofs covered by palm-leaves), we will try to state according to our experience during two epidemic seasons.

But before dealing with this subject we may by way of introduction make the following remarks :

1. We have firstly studied the action of the drugs employed in this campaign on malarial patients in our wards in Hospital. The results of these experiments were :

(1) Plasmochin kills all forms of Human Plasmodia, excepting the schizonts of *Pl. falciparum.*

(2) On a daily dose of 3 centgr. per adult, for 8 days,

* Specially contributed to 'The Antiseptic'.

Plasmochin is efficacious and does not show any disagreeable symptom.

(3) Unlike quinine, plasmochin acts on all forms of human plasmodia.

(4) Atebrin is active on all forms of human plasmodia except on gametocytes of *Pl. falciparum*. Its action seems to be superior to quinine, but seems to be more toxic than plasmochin (?) or at least more disagreeable symptoms are produced than by plasmochin. The price of atebrin being highit cannot be employed for the present in a mass prophylactic campaign.

2. As far as concerns relapses, these undoubtedly occur after the use of such synthetic drugs, but in a relatively reduced number compared to the relapses after the use of quinine. One must note that in many cases it is not possible to affirm with perfect surety whether the so called relapse is indeed a relapse or a reinfection.

3. These experiments made in Hospital were repeated in field, in a very highly malarious village, practically isolated from others by natural barriers (mountains and valleys) and whose whole population was submitted, under a rigorous, almost military control, for a mass treatment by quinine+plasmoquine, during the pre-epidemic season. We tried to destroy the adult anopheles by fumigation of the huts (results ?) and to kill the larvae on the borders of the river—the only breeding places of *A. listoni* found in this village as far as one kilometer around the village, through three sessions of Paris green, one 8 days before the plasmoquination, the second during the plasmoquination and the last 3 days after the second. This *primary* treatment was followed by a *secondary* and *complementary* treatments of pl+q. given as follows.

Doses and mode of Administration

Primary treatment during 8 days—3 tabloids of pl. compound (each tabloid contains 0.01 pl. + 0.125 quinine sulph.) + 0.125 quinine sulph. or *in toto* every day 0.03 pl.+0.5 quinine sulph. (adults); 2 tabloids pl. c.+0.125 quinine sulph. every day (adolescents 11—18 years); 1 tabl. pl. c. the 1st day, 2 tabl. the 2nd day, 1 tabl. the 3rd, 2 tabl. the 4th day and so on (children 5—10 years); 1 tabl. pl. c. (children 1—5 years); *secondary treatment*: 2 days rest after the *prim. treatment*; 4 days of treatment ut supra; 4 days rest; 4 days treatment; 7 days rest; *complementary treatment*: one weekly dose ut supra during three months in the pre-epidemic season.

We had taken particular care of treating strongly every new-comer to this village and such a precaution is essential to avoid a failure in the mass treatments of malarial localities.

The results of this experiment were splendid: the splenic index fell down from 82 to 27 and in the next epidemic season the people of this village accustomed to see every day at least 50% of its inhabitants shivering with malaria, had scarcely 3 cases of fever [one was due to grippe and 2 to paludism.]

On these acquired facts was founded our antimalarial campaign on large scale. Due to financial reasons we tried first to treat the localities with a spleen index over 50 %, then those with spleen index from 31 to 49%. For the first ones the following formula was adopted: *primary treatment* during 8 days at 0.02 pl.+ 0.5 sulph. q., followed by a *secondary treatment of 12 weeks* at one weekly dose of pl+q. For the second localities we were limited, on financial grounds, to make *only a primary treatment.*

The villages with a spleen index under 30% were not considered in our first prophylactic campaign, their malarial cases being treated as intercurrent diseases of a therapeutic rather than a prophylactic dominion.

What are the practical results of this Campaign?

We will resume only the data concerning the villages whose plasmoquination was made two years ago, and is where two epidemic seasons passed after the mass treatment of their inhabitants.

Village Kalem.—Population 240: (30 adults, 60 children 1—5 years, 50 children 6—10 years, 100 adolescents 10—18 years.) Plasmoquin comp. 1868 tabl. Bi sulph. q. 700. No toxic symptom. No secondary plasmoquination. Results: good in the 1st epidemic season, but not maintained in the 2nd epidemic season: however, the attacks were less in number.

Village Curpem.—Population 434 (38 children 1—5 years, 58 children 6—10 years, 83 adolescents 10—18 years). *Primary plasmoquination*, pl. com. 9389 tabl. Bisulph. q. 2154. Rare accidents: colics, cyanosis ending rapidly after the of the treatment. *Secondary plasmoquination* popul. 430 (1st month) 394 (2nd and 3rd month). Pl. comp. 1162 tabl.; Bisulph. q. 1790. No accidents. Results: first epidemic season—rare cases of fever. 2nd epidemic season—some fevers, less abundant than before. Index before treatment 66%, after the treatment 20.7%; at the end of the 2nd epidemic season 48 %.

Village Colomba.—Population 524 (71 children 1—5 years,

72 children 5—10, 46 adolescents 11—18 years). *Primary* and *Secondary* pl. comp. 10208 tabl. Bi sulph. q. 2640 Same results as in Curpem. Index before treatment 70% ; at the end of the 2nd epidemic season 32%.

Village Vinchundrem.—Population 244 (23 children 1—5 years, 26 children 6—10 years, 34 adolescents 11—18 years). *Primary* and *Secondary* pl., this one limited to 170 persons only. Pl. comp. 4200 tabl., Bisulph. q. 1200. Same results as supra.

Village Jacqui cum Rundem.—Population 96 (8 children 1—5 years, 8 children 6—10 years, 22 adolescents.) Accidents : two severe renal troubles, ameliorated after diuretics. *Primary* and *Secondary* Pl. pl : comp. 2.064 tabl Bi sulph. q. 548. Almost the same results.

Village Netorlim.—1st part, Population 475 (41 children 1—5 years, 35 children 6—10, 75 adolescents 11—18 years). Pl. comp. 11280 tabl. Bisulph q. 3039. *Secondary* popul. 665 (62 children 1—5 years, 49 children 6—10, 102 adolescents 11—18 years). Pl. com. 12,860 tabl. Bisulph. q. 3510. Results : whilst before treatment 50% suffered from fevers in epidemic season, after treatment only 20% were reported sick in the same season

Village Netorlim.—2nd part, population 210 (22 children 1—5 years, 18 children 6—10 years, 39 adolescents 11—18 years. Pl. comp. 3410 tabl. Bisulph. q. 888.

Village Nundem.—Population 190 (26 children 1—5 years, 17 children 6—10 years, 41 adolescents 11—18). Pl. comp. 3224 Bisulph. q. 760.

Village Verlem.—Population 275 (24 children 1—5 years, 19 children 6—10 years, 51 adolescents 11—18 years). Pl. com. 5632 tabl. Bisulph. q. 1339.

Villages Curdi, Naiquinim, Dongor, Bati, Cumbari, Viliena and Sinonem.—Population 778 (61 children 1—5 years, 58 children 5—10 years, 92 adolescents 11—18). Pl. comp. 9341 tabl. Bisulph. q. 3125. Results : diminution of fever about 50% in the first epidemic season, the number of fever increasing in the second epidemic season.

In the department of Quepem only primary plasmoquination was done during 8 days in the villages Botul, Cananguinim, Naqueri, Velimpa, Assody and primary and secondary pl. in the villages Sirli, Rovaporna, Padely, Quedem. In all 1214 inhabitants (166 children 1—5 years, 181 children 6—10 years, 243 adolescents 11—18 years). Pl. com. 28204 tabl. Bisulph. q. 6,104.

In the department of Canacona the following villages were submitted to a full treatment (primary and secondary): Murgavol. Popul. 12 ; Cusquem popul. 38. Pl. comp. 1.600 tabl. Bisulph q. 250.

Consulting all the reports of my health officers we can resume the work done in the following way :—

(1) We submitted to mass treatment 5095 inhabitants from which 3914 registered for a full treatment and 1181 for a primary plasmoquination only.

(2) From these 3914, 500 or nearly one eighth did not follow the secondary treatment.

(3) We have already spent almost 150,000 tabloids of pl comp. and nearly 32,000 of Bisulph. q.

(4) Among the persons who followed the treatment 356 came for relapses. But this number must be lower than the real number of relapses, because these people do not come for consultation unless the disease renders them unable for work. In any case these relapses gave us an expense of 3,000 tabl. of pl. and 2,000 tabl. of Bi sulph. q.

With such a large consummation of drugs in the course of two years, only for prophylactic purpose, we are able to give a general sketch on the value of such a chimioprophylactic campaign. We will try to formulate the following statements.

I. Mass quinoplasmoquination of rural areas can never be practically accomplished *in toto*, in the whole population of the same area as it can be done in a locality submitted to a military control. By ignorance, negligence or indiscipline of these almost analphabet inhabitants, many do not receive any treatment at all, others receive it in insufficient doses. But notwithstanding such insufficiency, chimioplasmoquination diminishes considerably the incidence of fevers and maintains these good results in the epidemic season following the treatment when this treatment comprises a *primary plasmoquination* during 8 days, followed by a *complementary treatment* of one weekly dose during 12 weeks.

II. If these *primary* and *complementary* treatments are indispensable for villages possessing a spleen index over 50 %, they are also necessary for those possessing an index between 31 and 49%. The Experience has shown that a *primary treatment alone* in such villages is practically without effect in the post-treatment epidemic season. The reduction in the spleen index cannot be obtained but after primary and complementary treatment combined.

III. The good results of quino-plasmoquination, observed in the first epidemic season after the mass treatment do not however

continue the same in the following years and this is due to many causes.

(1) Many inhabitants do not accept the treatment during the prophylactic operations ;

(2) Cases of relapses are not notified, the patients generally do not attach any importance to these small fevers to which they are so accustomed and which appear now occasionally, after a very long interval ;

(3) Immigrants coming from neighbouring non-treated villages and specially the malarial reservoirs, while passing through these villages, stay there but for a short while, often for a nocturnal shelter.

IV. In regions as those described here, among ignorant, superstitious and almost analphabet people, the experience has shown that malarial chimioprophylaxy (quino-plasmoquination as principal measure ; larval destruction by Paris green as complementary measure) will not be a failure when subordinated to the two following factors :

(1) *Mass treatment.*—Even with the practical imperfections already quoted and impossible to be controlled and overwhelmed—of the population of all villages showing a spleen index superior to 30% by a *primary treatment* of pl.+q. followed by a *complementary treatment* during 12 weeks at one weekly dose.

(2) Continue the good results of this measure by an ulterior medical assistance, even through qualified nurses, in order that every relapse or new attack of malaria may be rapidly treated, taking the patients in their own homes and not waiting till they come to the dispensary.

Following this scheme we are going to create many antimalarial zones in our departments of Novas Conquistas in order that all the villages contained in each zone may be visited twice every month for finding out and treating the patients with plasmoquine and quinine, mixed, if necessary, with decoction of common plants in which the indigenous trust so much. May we hope that this new phase of chimiotherapy will educate and civilize the people, maintaining at the same time the good results of chimioprophylactic campaign in which we are spending so much money and energy.

Some Aspects of Bubonic Plague*

BY

Captain V. G. SHROTRIYA, M.B., B.S., A.I.R.O.,

Sangli, (S. M. C.)

No other disease proves to be so trying to the medical practitioner who has freshly put up his brass-plate, as the bubonic plague. It has been thoroughly studied in its epidemical aspects but has defied all efforts in finding out a specific remedy to effect its cure. The practitioner finds himself all helpless to control the fever and he can do very little to alleviate the agonising pains of the bubo, and the patient is carried off from the world before the Doctor refers to the books on the tropical diseases whilst his more senior colleague from his own collective experience of some decades does not think the case to be worth treating. Indeed, with our present knowledge of the causes of this disease and the clinical manifestations thereof, the defensive mechanism which we are, at present, armed with, falls short to give some resultant benefit to the patient. Apart from this disproportional factor one has, however, to stick to some methods of treating the disease which might be hotly disputed by others.

After an incubation period of 2 to 10 days the patient suddenly develops fever without any definite rigors but with a sense of chilliness and the temperature soon shoots to 103° to 104°F. The glands in the groin or armpit begin to show signs of inflammation. A boy, ten years old, attended the school as usual but returned from the play-ground with small fever in the evening. At 9 P.M. his temperature rose to 103° F. with an inguinal bubo on the right side and he went delirious at midnight

It is needless to go into details as regards the signs and symptoms of a bubonic case. During epidemics it presents no difficulty if there be a high fever, lymphatic enlargement with acute pain, congested eyes, extreme prostration and definite history of rat-fall in the locality. But, sometimes, the relatives of the patient will vehemently contradict you—still more some bold neighbours will go to the extent of challenging your opinion and you will be at your wit's end to decide whether to report the case to the Municipality or otherwise. They will flatly decline to give the history of rat-fall and will contribute the swelling of the glands of the patient whom you are examining, to some fresh accident or to some cock and bull story. It should not be, however, forgotton

* Specially contributed to 'The Antiseptic'

that there is a high tendency amongst the public to hide the disease as it entails concomitant results of evacuation and disinfection of the houses by the local bodies when a report of such an attack is made. Such flimsy excuse should, on no account, be taken into consideration whatever station the persons, may attain in society. Venereal buboes at times come to rescue the neighbours to avoid prophylactic inoculation and disinfection of the houses. The practitioner may be put on a false scent if he fails to examine the genital parts of the patient for a sore or any pathological discharge. Acute tonsillitis with swelling and pain at the angle of the lower jaw may especially in children simulate the bubonic affection of the neck. Neglected wounds or uncleanliness of the scalp may inflame the neighbouring glands below, with small rise of temperature. Searching inquiry should, therefore, be made before reporting the case. Supratrochlear and even popliteal buboes are not infrequently affected by the B. Pestis although it is more common to find them in the femoral and axillary regions. The inflammatory process is so acute that the neighbouring viscera may be even affected. This is so especially in the neck. The inflammation is so great and extensive that the adjacent structures, the wind pipe and the food passage are obstructed. There is difficulty in breathing. The whole face is swollen so much so that the individualistic features could be hardly recognised.

As to the line of treatment to be adopted in case of a bubonic plague, one is likely to meet with wide variation of drugs, as no definite medicine, either in the form of serum or a chemical substance has been found out. Metallic preparations administered per mouth have no bactericidal action on the B. pestis. The endotoxin of the bacillus pestis has a great tendency to cause haemorrhage in all parts of the body. Whatever the nature of these toxins may be, it uses the reserve salts of the blood producing high toxic condition. The heart muscle suffers most from these toxins, none the less, than the central nervous system. The adrenal gland is generally the first to be affected along with the other endocrine glands which results in low blood-pressure. The reserve margin of the cardiac muscle is at stake. The medicines given orally fall short of any beneficial results on the toxic condition caused by the metabolic products of the bacillus pestis. It is of utmost importance to afford sufficient time to manufacture antibodies to encounter the toxaemia and in due course of time nature musters strong its vital forces to arrange a strong line of defence in the form of immunity. During this interval the cardiac muscle and the C. N. S. essentially require protection from the

damaging effects of the toxins. This naturally leads one to detoxifying the blood in the initial stage of the disease.

A brief reference to some drugs which have been occasionally used to act in a specific way is quite essential. Even "914" injections have been tried in this disease but in vain. Non-specific-protein therapy is proved of no use. Mercurochrome or "914" does not possess any bactericidal action on the B. Pestis. Camphor in oily solution given hypodermically during the last stage of the cardiac failure is quite useless. It is too slowly absorbed to effect any action. Cardiazol may prove of some value under such circumstances. Strychnine, either in the form of injections or oral use, has been advocated by some but the writer is against giving it as a routine measure and rightly its inclusion has been dropped in the 'Tropical Disease' by Manson (Edition 1922 and 1929—compare). Iodine I. V. has not given entire satisfaction to its advocates and is likely to lose its place in the therapeutics. I have been using Idomethylate of Hexamethylene tetramine for some years past. Its action has been found of some benefit. This drug has been used extensively in the Paris Hospitals in septicæmic conditions of the blood. It is to be given into the vein and if so given has some detoxifying properties. Its action may be due to the formation of formic acid in the blood in sufficient quantities to neutralise the endotoxins of the B. Pestis or through the cleavage of the idomethylate owing to the dynamic chemistry of the blood. Thus the toxic condition has a tendency to go downhill. This is marked by the improvement in the clinical signs and symptoms after one or two injections of this drug. The temperature slowly drops down and delirious condition clears very soon. The experience with this drug is that if the injections be given for three days or so, the temperature comes down to 100°F. I repeat the injection if the temperature begins to show some tendency to rise and discontinue if the morning temperature be 98° F. Along with these injections of Idomethylate of Hexamina, digitalis and strophanthus in proper doses and bromides 30 grains per diem are to be given orally. It is essential that the patient sleeps at night and so a dose of Veramon or any such preparation should be given. This regime is very useful as it quiets the patient, eases the attendants and averts the night visits by the practitioners. After a couple of days or so the patient may welcome the prescriber with a gentle and grateful smile on his face in the morning. I never use morphia although it has its own advantages. Those that are using it may do so with some concomitant results. Some practitioners are inclined to make

some fuss about the depressant action of the hypnotics. Those drugs that are distinctly depressant to the cardiac muscle should of course, be avoided. The writer has used the sleep inducing drugs liberally in the epidemics of 1932 and 1934, with good results. Absolute rest in bed should be enforced on. Nursing the patient also requires scrutiny at the hands of the physician. Local treatment of the bubo resolves itself into two different lines of treatment. One is to incise the bubo or to inject some medicine into it; the other is to leave it to run its own natural course. It is far better to resort to the latter than to any surgical interference. Locally it should be, however, dressed with hot poultices and the dressing should be changed every six hours. Local anodynes should be applied to relieve pain. If suppuration occurs it should be opened and dressed under antiseptic precautions. If the patient is treated with the injections of Idomethylate the bubo is generally absorbed.

In conclusion, the patient suffering from a bubonic attack treated with the I. V. injections of the Idomethylate of Hexamina with cardiac tonic, has better chances to fight with the disease; the bubo has a tendency to be absorbed while the recovery tends to be uneventful. I have treated a few cases on the above lines during the epidemics of 1932 and 1934 and have obtained better results in the early part of the epidemic when the mortality was high.

References :—

The Tropical Diseases—by Manson. Edn. 1919, and 1929.
Infectious Diseases and other Fevers in India. Edn., 1929—by Dr. P. T. Patel, Bombay.
Medical Guide—by Omera.
Medical Annuals.
Plague Register of the Sangli Municipality.

Skin Diseases of the Tropics*

BY

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MANSON, in his book on Tropical Diseases, has very ably shown why certain diseases are peculiar to the tropical climate. Among others, he has given importance to the following circumstances :—

(1) In those diseases, which are caused by germs, the latter need a medium—air, fluid etc.—of suitable temperature in order to travel from one host to another. Certain germs prefer hot climate and hence the disease they cause are common in the tropics.

(2) Certain disease producing fungi can grow on the skin in the presence of high temperature and moisture, such as Tinea Imbricata.

(3) Certain germs are carried to the man by insects etc., which are found only in the tropics.

(4) Certain germs need an intermediate host for their development and this intermediate host is found only in the tropics.

(5) Certain diseases are given to man by animals of tropical climate.

These circumstances do quite well for the causation of certain skin diseases which are more prevalent in the tropics.

The skin diseases, which come under this head can be divided into two classes :—

(1) Those that are the skin manifestation of some general tropical diseases, such as leprosy, cutaneous kala-azar, pellagra etc.

(2) In the second group fall the true diseases of the skin, namely, prickly heat, boils, mycetomas, dhobies' itch etc. The first group is also being considered here, so that the cutaneous manifestation of the diseases of this group, may not be mistaken for some true skin diseases.

Kala-azar.—In kala-azar there are three varieties of skin, manifestation, namely, black pigmentation, petechiæ and oriental sore.

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* Specially contributed to 'The Antiseptic'.

Black pigmentation of the skin and petechiæ are among the signs and symptoms of kala-azar. As a matter of fact it is the pigmentation that is responsible for the name of the disease. This black or earth-grey pigmentation is generally seen on the hands and feet. Petechiæ or pin-point haemorrhages may also be observed anywhere in the skin. Irregular chronic fever, enlargement of spleen and emaciation can easily suggest the diagnosis.

Oriental sore or cutaneous Leishmaniasis is not a manifestation of kala-azar, though its cause is also a species of Leishmania. It appears as a papule, which shows after some time scale formation. Ultimately it breaks down and becomes an ulcer. Histologically the papule shows infiltration of the dermis by round granulation cells, which lie about the bloodvessels and sweat-glands.

In the early stages of the sore there is itching. The sore may be single or multiple, and situated mostly on the hands, feet, arms, legs and face. The sore has to be differentiated from other granulomas, such as lupus vulgaris, tertiary syphilis, desert sore, blastomycosis. Diagnosis is made by the discovery of Leishman-Donovan bodies in the lesion.

Pellagra.—In many cases the skin lesions may be the earliest manifestations of the disease. The first lesion is erythema on the parts exposed to the sun. They are irregular in extent, but symmetrical. Erythematous patches behind the mastoids, around the neck and across the nose are very characteristic. Over the erythematous parts petechiæ or vesicles may appear. After some time desquamation takes place, leaving behind a rough skin. Sometimes it becomes difficult to differentiate these lesions from those of eczema, lupus erythematous, dermatitis and other erythematous conditions. Nervous and mental symptoms together with the history of recurrences gives the clue.

Leprosy.—The early skin manifestations of this disease are macular; they may be red, pigmented or pale. Whenever we find these eruptions, we see loss of hair too. The regions most frequently affected are supraciliary region, nose, cheeks, ears and extensor surfaces of the limbs. Later on we get what is called the nodular type of leprosy. In this we find deposits in the skin, known as lepromas. These are anaesthetic, devoid of hair. Later on these lepromata break down and form ulcers.

Dhobies' itch.—(Tinea cruris). This is the common variety of ringworm seen in the tropics. This is caused by Epidermophyton inguinale. The most affected parts are those which remain moist and hot, such as groin, regions between thighs and

scrotum, umbilicus, axillae, skin between penis and scrotum, and anus. In hot weather the disease is very prominent. Part looks raw and itching is severe. Even without any treatment the skin may become dry and scurfy in winter and the fungus may remain quiescent, thus giving rise to the notion that the patient is cured of the disease. At the approach of summer it recurs.

Treatment.—If the skin is raw and inflamed, first thing to do is to apply lead or calomine lotion to get rid of the inflammation. If the skin is dry and scurfy, it should be thoroughly rinsed with hot water and soap. In thick-skinned persons strong Tr. Iodine applied at night for two or three days brings about a speedy cure. It is, of course, painful. Usually I use the following ointment:—

℞

Acid salicylic	...	gr. xxx.
Acid benzoic	...	gr. xxx.
Resorcin	...	gr. xx.
Hydrarg Ammoniata	...	gr. v.
Vaseline	...	ʒ iv.

This ointment gives very good result, but its action is slow and it takes about 7—10 days for the cure. Chrysarobin or chrysophanic acid is excellent remedy, but it has its defects too. It stains the linen and the skin and it is very irritating. Bayer Company have placed on the market chrysarobin without all these defects under the name of 'cignolin'. Ihave used it in many cases and have found it really very efficacious. 3—5 grains of this can be added to an ounce of the above ointment.

Pityriasis Versicolar is also a very common disease of the tropics. Many people suffer from it, but they do not bother, because it does not give rise to much inconvenience or discomfort. The lesion of this disease is pale, fawn coloured, scurfy. It is not itching. The lesion may be of the size of a millet or many lesions may coalesce and may cause extensive areas. The cause is a fungus, called 'Microsporan Furfur'.

Treatment.—Tr. Iodine may be painted over the parts affected. Cignolin ointment is also effective. But the best and the cheapest method is as follows: Take a wide mouthed bottle and fill it half with photographic hypo. Then fill it to the mouth with water. Keep it for a day. We have now got a saturated solution of hypo. Apply this to the parts affected every night. Alternatively sulphurous acid may also be applied.

Mycetoma also known as Madura foot, is common in Madras and the Punjab. It usually affects the foot, where we see only degeneration of the tissues. This gives rise to a swelling, which later on ruptures and discharges an oily purulent, sometimes bloody fluid. Treatment for this condition is only amputation.

Prickly heat is so well known that it hardly needs any mention here. As regards its treatment, the first thing is to avoid perspiration. This is not done so easily as said. Frequent change of under-garment and applying some dusting powder after bath go a long way towards this aim. The dusting powder may consist of starch, boric acid and zinc oxide in equal parts. For the actual condition, the following powder may be used :—

℞

Sulphur sublimatum	...	80 parts.
Calamine	...	10 parts.
Zinc oxide	...	5 parts.
Acid Salicylic	...	5 parts.

For itching a lotion of calamine, zinc oxide, carbolic acid, Liq. carbonis detergens may be used. In our village, people bathe the body with water in which neem leaves have been boiled. In many cases it gives much relief.

Folliculitis.—This is also a very common affection of the skin. In my practice, 10% of skin cases suffer from this condition. This is due to infection of the hairfollicle by staphylococci aures; generally the thighs, arms and lower abdomen are affected. In the beginning we see small papule with hair in the centre. Later on the papule becomes a pustule. This is much more mild than furuncles. The following ointment has given good result.

℞

Beta naphthol	...	gr. xxv.
Sulphur Sublimatum	...	gr. 50.
Balsam Peru	...	♏ 50.
Bismuth Oxychloride	...	gr. xxx.
Paraffin Mollis	...	℥ i.

Scabies.—Scabies is not a purely tropical condition. But it is so common that a word about its treatment will not be out of place here. Generally Ung. sulphuris is used for this condition. But I use the following ointment, which I have found more effective.

℞

Acid carbolic	...	♏ x.
Sulphur precip.	...	gr. x.
Resorcin	...	gr. x.
Vaseline	...	℥ ii.

Acid carbolic is antipruritic and it also checks the growth of pyogenic organisms. Resorcin helps the action of sulphur. If pustules have already formed 10 gr. hydrarg ammoniata may be added to the above ointment.

Early Diagnosis and Prevention of Leprosy*

BY

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WE are living in an age in which the old ideas regarding the so-called loathsome disease, leprosy, is rapidly changing. During the last decade or so, an entirely new situation has arisen regarding the disease. From time immemorial, this disease was considered loathsome, and a leper in the old Testament time had to quit his home, kinsmen, and community, and live outside the camp. This view was not much changed even in the middle ages. But at present the whole situation is completely changed. The out-look of this disease is so changed that instead of trying to get rid of the lepers, we, at present try to stamp out the disease. Once upon a time, a leper, who was in the most infectious stage of the disease lived and moved with the healthy, and was driven out only when he reached that stage, in which the extremities began to mutilate. But we know now, that it is in this last stage that a leper is the least infectious, and thus is least dangerous to the public. The burnt out cases can safely mix with the healthy without the least fear of spreading the disease to them. The disease, which, at one time, was considered to be incurable, is at present, considered to be curable, if the diagnosis is made early and treated thoroughly. Early diagnosis, is therefore, an important matter from the standpoint of prevention of the disease. If the early cases are picked out in time and treated, they may not pass into the cutaneous stage which is considered to be the most infectious stage of the disease. Thus, by decreasing the number of the cutaneous cases, we decrease the number of sources of infection of leprosy. Early diagnosis of leprosy, is therefore, the first step in the prevention and spread of the disease.

It is also interesting to note, that just a decade ago, diagnosis of leprosy was done depending only on those signs and symptoms

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as described in the text books, and taught in the medical schools and colleges. In the general clinics the early cases were not diagnosed or recognised. But, at present, such early cases are seen daily in the general clinics. We may also notice, that the attitude of the lepers is entirely changed these days. They come forward and take the treatment willingly, instead of hiding themselves in shame and fear, as they did before. We may think that the diagnosis of such early cases is the work of the specialists and experts. But I think that every medical man, whether in hospital or private practice, should be able to make the diagnosis of such early cases. I will, therefore, deal with those signs and symptoms that appear early in the disease, and which are not generally recognised.

The two cardinal points in the diognosis of leprosy are ;

(1) The presence of mycobacteria lepra in the skin and the mucous membrane.

(2) The presence of superficial anaesthetic areas. As in tuberculosis, there is a stage in the course of leprosy, when the causative organisms cannot be obtained from the system by any means that is available at present. An individual may have tuberculosis of the lungs without being able to find B. tuberculosis in the sputum. Similarly in leprosy the presence of the causative organisms is not the criterion in the diagnosis of the disease. If we fail to make the diagnosis of leprosy before the organisms are found in the skin or the nasal discharge, we will not be doing justice to the patient. The chances of recovery of such a patient is much less than if we had him under our treatment, when the early signs appeared, since the organisms are found in the skin or the nasal discharge during the reactionary stage. It will be a matter of no less importance to know how to make the diagnosis of this disease in the quiescent stage. At this stage, the disease may be latent in the system for a long time, and the subject may not seek any medical aid, or may consult doctor only for some other condition which may be lowering his resisting power. He may at this stage develop some indefinite signs of the disease, or none of those signs may appear till the disease goes into the reactionary stage. In rare cases, the disease may pass from this stage to that of resolution, depending upon the body resistance of the individual, and the virulence of the organisms in the system. After the quiescent stage and before the reactionary, there may appear certain signs and

symptoms, which, though not diagnostic, may be suggestive of leprosy. If we get hold of cases at this stage and treat them we would be accomplishing two things. First, by treating an early case, we prevent the growth of this disease in the system, in other words, we prevent the disease from going into the reactionary stage. Secondly by preventing the growth of the disease in the system we aim at the prevention of the spread of the disease to others. Because, when the patient gets into the reactionary stage he becomes infective, as the organisms begin to multiply in the system during this stage. It is a wise measure, therefore, to recognise all the cases of leprosy in the very early stage and treat them thoroughly.

The following are some of the early signs of leprosy:

(1) Tingling and partial loss of sensation along certain nerves may be an early sign. Patients may complain of feeling of ants crawling on the skin. This sensation may not be constant, but may last from a few seconds to a few minutes. This may be felt along the ulnar, superficial peronial, and the radial nerves.

(2) Dry rhinitis with scab formation and occasional cracks in the nasal mucosa is considered to be one of the early signs. There may be epistaxis but no actual ulcers. The organisms may be found in the secretion only when the disease progresses.

(3) In rare cases one may find trophic blisters of the feet and the fingers of the hands, before any definite signs or symptoms appear. In two of my cases the patients consulted me for the blisters on their fingers. There was no evidence of thickening of the ulnar or the radial nerves, but after several weeks in one case, and months in another, the definite signs of thickening of the nerves and anaesthesia developed.

(4) In very rare cases one may come across with individuals running irregular temperature with indefinite pains in the nerves. If such cases are watched carefully, one may find in course of time, the definite signs of leprosy.

The above four signs are suggestive of leprosy, but are not the definite signs, while the presence of the following signs may be considered to be diagnostic.

(1) *Depigmented patches*:—The appearance of depigmented patches is one of the most constant signs of leprosy. These patches appear on the cheeks, outer aspects of the upper

and lower extremities, on the back, and near the hips, and around the buttocks. They look copper-coloured in dark-skinned individuals, and may or may not be anaesthetic. Erythema and raising of the skin around the margin of such patches may also be seen.

(2) *Anaesthesia*:—This is the most certain sign of leprosy. It is generally superficial and should be tested by light touch test. Anaesthesia may be found in a depigmented area, especially in a chronic depigmented area with healing centre. Often around the spreading anaesthetic patches there may be loss of sensation to heat and cold, which is also considered to be an early sign. Anaesthesia may be along the nerve trunks, which have become thickened, *i. e.*, anaesthesia of the inner aspect of the hand if the ulnar nerve is thickned.

(3) *Thickening of the nerves*:—This sign is diagnostic of leprosy even in the absence of other signs. The nerves that are commonly affected are the ulnar, the peronial, and the great auricular.

(4) *Parakeratosis*:—This is also considered to be another feature of early leprosy. The skin becomes coarse and shiny with distorted appearance of the hair on the skin.

(5) *Anhydrosis* of the affected skin may be considered to be one of the suggestive signs of leprosy. But it is not diagnostic in the absence of other signs. Accompanying this sign there is hyperhydrosis of the unaffected parts.

In the cutaneous type, we may find all the typical signs, such as, erythematous patches, nodules, and the interfollicular swelling. When these signs appear, the diagnosis is not difficult at all. These signs appear when the disease is well developed, and in these lesions the organisms may be found. But the diagnosis may be missed, if, instead of these signs, there is slightly diffused thickening of the skin which attains a shining appearance. On careful examination, in such cases, we may find some definite signs.

It is a question of great difficulty and responsibility to arrrive at the right diagnosis of leprosy in the presence of only the suggestive signs. If we recognise the disease at this stage, we may not only shorten the course of the disease and bring about a cure, but also prevent the spread of the disease. We shall now consider how the difficulty of making an early diagnosis of leprosy be overcome if only the suggestive signs are found.

We have a valuable drug in Potassium Iodide in verifying

the diagnosis when only a slight evidence of the disease is found. It is administered orally beginning with 10 grains dose per day, increasing it every day by 10 grains till 60 grains are given in one dose per day. Then it is increased by 20 grains upto 120 grains, and then by 30 grains upto 240 grains per day. Thus the maximum dose of 240 grains can be reached in two weeks' time. When this drug is administered the patient should be carefully examined daily. If any leprous lesions are present, we may find any of the following reactions before the maximum dose is reached. There may be rise of temperature, or swelling of the skin lesions, or tenderness and pain along the nerve trunks may be experienced. The skin lesions may be exacerbated. All these reactions may disappear when the drug is suspended. So we may corroborate these reactions with our inconclusive clinical signs on the patient. Secondly, this drug may bring about acute coryza, and the organisms may be found in the increased nasal secretion. Thirdly, the sedimentation test done before and repeated during the administration of the drug may show that the sedimentation index goes higher during the administration of the drug.

Leprolin test may also be done, but this test is not so useful as a diagnostic measure but may help in determining the immunity of an individual, or the resistance of the body against the the organisms.

The importance of diagnosis of leprosy in its early stage is that if such early cases are thoroughly treated we may expect a 100 per cent cure. Thus early diagnosis is important from two standpoints; first, from the standpoint of prognosis, and secondly, from the standpoint of prevention. When treating leprosy we have to aim at two points; first, to prevent the growth of the disease in the system; secondly, to prevent indirectly the spread of the disease from one person to another. Early diagnosis and timely treatment therefore, not only checks the growth of the disease but also lessens the chances of spreading the disease. In the early stage of the disease, especially in N_1 stage, the disease is not contagious, but if this stage is allowed to get into the next stages, viz, C_1, C_2, C_3, the disease becomes contagious, and the individual in this stage is a source of danger to the community.

If we want to stamp out this disease from our country, all the lepers who are infective, that is, those who are in C stage, should be compulsorily isolated in the asylums. The early N cases can be isolated in their own homes and treated. It is also absolutely necessary that all the contacts and the relatives

of the lepers should be frequently examined for any sign of leprosy, and treated if found infected. Those lepers who are discharged as cured or symptom-free, should also be examined frequently, as such cures may not be permanent. Lepers should not be allowed to hold responsible positions in the public life nor should they be allowed in public places. They should not be allowed to travel in public conveyances. The public should encourage the lepers to go to the leper asylums which must be made places of attraction to these patients. The old idea of the public that these asylums are places where the incurabales are imprisoned, must be changed.

Leprosy is a disease of the semi-civilised and the savages, the highly civilised being exempt from it. Hence education plays an important part in the prevention of the disease. Mass education especially on health and disease must also be encouraged. Economic condition also plays an important part in the spread of the disease. Poverty and congested living help the spread of the disease. It must once more be emphasised, that the essence of the modern prophylaxis against leprosy is its early detection, and prevention by efficient treatment. If this policy is carried out efficiently, in a decade or two, the old advanced cases will have died out, or become non-infective, and all the early non-infective cases will be treated before they become infective.

References :—

1. *Lowe, J. (1929) 'Early Diagnosis of Leprosy' Leprosy Notes. No. 5, p. 7, London.*
2. *Muir, E. Leprosy, Diagnosis, Treatment, and Prevention. Fifth Ed. India.*
3. *Muir, E. 'The Early Diagnosis of Leprosy.' Leprosy in India. No. 4, p. 127.*
4. *Muir, E. (1933) 'The Leprolin Test' Leprosy in India. No. 4, Vol. 5, p. 204.*

Cholera and its Treatment*

BY

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Predisposing Causes.—Fatigue, Chill, Diarrhoea, indigestion and strong purgative salines etc.

Incubation Period.—few hours to 10 days. Usually 3 to 6 days.

Stage I. Premonitory Diarrhoea

This is met with in only mild cases.

Nausea and vomiting, painless passage of bile-coloured stools many times, great prostration, urine scanty, skin clammy, pulse low-tensioned, anxiety and fear.

Treatment—Astringents, Not saline purgative or 'oil', should be given. All the evacuations, (vomit, urine, motion or spittle) should be disinfected in strong cresol lotion or mixed with saw dust and burnt away with kerosene oil.

Stage II. Copious Evacuations

Excessive watery vomiting and purging, skin shrinks, eyes sink, blood-pressure falls, collapse. Evacuations by gallon, unstained by bile. Rice-water stool, (Return of colour to yellow or green is a favourable sign.) Vomiting of large quantities. Muscular cramps most severe during collapse.

Suppression of urine due to low blood pressure and acidosis. Relieved by copious hypertonics.

Stage III. Collapse

Pulse only just felt, or lost, at wrist; voice hoarse, just a hoarse whisper, body cold, fingers and toes shrivelled and cyanotic, abdominal pain, severe cramps in extremities: extreme restlessness, and great anxiety, but intellect clear. Drugs no use now. Normal saline relieves but fails. Relapse follows suddenly a copious stool or vomit. During actual collapse, vomiting and motions are somewhat reduced. This is deceptive. Therefore watch blood-pressure and specific gravity of blood. Be on guard for sudden collapse.

Duration a few hours to 2 days.

Stage IV. Reaction

Gradual recovery of pulse and rise in blood-pressure, surface temperature rises to normal, body becomes warm.

* Specially contributed to 'The Antiseptic'.

Stools first change in consistence and then in colour—yellow or green. Vomiting ceases. Watch for urine.

Caution.—Intravenous injections are always followed immediately by a rise in temperature in all but moribund patients. A rigor and fever to 103° F. or over after intravenous injection, is not serious if of short duration. If high fever, delirium, etc. prognosis is grave.

Urine.—Albumen is high for the first two or three days but falls in recovering cases and remains high in those developing uraemia.

Urea.—Very small in amount, but increases in recovering cases.

Late complications.—Uraemia and Toxaemia.

Relation of uraemia to blood pressure.—If blood pressure is below 100 (adults) for 2 or 3 days after collapse stage is over, uraemia is almost invariable and fatal.

Sequelae

Parotitis.—In 1% of cases.

Sloughing of Cornea.—A rare complication.

Inflammation of Lungs.—More common. Rapidly fatal tendency within 24 hours. (Occurred in 41 % of cases.)

Dysentery and Diarrhoea.—1 % of cases.

Differential Diagnosis

1. Diarrhoea from other causes. Best treated as cholera during cholera outbreaks. Use astringents and opium—no purgatives.

2. Ptomaine Poisoning:—History—several persons eating same food attacked simultaneously; persistence of bile is a strong point against cholera; bacteriological tests.

3. Algid (intestinal) Malaria. History of fever attacks. Blood examination.

4. Acute Bacillary Dysentery. Blood and mucus; if collapse marked, transfer to the cholera ward.

Prognosis

Age over 50 bad. Generally 50 % deaths, severe abdominal pain, great restlessness, cyanosis—grave.

Treatment

Stage I. Premonitory Diarrhoea

No purgatives at all.

Astringents—kino; Dil. $H_2 So_4$

Dose of 20 ♏. of Tr. Opii, or 15 ♏ of chlorodyne may be given if stools still foecal.

Never give opium or chlorodyne if the stools are like rice-water. Never give saline purge, as it depletes the blood.

Stages II and III. Copious Evacuations and Collapse

All drugs are inert at this stage because there is no absorption owing to slowing and even stasis of circulation.

I. To replace lost fluids and salts.

Injections may be given:—

(1) Intravenously.
(2) Rectally.
(3) Subcutaneously.
(4) Intraperitoneally.

Indications for Injections.—

(1) Pulse (*a*) little or none at the wrist.
(*b*) feeble. 70 to 80 m.m., B. P. (Sphygmomanometer.)
(2) Sp. Gr. of blood if over 1062, however good the pulse may be to the finger.
(3) Restlessness the most important and earliest sign.
(4) Cyanosis.
(5) Cramps.

A. Technique of Intravenous Injections

Sterilise skin well. Bandage above the point of Injection. Adults-usually veins at bend of elbow.

Children under 10, long saphenous in thigh or vein in front of internal malleolus.

Composition of Hypertonic solution:—

℞

Sod. Chloride	...	120 grs.
Cal. Chloride	...	4 grs.
Water	...	1 pint.

Alkaline solution:—

℞

Sod. Bicarb:	...	160 grs.
Sod. Chloride	...	4 grs.
Water	...	1 pint.

Temperature of fluid:—As near to body-temperature as possible: if rectal T is 97°, it must be at 100°.

At 102° to 104° if not over 97°. These latter generally die.

If rectal temperature over 100° and up to 105°	Fluid Temp. 94° F.	as death is possible from Hyperpyrexia
Do. below 100°	Do. 96° F.	

Quantity of fluid to be injected :—

According as Sp. Gr. of blood is 1063—4—5—6 give 3 to 6 pints to adult males. The first pint *alk. sol.*, and the remainder Hypertonic saline.

Watch Blood-Pressure :—Use Sphygmomanometer. Give injection if 80 m. m. Aim at 100 to 110 m. m.

To get that, give 4 pints to adult men.

3½ pints to adult women,
2 pints to children of 10 to 15 years and
1 pint to children under 10 years.

Repetition of Intravenous Injection.—Watch the patient after a Transfusion. If any of the indications return, *repeat the injection by vein as often as necessary*. Otherwise give fluid by other routes as long as necessary.

B. Rectal Infusions

Rectal Absorption fails at 70 m. m. B. P. So watch the blood-pressure after any large stool or vomit.

Rectal Infusions :—

1. *Normal* saline ½ to 1 pint to be given every 2 hours during stage of evacuation, and every 4 hours after Reaction begins, and after secretion of urine has begun.

℞

90 grs. Sod. Chloride 3 grs. Cal. Chloride 1 pint Water	If urine is acid, add to the N. Saline, 160 grs. of Sodii Bicarb to each pint.

Hypertonic is not absorbed from the bowel.

C. Subcutaneous Saline. (Normal)

No use in collapse cases.

One pint at a time in axilla. Quickly absorbed if any pulse at wrist. None, if no pulse.

Very inferior to intravenous.

Great pain, delay in absorption if large quantity.

Alkaline solution should *not* be given subcutaneously.

D. Intraperitoneal Injection

Raise foot of bed. *Hypertonic.* If *breathing difficult, stop it.*

Not more than 1 pint for children may be tried if intravenous injection is impossible.

Technique :—

Sterilise skin well; narrow scalpel, Incision ½" long, middle line, below navel, through skin and fascia only. Insert canula

without stilette while Assistant raises abdominal walls. Bore through gently. Height of flask 2 to 3 ft. Amount not more than 2 to 3 pints.

Fluid by Mouth.—Two ounces at a time at short intervals. Ice to suck may be given.

Medical Treatment During Stage of Evacuation and Collapse

II. Give 1/100 gr. atropine hypodermically on admission, and repeat night and morning.

Opium in any form is absolutely injurious and *forbidden.*

Antiseptic Treatment.—Disappointing during stage of collapse as absorption is impossible.

In first stage more useful.

III. ℞ Pot. Permanganate ... 2 grs.
Kaolin and vaseline ... q. s. } one pill.

Immediately on admission, 2 grs. pill is given every quarter of an hour for 2 hours and then one pill every ½ an hour. Give them until motions become green and less copious. This change occurs in 12 to 24 hours.

Only barley water may be used. No milk. No soups.

2nd day :—
8 pills in 4 hours.

3rd day :
8 pills in 4 hours in severe cases to prevent relapse.

Permanganate lotion 1 to 6 grs. to the pint by mouth, very good. 2 to 3 oz. at a time even though vomiting continues very frequently.

These pills and lotions must be carried by every one working in cholera epidemics and used as both prophylactic and curative treatment.

IV. *Pituitrin* is useful in threatening uraemia due to deficient blood-pressure and stimulates the production of urine.

Convalescence.—Very rapid except in the old and the feeble.

Stage IV. Reaction

Evacuations reduced. Pulse slowly regaining strength. Body becoming warmer. But dangers by no means over.

These are :—Excessive febrile reaction.
Continued suppression of urine, and uraemia.
Inflammatory complications.

Control of the Febrile Reaction.—Most common if rectal temperature above normal, during collapse. Administer salines

of *subnormal* temperature. Take rectal temperature every 15 minutes.

If fever is high, give:—Iced water rectal saline *i.e.* Rectal continuous drip, not less than 1 pint at once.

Ice to head.	If Rectal T is 104° or under
Cold Sponging	tongue or in axilla 103°.

If higher, give iced water *enema*, and cold bath.

A rigor, restlessness, delirium or burning hot skin, always serious. If fully unconscious, recovery is rare.

Do not check the diarrhoea of the after-stage of Reaction. Opium and lead acetate are *fatal drugs*, disposing to uraemia. Acids too, are harmful. Treat this diarrhoea by regulating the diet. Rectal saline may be stopped when free secretion of urine is fully established.

Diet

Acute stages—Barley water only. Continue this during reaction as milk, soup, etc., induce a relapse. Thin Buttermilk or whey, next. When acute diarrhoea has stopped for 2 days or more, "pepper water" or "Rasam", and sufficient rice (rice squeezed out), custard and other light foods may be commenced, and the diet gradually increased.

Withhold all things except barley water and butter milk, *until the kidneys are acting freely.*

Pituitrin injection is good to stimulate secretion of urine and if uraemia is threatening.

Alcohol—only in later stages; in small quantities and certainly for Alcoholics.

No stimulants in acute stages.

Cardiac tonics.—1/100 gr. Digitalin, morning and evening.

Ammonium Carb. and Sal Volatile every four hours.

Add to it Tr. Nuxvomica and Tr. Digitalis if B. P. is not normal and if urine is not free.

Ammon Carb, if lungs are congested.

Convalescence

Very rapid, except in the old and feeble. Prevent sudden movements in, or out of, bed, to prevent *sudden death.*

May be sent out in 10 days after acute symptoms have stopped.

Resume of Treatment in the Acute Stage

1. On admission, give 1/100 Gr. Atropin, and repeat it night and morning.
2. Take blood-pressure; take temperature, oral and rectal
3. Take specific gravity of blood.
4. Permanganate pills or lotion by mouth.
5. If collapsed, give I. V. transfusion Hypertonic 3 to 6 pints, the first pint being alkaline mixture, according as sp. gr. is 1063,,-4-5-6.
6. Repeat the transfusion if necessary.
7. If I. V. Hypertonic is not indicated, give fluid by other routes, *e.g.* (*a*) if Rectal, normal saline, normal saline plus calcium Chloride, or if urine be acid, add to it sodii bicarb, or (*b*) axillary saline, or (*c*) Intraperitoneal (Hypertonic.)
8. Only Barley water by mouth.
9. No milk or soup, meat, or extracts.

CASES AND COMMENTS

Bayer 205 and Plague

BY

B. R. RANGANATHA RAO,

Sub Assistant Surgeon, L. F. Dispensary, Chellakere.

1. Mrs. N. aged 30 years, Hindu, seen on 10-2-1934, second day of illness. Had high fever 104°F, pulse 140 per minute, small and thready, unconscious, congested eyes, speech affected. Bubo in the left inguinal region. Bayer 205,0.6 gm. given intravenously at 7 P. M. Temperature came down by 3 degrees next morning, the patient better by the evening. First attack of the season and unprotected by inoculation. Result cured.

2. Mr. N. aged 30 years, Hindu, husband of No. 1 seen on 13-2-34 within 24 hours of the attack. Temperature 103°F, pulse 136 per minute fast and weak eyes congested and full of discharge, bubo in right Axilla. Bayer 205 (0.9 I. V.). Temperature came down within 24 hours. Inoculated on 12-2-34 with Haffkin's Anti-Plague vaccine. Convalescence prolonged Malaria. Result cured.

3. Mr. R. 14 years, Hindu. Seen on 2-3-34 on the 3rd day, high fever low muttering delirium, picking at bed clothes, congested eyes, bubo in the left inguinal region. Bayer 205 (0.6 gm.). Temperature came down from 104°F to normal within 36 hours. Protected by Haffkin's anti-plague vaccine. Result cured.

4. Mr. V. 21 years. Male, cook in the Hotel in which No. 3 was living. Seen on 2nd day on 3-3-34 had all signs and symptoms, bubo in left groin, recently recovered from Typhoid. Bayer

205 (0.9 gr.). Temperature was normal on 5-3-34 protected by Bayer's Anti-plague vaccine inoculation. Result cured.

5 Mr. J. 20 years, Hindu. Attacked on 2-3-34, had no treatment, died on 5-3-34 (unprotected).

6. Mr. K. 50 years, Mahamoden, attacked on 3-3-34. Refused injection of any sort, died on 7-3-34 (unprotected).

7. Mr. S. 40 years, Hindu. Attacked on the 5th, high fever delirious; would run away out of the house, assault the attendents, bubo in the left inguinal region. Bayer's 205 (0.9 gm.) on the 7th. Temperature normal in 24 hours; recovery delayed by lung complication. Unprotected.

8. Mrs. A. 30 years, Hindu female, attacked on 6-3-34, had all signs of plague. Bayer 205 (0.6 gm.) on the 7th. Patient better in 24 hours. Protected by Haffkin's anti-plague vaccine inoculation.

9. Mr. P. 20 years, Hindu male, had all signs and symptoms, attacked on 20-3-34, not treated, died within 24 hours. Protected by Bayer's anti plague vaccine.

10. Miss. M. 10 years, Mahamoden girl, had all signs and symptoms, gland in the neck, dyspnoea and dysphagia. Not treated. Died within 48 hours.

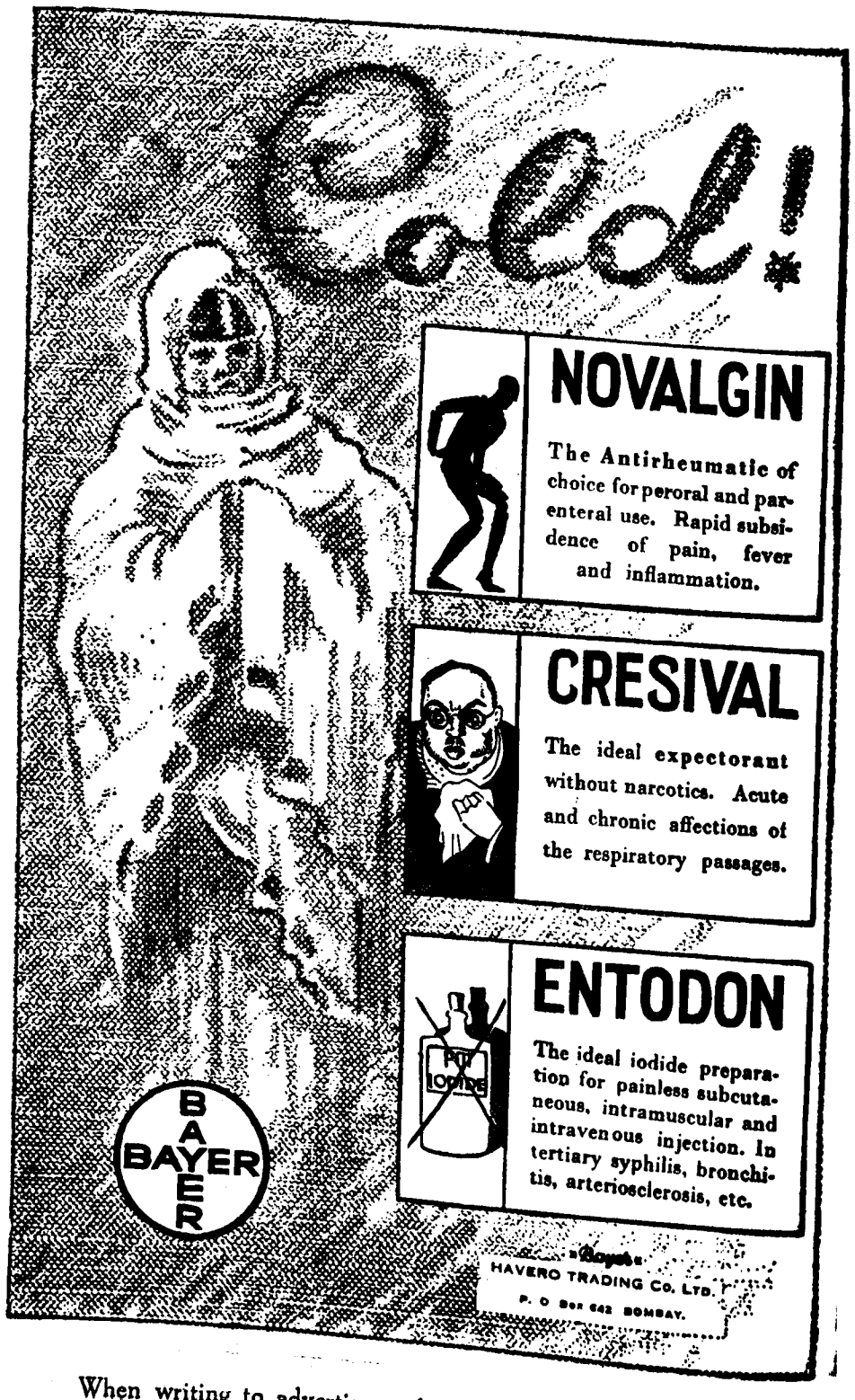
11. Mr. K. 25 years, Hindu male, seen on the first day of illness on 12-4-34, had all the signs and buboes in both inguinal regions. Bayer 205 (0.9 I.V.). Temperature came down in 48 hours.

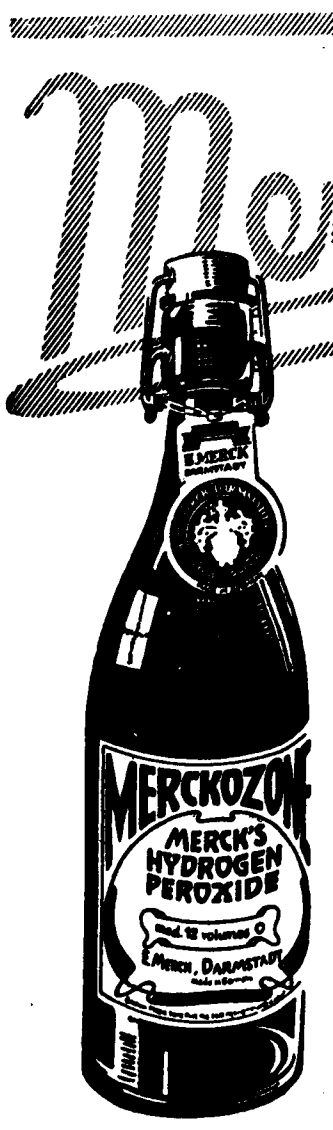
12 Mr. M. 16 years, Hindu male, seen on 12-4-34 unprotected. Bayer 205 not given. Died in three days.

From the above and the table given below, it is evident that all the cases treated by Bayer 205 protected by inoculation or otherwise, have resulted in cures while others have ended fatally. This is borne out by the good results reported by me in the November issue (1932) of Indian Medical Gazette and cases reported by Major G. W. Vincent M.D. and of Dr. Dyce Sharp. The fatal results reported by Dr. Rao Saheb Parulkar M.B., B.S., in the November issue in 1933 of the Indian Medical Gazette are probably due to severe lung complications. I do not think there is any doubt about the beneficial effects, the drug has got on the temperature and the improvement in the general condition in bubonic cases. The other medicines used in the treatment of the above cases are Diaphrotic or stimulant mixtures, Belladonna pigment to the glands and camphor injections in bad cases.

12 Attacks

- 4 protected by inoculation
  - 2 Haffkin's → 2 cured (Bayer)
  - 2 Bayer's → 1 died, 1 cured (Bayer)
- 8 unprotected
  - 4 died (not treated)
  - 4 cured (Bayer)





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EDITORIAL

Public Health in India

THIS was the main theme in that most interesting and instructive address delivered by Dr. T. S. Tirumurti B.A., M.B., C.M., D.T.M. & H., Professor of Pathology, Medical College, Vizagapatam, to the graduates of the Andhra University at their convocation held on the 28th of November '35 and was a welcome departure from the monotonous sermons on Politics and perplexing proposals for educational reform that used to characterize past addresses. It is seldom that a medical man is pitched upon to perform this dignified task and we are extremely thankful to His Excellency the Governor for the soft corner he has in his heart for the medical Profession, exhibited in diverse ways after his taking over charge of the administration of this Presidency. About the beginning of this century, we remember the late Lt. Col. W. G. King, I.M.S., the then Sanitary Commissioner for Madras was asked to deliver the convocation address to the graduates of the Madras University and curiously enough, he adopted the same plan and dealt with the public health problems of India in a masterly way and in his own inimitable style, by correlating the Indian usages and customs with the Western Scientific principles.

The chief vital statistical facts relating to British India in the latest reports are :—

(1) Total births numbered 9,678,876 giving a crude birth rate of 35.5 per mille as compared with 33.7 in 1932.

(2) Total deaths numbered 6,096,787 giving a crude death rate of 22.4 per mille as compared with 21.6 in 1932.

(3) Infantile deaths numbered 1,650,973 or 27 per cent of the total mortality, giving an infantile death rate per 1,000 births of 170.5 as compared with 168.7 in 1932.

(4) The crude increase in population was 3,582,089 which gives a rate of 13.1 per mille.

In these four short paragraphs are summarised the main health statistics of India for 1933. "In the first place it is clear that there has been no violent disturbance in the Indian vital statistical world. The birth rate, though somewhat higher than in the two previous years, has merely returned to the average level recorded during the 33 years of the present century. The death-rate is slightly higher than that recorded in 1932 but does not show any great departure from the downward trend which has characterised the general death rate since the great influenza epidemic of 1918-19. Unfortunately, the same cannot be said of the infantile death rate. In 1931, attention was drawn to the downward trend in this rate following the disastrous years of 1918 and 1919 but the recorded rates of the past six years seem to indicate that that trend has since 1928, in fact, the annual figures for infant mortality have fluctuated only slightly between 181 per 1,000 births in 1930 and 169 in 1932 and the figure for 1933 again lies between these two contiguous limits. It seems that, for the present, the factors influencing infantile mortality are comparatively stable and that new and more vigorous preventive measures will have to be planned and put into execution before a further saving of infant life can be expected. No public health officer can look with any degree of equanimity on an annual death roll of nearly 1¾ million infants below one year of age and if as has been repeatedly stated, the infant mortality rates of a nation provide an accurate estimate of its sanitary conditions, then India has little cause for satisfaction as regards the state of its public health. The further deduction may be made that existing campaigns in the fields of child welfare and maternity relief have had so far little or no widespread influence. In any case, these facts and figures indicate the enormous problems awaiting attack and make clear the extent of the health work facing the new provincial and central Government which will shortly come into being under the reformed constitution", with these words Lt. Col. A. J. H. Russell, O.B.E., V.H.S., I.M.S., Public Health Commissioner, with the Government of India, opens his Annual Report and no better description could be given of the true state of affairs in India.

A comparison of the Birth, Death and Infantile mortality rates of India with other countries will show the appalling state of affairs:—

	Birth rate per mille.	Death rate per mille.	Natural increase per mille.	Infantile death rate per 1,000 births.
British India ...	35.5	22.4	13.1	171
England and Wales ...	14.4	12.3	2.1	64
Scotland ...	17.6	13.2	4.4	81
Australia ...	16.8	8.9	7.9	39
New Zealand ...	16.8	8.0	8.6	32
Canada ...	20.9	9.6	11.3	73
Union of South Africa ...	23.7	9 3	14.4	60
Federated Malay States ...	35.5	20.2	15.3	137
Palestine ...	44.0	20.0	24.0	144
United States of America	17.4	10.6	6.8	58
Japan ...	31.6	17.8	13.8	118
Egypt ...	42.9	28.8	14.1	175

What could be the cause for this poor statistics of India. Col. Megaw, who was the Director of the Calcutta School of Medicine and later Surgeon-general with the Government of Madras and later still, the Director General of the Indian Medical Service in India, is of opinion that in England, sanitation has achieved its victories not merely by the preventive measures taken against disease but also because the public co-operated, and an improvement in the economic standards of living was taking place at the same time as the work of disease prevention, but in India the progress has been poor and this is due to "the new wine of scientific sanitation having been poured into old bottles of antiquated customs".

General Megaw alone is not in this view. In the year 1923, we came across an article in the American Journal of Public Health (August issue) which said, in effect, that Hinduism was a stumbling block to sanitary progress in India. The article appeared to us as a sort of special pleading on behalf of the Government of India.

Lt. Col. Russell in the concluding part of his remark attributes the slow progress of public health in India to the "universal and often sweeping reductions" which have been made in public

health budgets throughout the country. He stresses the dangers to which the general population is exposed by the continuance of those so-called economies. These dangers have been less evident and less grave than they otherwise might ; because during 1933, India has once more remained free from violent epidemics and has experienced another comparatively healthy year.

Sir George Newman, the late Chief Medical Officer, Ministry of Health, in his inaugural address to the Welsh Medical School says as follows : "How great has been the expansion in the progress of preventive medicine, is indicated by the fact that in 1900, the Nation spent 31 millions on public social service in England and Wales and also on Education, public health, lunacy and poor relief. Whilst in 1932, 30 years later, the Nation spent 430, millions on this service, including Insurance and pensions. Here is the gigantic scheme of National, social and health enterprise for the welfare of the people, and with this scheme the Medical Profession is in all intimately associated as advisor or agent ".

Compared to these figures, the money that India spends on its public health, is very insignificant. But General Megaw's explanation is however flatly contradicted by Col. W. G. King, the best part of whose service has been spent in laying the foundations of Public Health in this Presidency after a long and intimate contact with the people, and who has come to the conclusion that " the average educated Indian is not only capable of grasping the benefit of but of receiving, with very much gratitude, health education by practical demonstration of sanitary works of the community.

We think that Dr. Tirumurti has correctly found out the cause to this slow progress when he attributes it to poverty, faulty education and the lack of proper methods of propaganda for awakening the health consciousness among the masses. He says, " it cannot be doubted that education is the most desirable ally to sanitation " but he thinks that the educational policy in this country needs " a re-orientation and reform in all its branches."

How then can we improve India's public health ? In the short space of an Editorial, it is not possible to go into any detailed discussion, but three or four problems stand out prominently and it would be quite in order in discussing them here.

The improvement of the economic condition of the people is the most important factor. This however does not completely solve the problem. Even in Western countries where the economic position of the common man is infinitely better than

that which obtain in India, where there is still plenty of misery of diverse ways.

The next subject that we wish to touch upon is the importance of nutrition. Public health work is not merely to control diseases from spreading and the defending of people against attacks and diseases but it aims to create the maximum physical well-being. Nutrition plays a very important part in increasing the stamina and vitality of the nation. This science of nutrition is slowly changing the dietetic habits of the people. Increasing attention is being paid to food production and distribution. People are realising that the world's food production can be increased many times without increasing the area of cultivation, if only they make use of the available scientific knowledge to the fullest extent. Poor nutrition lowers vitality and leads to disease. Popular education in the science of nutrition, therefore is very necessary for the well-being of the nation. The subject of nutrition should be more adequately dealt with in the curricula of the medical student. It should also form part of the curricula of various Arts Colleges. Dr. Aykroyd, the new Director of the Nutrition Laboratories at Coonoor has pointedly drawn our attention to the urgent need in India for a detailed enquiry into the dietetic habits of the people in the different provinces and also the prevalence of food deficiency diseases.

Maternity and Child Welfare work have to be improved. The employment of better trained personnel and a better understanding on the part of the employing bodies as to the importance of child-welfare work, are the most important. There is need for greater co-operation between Child-welfare centres and hospitals.

The next thing that we would like to impress is the necessity for greater co-operation between the medical practitioner and the State. Medical men should enlarge the narrow purpose of directing their almost exclusive attention to morbid conditions and the remedy of such conditions by drugs to preventive aspect of medicine. Every medical practitioner should carry with him a new practice of preventive medicine with his daily routine. Every practitioner should be a missionary of health.....a teacher of his patients in the true sense. As Sir George Newman, correctly puts it " the medical practitioners ought to be the first effective teachers of hygiene to the people, the principal interpretors of preventive medicine in the country for, through their hands pass a greater proportion of the whole population ".

Another free and effective means of preventive medicine is the institution of a National Health Insurance scheme. This is a

co-operative organisation between insured persons, the friendly societies, the medical profession, and the Government, especially designed for "insurance against loss of health, and the prevention and cure of sickness". In England it is controlled by medical and lay co-operation. 16,000 doctors (very nearly 70 per cent) of the medical practitioners in England and Wales have agreed to accept their right, under the Act to give preventive and curative advice and treatment to sixteen million insured people. The doctor is paid for each person on his panel, whether he becomes a patient or not; the patient has a free choice of his doctor, and may come at the very beginning of his sickness undeterred by any question of fee. The doctor's duty is to diagnose and treat the illness and to estimate the resultant incapacity. There is no doubt bound to be some complaint in such a vast scheme, but taken as a whole this scheme has provided medical relief and service for half the adult population of England.

For the successful fulfilment of these suggestions, the essential item is the formation of a Health Ministry, as Col. Bhola Nath, the President of the Indian Medical Association, in his speeches during his recent tour in the South has often said. We look forward to the days when there will be a Health Ministry in India with a medical man in charge of the Medical and Public Health portfolios. We purposely say that a medical man should be at the head, because, no other man can feel the pinch of shoe better than its wearer. The medical man by reason of his contact with the population and his training is best fitted to find out the needs of the country as regards public health and sanitation.

In the days to come when India has launched upon the new constitution, we trust every medical man will take more and more interest in public and political work and will see that the Government of the time will recognize this salient point and create a ministry with a medical man at its head. We fervently wish that this fond hope will be fulfilled. We shall wait and see!

The Indian Medical Association

The visit of Col. Bhola Nath to the South has brought the Indian Medical Association to the limelight in the Medical World of this Presidency. During his extensive tour which has included, Vizagapatam, Rajahmundry, Guntur, Ellore, Bezwada, Hyderabad, Nellore, Madras, Tanjore, Trichinopoly, Madura, Tinnevelly, Trivandrum, Ernakulam, Mangalore, Coimbatore and other places, Col. Bhola Nath has stressed the importance of the

Indian Medical Association and the need for its branches to be opened in the various centres, and the necessity for medical practitioners to join it in large numbers. The objects of this Indian Medical Association among others are: the promotion and advancement of the medical and allied science in all their different branches, the improvement of public health and medical education in India, the maintenance of the honour and dignity and the upholding of the interests of the medical profession, and co-operation between the members thereof. For this purpose, 'The Indian Medical Association', arranges from time to time, Congresses, Conferences and Lectures and publishes a journal, which undertakes in addition to the discussion of scientific matter, to give publicity to the grievances of the Profession and does propaganda in its columns on behalf of the Association. As has been pointed out by Col. Bhola Nath on many occasions, the trouble to which the Medical Profession in India is subjected to, is due to the lack of solidarity and discipline, which forms a striking contrast to that of the medical profession in other countries of the world. As is known to everybody, medical science, medical progress, and the harmonious working of a medical society is not the achievement of one individual, but the result of co-operative work of the whole profession. It is to organise the medical men in this part of India into one solid body, that Col. Bhola Nath has undertaken the tour. As he has pointed out, the Indian Medical Association is intended for all sections and communities. Its aim is to protect the interest of the medical profession as a whole and by joining an organised body of that kind, medical men will be sure to create a public opinion among themselves and among the rest of the world and will eventually evolve a code of ethics for the guidance and betterment of the Profession in India. The Profession will thereby gain dignity and honour and will be able to play in the future years a greater part in the life of India. We heartily endorse the appeal of Col. Bhola Nath and request every medical practitioner to join the Indian Medical Association and to strengthen its hands. Provincial Associations may exist for the sake of particular castes or classes of medical men, but there are times when we would like to act as medical men in the broad sense of the word and it is for this purpose that we would request members of all classes to forget, in the greater interests of the medical profession in India, their small communal classifications and whole-heartedly join the Indian Medical Association. To Col. Bhola Nath, the Indian Medical Association and the Medical Profession in India owe a great deal!

The XII All-India Medical Conference, Nagpur

Presidential Address

BY

Dr. U. RAMA RAU,

Madras.

BROTHERS and Sisters of the Medical Profession, Ladies and Gentlemen,

I thank you most heartily for the honour you have done me in elevating me to the Presidential chair this year. When I first read Dr. Ray's telegram congratulating me on my election, I was really taken aback and could not believe my own eyes, for this honour was undreamt of, unexpected and undeserved. The grandeur of your reception and the warmth of your affection to me indicate the oneness of thought, the sincerity of purpose and the loftiness of aim on your part in abolishing the caste system and attempting at unity and solidarity of the Profession. This is indeed a happy augury, and the year 1935 will ever be remembered as an eventful year in the history of the medical profession in India when the foundation for the unification of the profession may be said to have been well and truly laid in this sacred city of Nagpur. I am sure you will not accuse me of immodesty when I say that I was and am always, imbued with the idea of service—service to my professional brethren and service to my countrymen in my own humble way, during my career of 35 years both in the practice of the healing art and in public life and was ever a faithful follower of the doctrine inculcated in the Bhagavath Gita, " Do your duty, without looking to the fruits thereof ". If, to-day, it has pleased the Almighty, in the fulness of time, to bestow this reward on me—the highest reward in the gift of the Medical Profession in India—then, I think, I have served in the right spirit. In undertaking this onerous task, I am conscious of my limitations. I know my frail frame and advanced age are real impediments. But, still, with the help and guidance of Providence and with your kind co-operation and support, I hope to be able to discharge my duties to the best of my ability and in the best interests of the Profession.

The Indian Medical Council

There is no subject more engrossing the attention of the Medical Profession in India at the present time than the Indian

Medical Council. A Medical Council for India has no doubt been established at long last and its work is now in full swing. But this is not the Council you and I have had in view. This Council is only an apology for a Council—a grand appendage to the Government of India and a tiny plaything of the British Medical Council. It will be a twice told tale if I begin to narrate the history of the Council in detail. I therefore propose to give a resume of it here, just to enable you to refresh your memories. The history of the Indian Medical Council is the history of a long drawn struggle between the British Medical Council on the one hand and the Indian Universities on the other, culminating in the signal success of the former and the abject surrender of the latter. Before the introduction of the Montford Reforms in 1921, the B. M. C. was fully satisfied with our University training and teaching, not because they were faultless to the core and perfect in everything but because they were under the control of the I. M. S., whose sins of omission and commission, the B. M. C. wilfully winked at or ignored. Soon after the introduction of the reforms in 1921, the B. M. C. suddenly ' discovered a discrepancy between the regulation and practice of midwifery instruction in 1920' and addressed a letter of enquiry to the Indian Universities, threatening them at the same time with withdrawal of recognition of their medical qualifications, if a satisfactory explanation was not forthcoming. The Universities naturally became perturbed and in order to placate the Council, requested it to nominate one of its members as a visitor so that he may see and judge things for himself. Sir Norman Walker was accordingly sent. He submitted an adverse report. At the same time, he successfully persuaded the Government of India to accede to the appointment of an officer as Special Inspector of the Universities. Next time, Col. Needham was sent as Inspector, but the Calcutta University shut its doors against him. The B. M. C., enraged at this, at once withdrew the recognition of the medical qualifications of that University and gave only temporary recognition for one year to the other Universities such as Bombay and Madras. This conditional recognition was continued from year to year on the report of an Inspector, so far as the latter Universities were concerned, while in regard to Calcutta, the recognition was restored, temporarily though, on its agreeing to appoint a Director of one of its local institute as a Local Inspector. This was a most unsatisfactory state of affairs and the only panacea for this evil lay in the establishment of a Medical Council for All India, to which must be transferred the entire control of medical education in this

country. The creation of such a Council was not possible without the initiative of the Government of India and the consent of the various Provincial Governments. The Government of India demurred to undertake legislation lest it should tread on the sacred rights of the Provincial Governments and nearly 5 years had elapsed without any permanent settlement of the question being arrived at.

In the year 1926, my friend, the late lamented Dr. Lohokare of Poona—May his soul rest in peace!—entered the Legislative Assembly and I myself was elected to the Council of State. We both were anxious to do our little bit for the medical profession and if possible to ease the situation created by the British Medical Council by the establishment of a General Medical Council for All India, on the model of the Canadian Medical Council. We both put our heads together, and prepared a draft bill and introduced it simultaneously in the Legislative Assembly and in the Council of State in Feb. 1926. With the death of Dr. Lohokare, soon after, died also his Bill in the Assembly and was buried in the archives of the Secretariat. My Bill in the Council of State shared a better fate. It reached the circulation stage and a mass of opinions good, bad and indifferent was collected. Thereafter, I had to encounter stern opposition and resistance from the Government. The Government objected to the Bill on the score, (1) that the Sub-Assistant Surgeon class ought not to find a place in the All India Register and (2) that such of those Allopathic doctors as are teachers in indigenous schools of medicine should also be excluded from the pale of the Council. I met the Hon'ble member in-charge of the Health Portfolio half-way and agreed to give up the Indigenous Practitioners but refused to yield with regard to the exclusion of Licentiates. Sir Muhammad Habibulla, the then Government member, than whom no more ardent well-wisher and sincere sympathiser of the medical profession in India could be found, was not for smiting a fatal blow on my Bill. He proposed to recast the Bill in the light of the opinions received and introduce it as a Government measure in which case there was a greater chance of success and dissuaded me from moving further in the matter. On that assurance, I withdrew my Bill. Thus ended our first attempt for the establishment of an All India Medical Council. Between 1926 and 1929, there were negotiations going on between the B. M. C. and the Government of India on the subject and seeing there was no immediate prospect of the Government coming out with a Bill of their own, I introduced a fresh Bill in

1930. All the objectionable features of the first Bill were removed with the clause relating to Licentiates alone being retained. Even the Indian Medical Gazette of Calcutta showered its blessings on it. This is what it observed in its editorial of March '30 issue:—"On a study of Dr. U. Rama Rau's Bill, our opinion is that it appears to meet the present conditions admirably. It meets the Indian demand for self-government in medical affairs by the creation of an All-India body of democratic constitution to whom the General Medical Council of Great Britain may be expected to entrust the duties of the supervision of medical education and inspection of examinations; whilst it does away with the necessity for an official Commissioner of Medical Education appointed *ad hoc* without consulting general medical professional opinion in India.....In brief, the Bill attempts a sort of federal solution of the present problem which would leave the power of existing provincial councils untouched but yet introduce a central and co-ordinating mechanism which would give India combined representation with regard to world problems of medical education and registration." Unfortunately, this Bill too had an abortive career, as I had to resign my seat in the Council of State, soon after, in obedience to the Congress mandate. Here the curtain falls over the first scene of this drama in which non-official members of the medical profession in the Legislatures played their part and failed under circumstances beyond their control.

The climax was reached in Feb. '30 when the British Medical Council resolved to withdraw even the temporary recognition of the Medical degrees of the Indian Universities and thus sever all connections with India for the nonce. All avenues of an honourable compromise with the British Medical Council having thus been closed up, there was only one course left for the Government and that was the establishment of a Medical Council for All India. A draft Bill was drawn up and it must be said in fairness to the Govt. of India, that it was a comprehensive and liberal measure, though defective only in respect of the exclusion of the Licentiates. This Bill did not find favour with the Provincial Governments, our own ministers siding with the I. M. S. and betraying our interests. There was one other alternative suggestion which the British Medical Council made and was approved of by the Ministers. That was the appointment of a permanent Commissioner for Medical Examinations. The Government of India meekly submitted to the proposal and Col. Needham was appointed Commissioner in due course. Col. Needham was ready to sail. But the Legislative Assembly turned down the

proposal on financial grounds. Col. Needham had to stay away much to his own chagrin and that of the British Medical Council. Thus ended the second stage in the drama of the 'Indian Medical Council.'

The creation of an Indian Medical Council was then the one and only solution for the problem. A fresh bill was drafted and placed before the Assembly in 1933. This bill was altogether different from the previous one and was really intended to placate the British Medical Council and to provide an intermediary in the shape of a Medical Council in India to act between it and the various Universities of India and satisfy the requirements of that body with regard to recognition of graduate qualifications. By legislating for higher grade qualifications only, the Government of India have estranged the feelings of more than 25,000 licentiates practising in this country and have sought to perpetuate caste distinction among the medical profession more acutely than before. The composition of the Council was such that the officials preponderated in it and the democratic element was reduced to the lowest possible minimum. Things quite unexpected, however, had happened in the Select Committee of the Assembly. The Select Committee were evidently as insistent on the inclusion of the Licentiates in the Medical Register as the Government were for their exclusion and an ugly compromise was effected by which the Government agreed to abandon the Register altogether while the opponents on their part gave their tacit consent to the denationalisation of the Council. Thus, the Council was reduced to the status of an advisory body of officials picked up from the various provinces and consisting mostly of I. M. S. men and their subordinates. Such a council will certainly dance to the tune of the British Medical Council of Great Britain and cannot be expected to act independently in the best interests of India, as later events have amply demonstrated, such for instance as the appointment of Dr. McRae, the nominee of the British Medical Council, as secretary to the Council.

The closing scene of this farcical drama was enacted in the Legislative Assembly, shortly after. The Bill as emerged from the Select Committee, was unanimously passed, not a syllable, not even a comma having undergone alterations. What was it that made the House give its unanimous support to the Bill withdrawing all the amendments at the last moment? It was the bogey of the Secretary of State's interference on the ground of its being a piece of discriminatory legislation and therefore opposed to

para 123 of the White Paper that was responsible for this eleventh hour unity in the House. The Secretary of State had not quite approved of the Bill, especially the clause relating to reciprocity. If only recognition had been given automatically to British and Colonial qualifications in India, irrespective of whether Indian qualifications were recognized in those countries or not as the original Bill did, the Secretary of State would certainly have kept silent in the matter. But public opinion in India was tremendously opposed to such automatic recognition and the Select Committee who were eager to please the public,especially on the eve of elections, devised a *via media* by which statutory recognition was given to medical degrees of those countries for the first four years only, prescribing at the same time that any qualification that was not covered by any scheme of approved reciprocity should automatically disappear from the schedule. This was not entirely to Government taste and to placate the Government a safeguard had been provided by which the Governor General in Council was empowered to grant reciprocity in case the Indian Medical Council refused to do so. That was enough to hush the B. M. C. and Sir Samuel Hoare—the father of safeguards in the Indian Constitutional Bill!

The emotional speech of Sir Fazl-i-Hussain, the member incharge of the Bill, at the Assembly, that he had made several surrenders from point to point in the Select Committee to reach an agreement, helped to cow down all the members and give their unanimous support to the Bill. Whatever points Sir Fazl-i-Hussain may have surrendered, I think he has scored the vital point, that is, he got established in India, a Medical Council, which by reason of its composition, will play second fiddle to the General Medical Council of Great Britain, a Council where the large and important body of medical men, the Licentiates, who are very often put incharge of small hospitals and dispensaries, who are made to conduct medico-legal examinations and on whose evidence probably human beings are hanged, have no place and a Council whose decision in the matter of reciprocity can be over-ridden by the Governor General in Council. This according to Sir Fazl-i-Hussain is " Efficiency at Home and Honour abroad". The present Indian Medical Council, therefore, is not what the nation wants. It requires radical reform and nothing but a repeal of the Act and re-enactment on democratic lines will satisfy us. I am afraid the present Assembly may not be able to help us, for, though we have a steam road roller now in place of the old, lifeless, soulless, stone roller, possessing some strength and power, it has not got

sufficient steam yet to successfully effect radical reforms. At best, it can only attempt some patch-work. We must, therefore, await better times. Meanwhile, I urge on our medical brethren in the Legislative Assembly to introduce an amending Bill, in its winter session next month, just to feel its pulse. The amending Bill must provide for (1) the deletion of the word 'higher' in the preamble occurring in 'higher qualifications', (2) the election of one member from each province from among the Licentiates and (3) to include the qualification of those Licentiates who have undergone a course of 5 years training in any recognized institution as is now being given in the Stanley Medical School in Madras, in the schedule of Registerable qualifications. The maintenance of the register and disciplinary control may be left to the Provincial Medical Councils as at present, to avoid unnecessary duplication of functions. The strength of the Council would then be about 36, certainly not an unduly large number for a vast sub-continent like India. I wonder how the inclusion of Licentiates in the Council can at all affect the prestige of the British Medical Council. If only the British Medical Council should peep into the past history of its own Council, and read and re-read the provisions of the Act governing its own institution, it will find how wide and how all-embracing they were. Their Council was open to all classes, even Apothecaries. Then, why put a ban on the Licentiates? Their qualifications are not a whit behind those of the Licentiates of the Royal College of Physicians and Surgeons. I think the time has gone for the British Medical Council to play the role of a Dictator. Much water has flown down the rivers between 1933 and 1935. We have been given Swaraj for India, that is, at least, what the Britisher now boasts of. Then why should he object to our having Swaraj in Medicine? Whether the British Medical Council likes it or not, our aim ought to be 'to establish a uniform minimum standard of qualifications in medicine for all provinces such that persons attaining thereto, shall be acceptable as medical practitioners throughout India,' and this we must strive to attain at any cost.

Medical Education

Medical education in India is in a most unsatisfactory state calling for thorough overhauling and immediate reform. There are two standards of qualification, one, a University degree and the other a license or diploma. The holders of the University degress, who have been placed under ban for over five years, have now begun to bask again in the sunshine of the B. M. C. The University degrees of Bombay, Madras, Calcutta and Lucknow

have since been recognized and it is hoped that with the good offices and kind intervention of the Indian Medical Council, the other University degrees also will come to be recognized in due course. The plight of the Licentiates, however, is beyond description. At present, there is no provision for higher education for L. M. P's in this country and those who aspire to higher qualifications are compelled to proceed to England to take up a continuous course for at least two years. So long as they remain in India, it is impossible for them to obtain a qualification which is registerable in the United Kingdom unless they are prepared to go through a University course from the very beginning. In Madras, some sort of solution was found for these problems. The L. M. P. course has been extended to five years in the Stanley Medical School and the percentage of marks obtainable by the final year L. M. P. students has also been raised to 50%. Some difficulty is experienced only with regard to preliminary educational qualifications. Graduates in Arts and Intermediates come pouring in for admission into the school but still, the Government persist in admitting S. S. L. C. students and declaring at the same time that the Licentiates cannot claim equality with the University graduates, that their qualifications are not registerable and that they must remain Licentiates for ever. This is indeed deplorable. Yet another sop was thrown to the L. M. P's in Madras. Dr. M. R. Guruswami Mudaliar brought forward a resolution before the Academic Council of the University of Madras on 14th March 1931, providing for L. M. P. diploma holders to qualify themselves for M.B., B.S., degree under certain conditions. While it aims at levelling the existing inequalities in the medical profession, there is no denying the fact that the obstacles thrown in the way of the L. M. P's gaining their end have been rendered too formidable to be easily overcome. One of those obstacles is the condition requiring the L. M. P. of 5 years standing in the Profession to pass the Intermediate examination in Arts of Madras or any other recognized University or the Cambridge Local with credit in three subjects. The syndicate would have acted wisely if they had only ruled that L. M. P's desirous of studying for the M.B., B.S. course should sit for the English paper alone in the Intermediate examination exempting them from the rest. But that was not to be.

So, Madras is no whit better than other Presidencies and Provinces where these privileges do not exist. Now, there is only one course open for us, if we should aim at the ideal of a uniform

high standard of training with a single high minimum standard of qualification and that is this :—The minimum preliminary educational qualification must be Intermediate Examination in Arts with Science optional or an Entrance examination in English, Physics, Chemistry and Biology of the Intermediate grade, conducted by a Board of Examiners appointed by the Government. The selection of students should be made on merit and not on communal basis. A statutory body like the Royal College of Physicians and Surgeons in England should be established in the capital of each province and the course should be of five years duration, the curriculum, instruction and examination being the same as for the University graduates. There are enough facilities for clinical studies in capital cities and there are any number of men with British qualifications who can be appointed as Honorary Physicians and Surgeons in Hospitals attached to teaching institutions and as teachers in Colleges on a modest honorarium. The College of Physicians and Surgeons should consist of about 30 members chosen from the pick of the medical profession in each Province, the non-official element preponderating. The colleges will conduct examinations and award diplomas. There may be three diplomas, the Fellowship (F.C.P.S.), Membership (M. C. P. S.) and Licentiateship (L. C. P. & S.). Graduates of the medical colleges should be allowed to appear for the F. C. P. S. examination, the higest qualification of the College of Physicians and Surgeons. This will level up the distinction between the two classes. This qualification should be made registerable both in India and England. The holders of the diploma possessing as they do the minimum educational qualification which is prescribed for admission to the medical colleges should be eligible for recruitment to Government Service on competetive basis on the same terms as the University Graduates. This was the gist of the scheme that I proposed to the Madras Government in 1932 and the then Hon'ble Minister, the late Mr. B. Munuswami Naidu regretted he was unable to consider the scheme on financial grounds. With the existing allotment for medical schools and with the collaboration of Independent Medical men as Honorary workers both as teachers and as Hospital Staff, no great financial strain need be felt. At the next elections to the Legislatures under the new constitution which are not far off, medical men must see that only those men who give an undertaking to level up the existing inequalities and remove the existing anomalies in the medical profession in India are returned.

Ladies and Gentlemen, you hold the key-position, you have

vast influence with the people, and if you are so inclined you can use it for the uplift of your less fortunate brethern and the amelioration of their unhappy lot.

Medical Research

Closely allied to Medical education is Medical Research. Unfortunately in India, research work is not encouraged to the same extent as its importance demands. Medical Research here is often associated with the I. M. S, fat salaries, high altitude, quiet solitude, cool and breezy climate and very little result. The right place for medical research is Calcutta, Bombay or Madras and not Kausali, Dehradun, or Coonoor. Nor can researches done in London be imported to Delhi. Our Medical problems are different and require hard work under the tropical sun amidst the sick and suffering. It was in the small laboratory, 70 yards to the south east of the Presidency General Hospital, Calcutta that the late Sir Ronald Ross discovered the manner in which malaria is conveyed to mosquitoes. The trying conditions under which he conducted his experiments in a small hot dark room in his hospital have been vividly described by Sir Ronald Ross himself, thus :—"I did not allow the punka to be used, because it flew about the dissected mosquitoes. The result was that swarms of flies and 'Eye flies' tormented me at their pleasure while an occasional stegomyia revenged herself on me for the death of her friends. The screws of my microscope were rusted with sweat from my forehead and hands and its last remaining eye-piece was cracked". Such must be the spirit of sacrifice in research work. No facilities whatever exist for research and post-graduate study in any of the University Centres. If medical research has not advanced to an appreciable extent in India, the fault rests entirely with the Government. The best Indian Medical talents are allowed to rot in Government Hospitals or eke out a scanty living by private practice. We, Indians are generally accused of being mere imitators and that we have no aptitude for original research. It is a fallacy. Given the opportunity, India can compete successfully with other nations of the world. Research is no monopoly of the West. Science knows no barriers of caste, colour, creed or territory. As living examples, we can mention Sir J. C. Bose, Sir P. C. Ray, and Sir C. V. Raman who have made India famous for scientific research. The name of that mathematical genius, Ramanujam, has recently been added to the scroll of the illustrious dead. In the Calcutta School of Tropical Medicine, many Indians have earned a reputation for scholarship and original research.

Many scientific inventions of the modern world had already been discovered by sages and savants in Ancient India. They are merely re-discoveries now. The atomic theory, the germ theory, the bacteriophage theory were not unknown to Ancient Indians. Jenner's discovery of vaccination for small-pox was known to Indians ages ago. The causation and spread of plague by rats is made mention of in Ayurvedic Works. Heliotherapy, Hydrotherapy, Rejuvenation by yogic exercises and such other things are yet to be delved into by Western Scientists. Such was the nature of our culture in ancient days. Unfortunately, that culture has been destroyed and our talents have been laid low. The General Educational Policy of our Government is responsible for it. Their policy may be compared to an elephant which, having destroyed the brooding hen, sits on its eggs to protect them. In the words of that great poet, Wordsworth, slightly modified, let me exclaim :

"Many are the *Scientists* that are sown by Nature
Not only in the West but all the world over.
Men endowed with highest gifts,
The vision and faculty divine.
But, wanting in accomplishments *and opportunities*
They go to the grave *unheeded and* unthought of.
Strongest minds are often those
Of whom *this biassed* world hears least
Else, surely, *we, Indians*, had not left *our* graces
Unrevealed and unproclaimed".

More opportunities should, therefore, be given for Indian talents and the Indian Universities must provide more scholarships for research. The Universities being mostly Indian in character and composition, it is not difficult to achieve this end.

Medical Service

I. 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, had held aloft the torch of medical lore and had 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 whom nearly 278 Civil posts are reserved. These posts include administrative posts under the Government of India and the various

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. Such a combination of civil and military duties, which subordinates the needs of the civil population to the requirements of the military, saddling the country with enormous expenditure 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 stethescope on 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 Indian Medical Service was materially increasing. This alarmed the Army Department and they proposed to make the Indian Medical Service 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 the authoritative and costly Royal Commission 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 Indian Medical Service, even for military requirements as they thought that such a pressure would retard the rapid Indianization of the medical services aimed at by the ministers in the Provinces and help them in the restoration of their pristine power and prestige. Concessions after concessions were offered to them and the two most important of them were (1) the abolition of the system of recruitment on the basis of a competitive examination and (2) the fixation of a definite ratio of two Europeans to one Indian, recruited for the service.

In 1930, Mr. Jayakar moved a resolution in the Legislative Assembly to this effect: "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 has 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".

This resolution was clear and self-contained and was a great advance over the 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 insisted 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. But, this was not to the Government taste and that of the European group in the Assembly. An amendment was moved by Sir D'Arcy Lindsay which urged the Government "to revive the Competitive examination for recruitment to the Indian Medical Service 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" and this amended resolution was unanimously accepted. But this resolution remains a dead letter even unto the present day 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 key service will continue".

This anomaly has not been removed even in the new Indian constitution and the domination of the Indian Medical Service has been perpetuated. The Indian Medical Service has come to stay with us permanently until at least, another stage in the advancement of Self-Government has been reached. God knows when this is going to be. So, we must make the best of a bad bargain. Our friends in the Assembly must bring forward a resolution on the lines of Mr. Jayakar's again and carry it through. The Indian Medical Council too must urge, after four years, for a registerable qualification in India for entrants to the Indian Medical Service. This qualification must include proficiency in Tropical Medicine. So long as we pay handsomely to the piper, we are entitled to ask for the best tune.

My friend and predecessor in Office, Col. Bhola Nath, who knows more about his own flock, has given us an exhaustive and interesting account of them in his address last year and it will be highly presumptuous on my part to attempt to enlarge upon it. So, let me stop with the dictum, "what cannot be cured must be endured".

2. Women Medical Service

Women of India have now come to the forefront in all walks of life. They find the Medical field no less alluring and attractive than the educational, which they first entered. A number of women graduates and Licentiates in Medicine are being turned out by Colleges and Medical Schools in every province, year after year. They too suffer like their brethren, in the struggle for existence. The Government of India have recently organized the Women Medical Service. This service is recruited in India. It consists of 40 members for All-India. Of them 50% are Indian. For a vast sub-continent like India, this number is too poor. More women, specially Indian, must be recruited for this service.

Nearly four lakhs of rupees are paid every year to the Women Medical Service from public revenues. So, the appointment should be made by an Independent body like the Public Service Commission. The proposed contract that members of the women medical service reserve, proceeding to England for their study should resign the service and pay back the Rs. 10,000 if they marry within 4 years after returning from England should be abolished. It affects a number of Indian candidates, as few Indian ladies would be prepared to bind themselves against marriage.

3. Provincial Medical Service

There are three grades of medical men serving under Government, the Civil Surgeons, the Asst. Surgeons and the Sub. Asst. Surgeons. The Civil Surgeons are promoted from among the ranks of Asst. Surgeons who are seniors. These men though given independent charge of hospitals are given subordinate position when an I.M.S. officer is posted to the hospital, though he happens to be the latest recruit. The other two grades are kept separate and water-tight and whatever the length of service and whatever the reputation of the Sub-Asst. Surgeon, he cannot enter the Asst. Surgeon's cadre, except in rare cases where he happens to be in the good books of the head of the Medical Department. In the Revenue Department of Govt. a Tahsildar, who rose from the ranks could be eligible for appointment as Deputy Collector, though he is not a provincial civil service man. While so, I fail to see why this distinction is maintained in the medical department alone. I would therefore suggest that a Provincial civil medical cadre be formed and that promotions from Sub. Asst. Surgeon's cadre be made to the Asst. Surgeon's cadre, on grounds of merit and efficiency, until both these classes get merged up. I would even

go to the length of suggesting that a competitive examination be held to which Licentiates and Graduates be admitted,to fill up vacancies in Asst. Surgeon's grade and those who come out successful be promoted to that grade, not as a matter of grace but as a matter of right. The old time-worn slogan, "once a licentiate, ever a licentiate", must be scrapped out and equal opportunities should be afforded for all grades of medical men in service. If necessary, a certain proportion may be fixed for direct recruitment and for recruitment from the Sub. Asst. Surgeon's cadre.

Independent Medical Practitioners

Most of us here belong to this category. The Independent Medical Practitioners depend entirely on private medical practice for their livelihood and they have to carry on this against what may be called 'State Aided Competition'. It is really hard for a Private Medical Practitioner to compete with medical men subsidized by Government. The independent medical practitioner has another more formidable opponent in the person of the *Hakim* or *Vaidyan*. The profession is overcrowded and acute unemployment is now staring them in their faces. In this connection, I am tempted to give a few words of advice to the budding practitioners who may be here. First of all, you must know the masses are generally poor and are still steeped in ignorance, prejudice and superstition, which will have to be overcome in order to achieve success in your profession. The patient who seeks your aid does not care about the invidious distinctions that exist between the graduate and the licentiate. He wants the best service and the fittest alone can survive in these days of keen competition. If, therefore, only a few among the Private Practitioners have roaring practice, you must remember that it has been built up after years of struggle and hard and honest work. Industry and integrity must be your watch-words. You must read books and journals and keep yourselves up-to-date and abreast of the times. Courtesy and patience, you must possess in an abundant measure. You must put on a cheerful look always. You must try to cheer up your patients and put up with their whims and fancies and their idiosyncrasies. These qualities will pay you in the long run.

1. Honorary Physicians and Surgeons

The honorary scheme was first introduced in Madras in the year 1920 and was given up as a failure, not because capable men were wanting but because the conditions imposed by Government were such that men of self-respect refused to serve as

Honorary Officers. The scheme was revived in 1923 as a result of my agitation in the Local Legislative Council and was again condemned on the following grounds, (1) that the appointments were unpopular, (2) that they were not conducive to the welfare of the patients. (3) that there was no economy, in administration to Government as the employment of honorary staff had not permitted any retrenchment in the permanent staff and (4) that the teaching capacity of the Indian medicoes was low. After long and persistent struggle, a Committee was appointed by Government to consider the further extension of the scheme and orders on their report have recently been issued. This order again is lacking in sympathy and straightforwardness. The vested interests wish to safeguard and secure their position. Let me quote two instances here. The order says that Honorary Medical Officers may generally be appointed to hospitals and dispensaries where the daily average attendance of patients exceeds 100, provided that such officers are agreeable to attend the institutions at out-patient hours. The out-patient hours are generally between 7 to 10 in the mornings and this is the time when the Independent Medical Practitioner can expect some patients for private treatment So, the whole thing reduces itself to this, that he must either accept honorary post and starve or give it up and thereby keep the wolf away from the door. The instinct of self-preservation will only induce him to adopt the latter course. Then again, there was a suggestion made that small hospitals or dispensaries might be placed in the entire charge of honorary medical officers. On this point, the order says, "The Government consider that the time is not yet ripe for placing hospitals and dispensaries in the entire charge of honorary medical officers. They agree with the Committee that the development of this scheme should be gradual and that it should be introduced only as suitable officers become available". What a sad commentary these afford on the biassed mentality of official medical men and those in power.

2. Rural Medical Practitioners

The Rural Medical Practitioners are quasi-independent medical men who now flourish in the Madras Presidency. If the honorary scheme was intended to relieve intellectual bankruptcy among the Profession, the rural scheme was intended to relieve financial bankruptcy. The Rural Scheme was suggested by me in my journal "The Antiseptic" in the year 1925, in order to relieve the growing unemployment and consequent distress among medical men in our Province. I was a member of the Madras Legislative Council then and I discussed my scheme with the

Chief Minister, the late Raja of Panagal, who, it must be said in fairness to him, was an out and out Nationalist, so far as the medical department was concerned. There was no good, I told him, in asking these unemployed medical men who are crowding themselves in cities and towns and actually starving 'to go to villages,' as some of the politicians advise them to do, without providing for their subsistence. He took the clue and at once launched this scheme. Under this, the medical practitioners are given an annual subsidy of Rs. 600, half of which will have to be expended on rent, ward-boy, sweeper and the like, and Rs. 400/- for medicines, which is no doubt inadequate. They must locate their practice in village parts, treat the necessitous poor free and receive fees from the rich. A midwife is also attached to these rural dispensaries. Unfortunately, these rural practitioners have been placed under the control of Local Boards. In course of time, they got themselves mixed up in local politics and were perforce obliged to take sides in local board elections and the like with the result that they had become the victims of persecution by one party or the other. But these men are made of sterner stuff. They formed themselves into an Association, held annual conferences, waited on deputations to the Minister and the Surgeon-General, got their grievances redressed and thus firmly secured their positions. They are better off now. This rural scheme has recently been introduced in Canada in 1930 and the rural practitioners there are called community doctors. These men are handsomely paid about Rs. 4500/- per annum as subsidy. I quote below the relevant portion of that scheme;—"Of the 866, 700 people who live in Saskatchewan, Canada, over three quarters reside in rural districts. Many of these are sparsely settled and in these thinly populated areas, it is often impracticable for a doctor to establish himself. To cope with this condition, the Provincial legislature during the session of 1928-29 passed two measures which constitute some thing new in Government administration. The first measure provides that the Council of every Municipality shall be empowered to make a grant to a medical practitioner to induce him to reside and practise his profession in that Municipality and in consideration of such residence and practice a grant of money up to 1,500 dollars (£.300) shall be paid to him". I wish this scheme is extended to other parts of India and modified according to Provincial needs.

3. Medical Inspectors of Schools

This is another avenue open for Independent Medical Practitioners. The scheme of Medical inspection of schools was tried

haphazardly in Madras for a few years and was given up on grounds of economy. This must be revived not only in cities and towns but also in rural parts and the independent medical practitioners must be provided with these jobs.

With the extension of the honorary scheme which will release a large amount now being expended on staff in hospitals and the expansion of rural medical scheme from out of the savings thus effected, at the rate of one medical practitioner for a unit of, say, 20 villages in each taluq or as many villages as may be comprised within a radius of 5 miles and the prohibition of private practice by I. M. S. men and other medical officers and subordinates in Government employ, except as consultants in the case of specialists, are in my opinion the only means of solving the present acute unemployment problem among medical men and providing efficient medical relief to the masses.

The Indigenous Systems of Medicine

There is no country in the world where medical relief is so poor as in India. It is a well-known fact that the Aryans of Ancient India exhibited their skill and genius in all the departments of medicine and although the vicissitudes of foreign conquest and a number of other factors coupled with the withdrawal of state aid, interfered to break the continuity and turn the scale of progress back, records still exist in plenty to demonstrate that the Hindus of old possessed a good knowledge of the human frame, of the ills that the flesh is heir to and the methods to be adopted to remove them. The Aryan system of medicine is known as the Ayurvedic. After the Muslim conquest of India, the Unani system began to flourish in this country and had the support of the State. There is also another system named the Siddha System which is the Tamil system and which is largely in vogue in South India. These three systems though greatly deteriorated, had and still have large public support. They cater to the needs of nine-tenths of the population of this country. It was thought highly desirable in the interest of the people that these systems should be placed on scientific basis. The Madras Legislative Council began to put pressure on the Government. A Committee was appointed of which I was a member, to investigate and submit a report. As a result, the Government Indian Medical School was established in Madras in 1925 with a big hospital attached to it. Similar agitation was also set up in other parts of India. I understand two Ayurvedic Colleges and an Unani College have also been established

in Northern India. The Indian Medical School in Madras is being well conducted and instruction is imparted in all the three systems, Ayurvedic, Siddha and Unani. As many as 310 students have completed their course and passed out of the school during the period of 9 years. Of this number, 11 are in Government employ, 87 are working in rural dispensaries, 36 in Local Fund Dispensaries, 15 in Municipal dispensaries and 171 are having private practices. That the hospital is popular can be gauged from the fact that the total number of in and out patients treated during the year 1934 came to 1897 and 2,85,939 respectively. I allude to these figures merely to point out that we can no longer ignore or brush aside these systems as empirical. The duration of the course is 5 academical years. There are three classes (1) the L. I. M., or Licentiate in Indian Medicine, (2) the A. I. M., or Associate in Indian Medicine, and (3) A. L. I. M., Associate Licentiate in Indian Medicine. Let me take the first two qualifications alone for consideration here. There are two defects in the L. I. M. Course. (1) The Preliminary educational qualification is too low. It must be raised to the standard set up for allopathic practitioners; (2) the subjects are too many and overcrowded and the students have to learn both the western and eastern systems within the same period of five years, which it is not possible to do. The course must therefore be extended to another two years, if it should stand on a par with the A. I. M. Course.

The A. I. M. Course is intended for qualified practitioners of allopathic medicine to obtain special courses of instruction in the three branches of Indian Medicine, viz., Ayurveda, Sidda and Unani, and extends over 2 years. This will form the basis for the formation of a separate Indian medicine for the future, which will be a happy blending of both the Allopathic and Indigenous systems of medicine, suited to our soil.

Drugs and Medicines

India's position is unique in this regard. Instead of utilizing the drugs found within her own borders, she has got to depend on countries thousands of miles away, to fill the empty bottles of her Pharmacies. Taking the figures for 20 years between 1909 to 1929, we find the value of drugs and medicines imported to India, excluding chemicals and narcotics, increased from 73 lakhs in 1909 to 202.12 lakhs in 1929, while the value of raw drugs exported from India also increased from 15.5 lakhs to 41.6 lakhs during the same period. Thus the trade balance in favour of importing countries

at the end of 1929 was 161.6 lakhs On the basis of the average struck out from the above figures, the trade balance at the end of 1934 can be put down at 200 lakhs. Thus India is the loser by Rs. 2 crores annually in the drug trade. There is no gainsaying the fact that some of the imported drugs and medicines get deteriorated in strength due to climatic, storage and other conditions and that is an additional loss to the country, apart from their being a positive harm to the patients, should they find a way into their medicine bottles by unscrupulous dispensers. The Government of India ought to have long ago established chemical Laboratories in important centres in this country, where the tinctures and other medicines can be prepared out of the drugs collected first-hand in this country and their supineness has drained the public exchequer to the extent of nearly 200 lakhs of rupees annually. Nor is this all; the *costliness of the Allopathic* medicines due to the circuitous route, which our own drugs take to reach us in medicinal form, to duty and freight charges is also responsible for the treatment not being availed of largely. Chemical Laboratories and herbariums in each of the several provinces of India are therefore dire and prime necessities and it is an economic folly of the highest magnitude to allow things to drift eternally like this and make India dependent on Europe and America for drugs to save her suffering millions. Patriotic spirit, however, is not wanting among Indians and men of means and scientific aptitude, have tried in the past to surmount all difficulties and obstacles and successfully establish chemical laboratories in this country to prepare tinctures, sera, vaccines etc. and supply them at comparatively less cost. The Bengal Chemical and Pharmaceutical Works, the Bengal Immunity Co,, Alembic Chemical Works, Smith Stanistreet & Co., Powell & Co., the Calcutta Chemical Co., are a few of the leading and enterprising firms of Calcutta and Bombay that are at present engaged in the manufacture of medicines under expert scientific guidance and their medicines have been tested and found not wanting. They are in no way inferior to the British products. After all, these firms only touch the fringe of the problem.

In the year 1927, the Council of State passed a resolution in the following terms:—" This Council recommends to the Governor General in Council to urge all Provincial Governments to take such steps as may be possible to control the indiscriminate use of medicinal drugs and to legislate for the standardization of the preparation and for the sale of such drugs ".

To give effect to this resolution, the Government of India

appointed a Committee with Lt. Col. Chopra as Chairman. But the terms of reference precluded the Committee from dealing with the economic aspect of the question. The masterly report of Col. Chopra was practically shelved until recently it was unearthed by the Council of State by another resolution. The Government of India have now come forward with their proposal to establish a Bio-Chemical Laboratory at Calcutta and have asked the Provincial Governments to follow suit. A laboratory in every Province is absolutely necessary to test the purity of drugs and no time should be lost to set them up.

There is again another economic aspect which the Government have failed to consider. That is the dumping of patent medicines and secret remedies, which have spelt economic ruin on our land and have caused indescribable harm to the people. The British Government in their own country have imposed a stamp duty on the secret remedies and are having an annual income of £ 4 to 5 millions. The U. S. A. are also imposing duty on secret remedies and patent medicines, with this difference that while the Government of U. S. A. insist on the component parts of medicine being inserted on the label in each packet, the British Government do not so insist and this is a great disadvantage to India. This enormous drain of India's wealth should instantly cease and there ought to be legislative control over these patent medicines. There are also patent remedies and secret remedies of indigenous origin which play similar havoc, though to a lesser extent. In the case of the indigenous practitioners, who refuse to disclose their formula, the Taxation Enquiry Committee have suggested a tax of four annas in the rupee. They have also suggested an increase in the tariff rate of imported patent medicines to 50%. The Government of India have not moved in the matter because it affects vested interests. The import of these patent medicines should be stopped and no medicine should be allowed to be imported which does not disclose its formula on the label. We medical men should refuse to prescribe patent medicines, whose formula has not been disclosed. A great deal of propaganda is necessary to impress on the people, the harm in taking patent medicines advertised in papers as specifics for diseases. Mahatmaji's Village Industries Improvement Association might profitably include this item in their programme and dissuade people from using patent and proprietary medicines and foods and thereby stop the flight of nearly half a crore of rupees annually from our land.

Even in the matter of supply of drugs and medicines, there is

the military domination over the civil. The medical stores are military stores; they get the supplies from England and distribute them to Civil Hospitals. They charge 20% extra as departmental charges. But when the supplies are made to Local Boards and Municipalities, a further levy of 20 % is made. Thus, when the medicine reaches the rural population, its original cost is raised by 40 %. I raised this question in the Council of State in 1927 and pressed for freedom for Provincial Governments and Local Boards to purchase their stores direct from any approved vendor. Though the Government promised to do something in the matter, I understand the same old system still continues. We must agitate and see that this military control over medicines and drugs ceases and that the civil government get their supplies at the cheapest rates from the open markets.

Indian Pharmacopoeia

The compilation of an Indian pharmacopoeia is a great desideratum, and the time has now arrived for taking up this question in right earnest. The various formulae given in the British, U. S. A., and other Pharmacopœias, may, after sufficient laboratory test and trial in our own country, be adopted with advantage and included in the Indian Pharmacopœia. The indigenous system of medicine may also be standardized and such of the therapeutic agents as are really efficacious may be brought within its fold. Let me repeat here my old 'obiter dictum, "If in the wake of the great enterprise of the study of Tropical Medicines, the examinations for the Indian Medical Service are held only in India, for the study of which candidates come here from the West and if the Pharmacopœia of India be more Indian than at present, will that be an era in the history of medical science in India"?

Dentistry

This is a much neglected subject. The care of the teeth has dropped down with the advance of civlization. We, Indians, who used to take scrupulous care of our teeth have greatly deteriorated. We must have qualified dentists to mend our teeth. Dentistry should be taught in all Medical Colleges and Schools. If it is not feasible, a College should be established at a Central place where up-to-date instruction should be imparted in Dentistry. A separate Register should be maintained to discriminate qualified men from quacks. The Indian Medical Association, I notice, has also passed resolutions on the subject We may pass any number of resolu-

tions, we may cry hoarse but our cries have always been cries in the wilderness.

Public Health and Social Services

We, medical men, have got to shoulder greater responsibility in promoting public health and social well-being than we have hitherto done. In private practice, we must not fail to impress on the patients the benefits of fresh air, pure water, nutritious food, good exercise, sound sleep and a host of other things which are indispensable, not only to cure them of their maladies but also to prevent them from contracting fresh ailments. That way lies our success in our profession. We must undertake health propaganda work and do our little bit towards prevention of diseases. In rural parts, there is very great opportunity for social uplift. The Rural Medical Practitioner, if he is so minded, can keep the few villages under his control in a perfectly sanitary condition. The Public Health Department has got a very poor staff under its control. In the case of an outbreak of cholera or small-pox they are obliged to requisition the services of the Rural Medical Practitioners. Recently, in some of the districts of the Madras Presidency, where cholera was epidemic, the rural practitioners did all the inoculation work for a small remuneration and in that way the epidemic was kept under control. The Medical and Public Health Departments must work in a spirit of comradrie and given the rural practitioner, a compounder, a vaccinator and a midwife to assist him, he will be able not only to successfully ward off infectious diseases like cholera and small-pox but also lessen maternal and infantile mortality in the area under his charge

Co-operation and Preventive Medicine

The next thing that we would like to impress is the necessity for greater co-operation between the medical practitioner and the State. Medical men should enlarge the narrow purpose of directing their almost exclusive attention to morbid conditions and the remedy of such conditions by drugs to preventive aspect of medicine. Every medical practitioner should carry with him a new practice of preventive medicine with his daily routine. Every practitioner should be a missionary of health.....a teacher of his patients in the true sense. As Sir George Newman, correctly puts it "the medical practitioners ought to be the first effective teachers of hygiene to the people, the principal interpretors of preventive medicine in the country for, through their hands pass a greater proportion of the whole population".

Another free and effective means of preventive medicine is the institution of a National Health Insurance scheme. This is a

co-operative organisation between insured persons, the friendly societies, the medical profession, and the Government, especially designed for "insurance against loss of health, and the prevention and cure of sickness". In England it is controlled by medical and lay co-operation. 16,000 doctors (very nearly 70 per cent) of the medical practitioners in England and Wales have agreed to accept their right, under the Act to give preventive and curative advice and treatment to sixteen million insured people. The doctor is paid for each person on his panel, whether he becomes a patient or not; the patient has a free choice of his doctor, and may come at the very beginning of his sickness undeterred by any question of fee. The doctor's duty is to diagnose and treat the illness and to estimate the resultant incapacity. There is no doubt bound to be some complaint in such a vast scheme, but taken as a whole this scheme has provided medical relief and service for half the adult population of England

Medical Practitioners as Legislators

It is a pity that medical men are sparsely represented in the various councils of the Indian Empire. The old Legislative Councils in India inaugurated in 1892 had only a dash of representative element here and there. In those days, not even the Surgeon-General, the head of the Medical Department was a member of the Legislative Coucil—I am speaking only of Madras —while the Director of Public Instruction and the Inspector General of Registration had almost always been members of the Council. In 1909, when the Minto—Morley Reforms gave India enlarged Councils on an elective basis, no doctor stood for election. The late Dr. T. M. Nair, who was as much an esteemed politician as an esteemed surgeon and Specialist in Eye, Ear, Nose and Throat Diseases, entered the Council only through the door of nomination. He introduced the medical Registration Bill for Madras as a private Bill, and got it passed into an Act. He may as well be called the father of Medical Registration Act in Madras. Under the Montague Chelmsford Reforms, there were at the beginning only about 4 doctors in the Madras Legislative Council in a total strength of about 120 and to-day there is only one. In the Legislative Assembly, during the Nehru period there were two doctors and in the Council of State, only one and that was myself. In the present Desai period, I believe there are four in the Assembly and none in the upper-chamber. These figures tell their own tale of apathy and disinterestedness on the part of the Medical Profession to enter the Legislatures

You must remember that your problems are different and a landlord and medical portfolio, or a lawyer and medical portfolio are incompatibles. A medical man becoming a Minister of Medicine and Public Health in a Province will be the greatest blessing to the people. So, you must not let slip the golden opportunity that is afforded to you under the Hoare-Wellingdon Reforms. I dare say there is no dearth of able and eloquent politicians among the Medical Profession. Men with a long purse to successfully fight out the elections, men with the gift of the gab to vehemently plead the cause of the profession and men with ripe experience to skilfully tackle the intricacies of the medical problem are to be found among us in large numbers to-day and to such of them, I would appeal to stand as candidates for the next elections. You must not forget also the Local Boards and Municipalities. Your presence in those bodies will make your path easy. By coming into closer contact with the people, you will be able to gain their good-will and win their confidence. That will prove a great asset to you. God helps only those that help themselves!

The Indian Medical Association

A word about the Indian Medical Association and its activities and I am done. The Association has got though short, yet, a creditable record behind it. It was started during those troublous times, when the Indian Universities were treated with scant regard by the British Medical Council in the matter of recognition of their medical qualifications and the medical profession in India generally was intended to be kept always in the background as 'hewers of wood and drawers of water' in their own country. The objects of the Association are (1) to secure the promotion and advancement of Medicine and allied Sciences, (2) maintain the honour, dignity and interests of the medical profession and (3) secure the co-operation between the members thereof. The first of these objects is being fulfilled by the publication of the monthly journal called "The Journal of the Indian Medical Association" and the reading of scientific papers and discussion of scientific topics in annual conferences such as this. The journal is reputed for its wealth of knowledge and erudite scholarship and it behoves every member of the Association, nay, every member of the medical profession, to subscribe for it and make it a success. The second object has been amply fulfilled by the noble and strenuous part the Association played in the battle with the British Medical Council and the ultimate establishment of the Indian Medical Council. If the Indian Medical Council is not to our liking, it is not the fault of

the Association. "Even a worm can turn" is no idle saying and the Indian Medical Association has sufficiently demonstrated its truth to the British Medical Council. This is no mean achievement. But the fight is not yet over. There are many more things to be done before we can maintain our honour and dignity and safeguard our interests. To attain this end, unity is essential. Every member of the medical profession in India should be a member of the Indian Medical Association. The Association has thrown open its doors even to Licentiates. It is high time therefore for the All India Medical Licentiates Association to be incorporated with the Indian Medical Association. A beginning may be made by holding the Annual Conferences of both the Associations at the same time and at the same place and having a common meeting for Scientific discussions. We have been divided and sub-divided by the powers that-be, to serve their own purpose. Our tussle with the British Medical Council must be considered as a blessing in disguise. We must learn a lesson from the British Medical Association and note how strong and united they are and how persistent in protecting the interests of their kith and kin, in all parts of the world. We must see that we make our Indian Medical Association as strong as the British Medical Association and our Indian Medical Council as unyielding as the British Medical Council. This consummation can only be reached by the union and array of the whole profession, high or low, official or non-official under a single banner and hearty co-operation among the members. In union lies our strength!

Ladies and Gentlemen, I thank you once more for the honour you have conferred on me and wish you Good Luck and God-Speed.

The Tinnevelly District Medical Association, Palamcottah

Srivaikuntam' 23rd November, 1935.

The Tinnevelly District Medical Association held its monthly meeting on Saturday the 23rd November 1935 at Srivaikuntam a holy place of this District. Members numbering 45 including two lady doctors gathered from all parts of the District. Some of the officials and non-officials were also present. Members also attended the Health Exhibition organised by the District Health Officer.

The meeting began under the presidentship of Lieut. Col. T. S. Shastry, I.M.S., at 11 A.M. The Secretary read the minutes of the Centenary Celebration of the Madras Medical College along

with the monthly meeting of the Association held on 4-11-35 at Palamcottah which were passed. Discussion about the scheme of meetings for the next year (1936) was then taken up and will be concluded at the next meeting. The following resolution proposed by Dr. P. Janardhana Rao., L.M. & S. and seconded by Dr. S. Kanthimathinathan, L.M. & S., was unanimously passed :—

> "Resolved to request the Government that they may be pleased to consider the period of absence from their stations, viz. from the 1st to 5th January 1936 both days inclusive to attend the First All-India Obstetric and Gynæcological Congress at Madras on the 2nd, 3rd and 4th January 1936 may be considered as duty even though Travelling Allowance may not be paid".

An enjoyable Dinner was served to all present at 12 noon. After sweet music and rest, the meeting again began at 2 P.M. Dr. S. Kanthimathinathan, L.M. & S., of the Municipal Hospital, Tinnevelly, delivered an interesting lecture on 'Dyspnoea'. Dr. S. Venkatachalam, L.M.P., of Srivaikuntam, read a paper on 'Splenomegaly in the Tropics'. A case of Caesarian section for Placenta Previa Centralis which was operated on successfully by Lieut. Col. T. S. Shastry, I.M.S., was read by Dr. Mrs. A. Brown of the Women and Children Hospital. Vannarpet, and the detailed treatment of the serious complications that ensued *viz.*, B. Coli infection. Thrombosis of both the lower limbs and puerperal insanity were explained. The woman was discharged cured after a stay of 2½ months in the Hospital.

The President offered thanks to Dr. Govinda Menon, the Sub Assistant Surgeon at the Local Fund Hospital, Srivaikuntam, who is to retire shortly and his fellow-members of the area for their splendid hospitality.

The President conveyed to Dr. Menon, the best wishes of the Association for his happiness and prosperity after his retirement. The meeting ended after a high tea and an exhibition of some thrilling feats of physical strength by a local 'Sandow' at 5 P.M.

The East Godavari District Medical Association, Cocanada.

Minutes of the Meeting held at Peddapuram on 23rd November 1935.

A meeting of the East Godavari District Medical Association took place this time at Peddapuram on 23rd, November 1935. Captain J. S. Mc.Millan, I.M.S., presided. The Peddapuram group of members were at home to the Association, 42 members from all over the district having attended. There was an enjoyable tea

party. Dr. P. Lakshminarayanappa of Peddapuram read a paper on "Surgical Shock". Dr. P. C. Jaju of Peddapuram read some case notes on "The toxic effects after the injection of Organic Arsenical Compounds". Dr. V. Venkatramayya of Veeravaram read some case-notes on "Rat-bite Fever".

Capt. J.S. Mc.Millan, I.M.S. explained the cause of Rat-bite fever and said that among rats some are injected with a disease caused by the Spirillum minus producing in the rat a disease of 3 stages like Syphilis and when an injected rat bites the human being and there happen to be mucous patches in its mouth, it conveys the infection to man. The disease in addition to the other symptom is characterised by a fever running a course like relapsing fever with the difference that whereas in relapsing fever, the relapses stop with two or three, rat-bite fever relapses, go on and on and on for months unless Salvarsan is administered in some form. It is so rare because few rats are infected in this country. Diagnosis:— Spirillum minus, a very small spiral with 2, 3 curves, is demonstrable on making a smear of fluid extracted from an inflamed lymphatic gland. It is not found in blood smears as in relapsing fever. Inoculation of a rat with human blood will show the spirillum in rat's blood. Dr. V. Venkatramayya said he had a wonderful effect on his two cases by injections of Salvarsan.

Capt. Mc.Millan, brought to the notice of the Association that a case of Cerebro Spinal Meningitis was admitted recently into the Head-Quarter Hospital at Cocanada and warned that every Medical man should be on the look out for more and explained that the disease is very dangerous and characterised by an intense head-ache going on very quickly into unconsciousness with signs of meningitis. Lumbar puncture, centrifugalising the fluid and staining a smear with Leishman would show the Cocci unmistakably and intrathaecal administration of serum and persisting in it daily even after consciousness is regained until all Cocci disappear from the spinal fluid is the line of treatment.

Capt. Mc. Millan made a small speech on the need for the organisation of Red-Cross Society all over the district and formed an advisory committee consisting of local doctors to organize a branch at Peddapuram. Dr. T. Kanakaraju of Ramachandrapuram read a paper on "Honorary Medical Officers and State Hospitals.

After an enjoyable dinner the guests dispersed.

Trichinopoly and Chettinad Medical Association

A Medical Meeting

A Joint Meeting of the Trichinopoly District and Chettinad Medical Associations was held at 5 P.M., on Sunday the 24th November, 1935, in the H. H. the Raja's Hospital, Pudukottah when about 60 Doctors attended. The Chief Medical Officer and the Staff were 'At Home' with 'Tea' and 'Dinner'. Dr. M. G. Ramachandra Rao, M.B.C.M., Chief Medical Officer, Pudukottah, presided.

In his opening remarks, the Chairman said that it was a notable day in the annals of Pudukottah Medical History. He welcomed the large gathering of Medical Men from the surrounding districts who had gathered in such large numbers from distant places at great personal inconvenience. He then called upon his assistants to demonstrate interesting cases and read case notes on cases of Trephining of the skull, Santonin poisoning and pregnancy mistaken for ovarian cyst.

Dr. M. R. Subramanyam of Valliyanay, Karur Taluk, Trichinopoly District, demonstrated an interesting case of intractable 'Neuralgia'. There was an interesting discussion following the demonstration of cases and reading of case notes, in which many members took part.

Capt. Sangham Lal, I.M.S., F.R.C.S., District Medical Officer, Trichinopoly made a few remarks on the cases demonstrated and said that such meetings were serving a very useful purpose in inducing doctors to keep abreast of Medical literature and helped them in acquiring better knowledge of the subject.

He then delivered an interesting lecture on 'ADVANCES IN SURGERY' and clearly explained the latest methods of treating simple surgical conditions such as boils, carbuncles, witlow, and infections of the hands, burns, and osteomyelitis. He said that modern surgical treatment was tending to become more conservative, rather than dashing surgery.

The Chairman in his concluding remarks said that he was much impressed with the interesting and lucid lecture of Capt. Sangham Lal, and much appreciated the high level of discussion. He thanked the Secretaries of the Trichinopoly and Chettinad Medical Associations whose enthusiasm was responsible for that day's meeting.

Dr. Raghavan the Secretary of the Trichinopoly District Medical Association explained the objects of these Joint-Meetings and requested the Doctors in Pudukottah to join hands with the neighbouring districts and help to strengthen the hands of the

Central Medical Association of South India that is being formed. He also requested all the doctors to take part in the Annual Medical Conference that will be held during the middle of December '35 in Trichinopoly.

Dr. T. S. Shetty, the Secretary of the Chettinad Medical Association in proposing a vote of thanks to the Hosts, appealed to them either to form an Association for Pudukottah State which might be affiliated to the Central Medical Organisation or to join the neighbouring District Medical Associations.

Mr. D. S. Ayyengar of the 'THIO-CALCIN' Co., who was present on the occasion distributed samples and literature on 'Sirop-Thiocalcin'.

The Doctors present were then taken round and showed the newly opened Radiological Institute which was much appreciated.

After Dinner at 8 P.M., the Meeting terminated.

GLEANINGS FROM MEDICAL PRESS

Medicine and Therapeutics

Use of Convalescent Blood in Whooping Cough.—William L. Bradford, M. D., Rochester N. Y., *American Journal of Diseases of Children*, Oct. 1935 pp. 918, gives a resume on the value of convalescent serum and of whole immune blood in the prevention of whooping cough and in a series of fifty eight children under 3 years of age treated with injections either of 10 c.c. Serum taken in the eighth week of convalesence or of from 1—20c.c. of whole blood taken from an adult (parent) who had experienced the disease previously ; finds 44 of this group obliged to remain in families in which one or more cases existed. 27 of this group received the injections during the incubation period. In 15, the disease developed, but in 10, (66 %) it was mild. There was one complication.

Of 27 used as controls, eight (41 %) had a mild form of the disease; eight, average, and four severe. In four complications developed.

In 17 children exposed in the family who received the preventive vaccine after symptoms of coryza existed, there was no indication that the course of the disease was modified.

In a group of 16 patients exposed outside of the family, nine were given injections during the incubation period, and the

number completely protected was so great as to suggest that the exposures may not have been genuine.

From evidence obtained by observation of treated patients exposed in the family along with suitable controls and from the survey of the literature to date, it seems probable that immune blood is effective in the prevention and modification of whooping cough if given before the catarrhal symptoms appear. If given after the disease is established, favourable results are less apparent.

Therapeutic Hints

Asthma: Gold Salts.—L. Banszky (Leidon) reports good results from gold Sodium thiosulphate given intra-muscularly in doses of 5.50 mg. Of 20 cases so treated, 10 became wholly free from asthma. *Lancet*, July 13, '35 p. 79.

Amoebic Dysentery.—Copper Sulphas—P.Beregoff (Montreal) recommends colonic irrigation with 2—4 litres of hot solution of copper sulphate, 1 in 5000, at a temperature of 50—55°C (122—131°F) in the container, at a rate of 100—200 ml. per minute. On arrival in the colon the temperature is 45—48°C (113—118°) F. Ten irrigations, daily or every other day, usually cured the condition.—*Canadian Medical Association Journal* June '35, p. 641.

Tetanus: Avertin.—According to H. S. Mitchell, (Montreal) avertin is a valuable auxiliary in the treatment of tetanus, though it does not replace antitoxin. (*C. M. A. J.* April '35, p. 415.

A New Clinical Test for Bilirubin in Urine.—"A simple qualitative test has been worked out in Dr. G. A. Harrison's laboratory. It consists in the oxidation by Fouchet's reagent of bilirubin adsorbed on a barium precipitate, and is performed as follows: A test-tube is half-filled with urine (about 10 ml.), and half the volume of 10 per cent. barium chloride solution is added. The contents are mixed and filtered. After the fluid has passed through, the paper is spread on another dry piece of filter-paper and 1 or 2 drops of Fouchet's reagent are added to the precipitate. A green (biliverdin) or blue (cholecyanin)colour indicates bilirubin.

"Fouchet's reagent consists of:—

Trichloracetic acid	...	25 grm.
Distilled water	...	100 ml.
10 per cent. Ferric chloride	...	10 ml.

"The test is very delicate; it is much more sensitive than either Gmelin's nitric acid test, or the iodine ring test; at the same time it is not too sensitive; normal urines are clearly negative, and urobilin does not give a false positive reaction; the minimum amount of bilirubin detectable is 0.003-0.008 mgrm. per 100 ml. of urine. For further details see the *Biochemical Journal*, 1934, xxviii., p. 2056."—*E.G.G., in St. Bartholomew's Hospital Journal*, March, 1935.—*G. P. of Australia.*

Tuberculosis among Medical Students.—Continuing his study of the occurrence and development of tuberculous lesions among medical and other University students in Philadelphia, H. W. Hetherington (Arch. Int. Med. May, 1935, p. 709) reports that the incidence of positive reactions to the tuberculin test among medical, dental, and law students is high; in the graduating classes it approximated 100 per cent. The incidence of tuberculous lesions at the apex of the lung, as demonstrated radiographically, was from 15 to 20 per cent. in four graduating classes, including a total of 521 students. There was a decreased incidence of more advancad lesions among medical students in the three later years of the curriculum; this is attributed to prophylactic care taken by those in whom early lesions had been detected previously. The occurrence of new lesions and the progression of old lesions was more commonly noted in the third year of the medical course than in the three other years combined. The results of a limited number of examinations indicated that the incidence of apical disease was decidedly less in law than in medical students, but that the occurrence of serious disease was by no means rare among the former. The dental and law students were less severely affected by tuberculosis, however, than the medical students. It is argued that the last-named are first exposed to possible contact with tuberculosis during their second year, when they study gross pathology in the post-mortem room and laboratory; during the third and fourth years they are brought into contact with tuberculous patients, and with the dust in their homes, containing in many cases viable tubercle bacilli. Although it is as yet uncertain whether this exposure actually produces latent or manifest disease, the facts are held to show the desirability of special precautions to prevent the contamination of student work-rooms with tubercle bacilli.—*B. M. J.*

A Risk with Amidopyrin.—Amidopyrin has for some years enjoyed the reputation of being a relatively harmless substance

but P. Plum has contributed to " The Lancet " (5810, 14) a study of seven cases of agranulocytosis after taking therapeutic doses of amidopyrin. The author's principal conclusions are :—(1) It is demonstrated that in a disposed person even a single small dose of amidopyrin may have a very strong and protracted reducing effect upon the white blood cell count, including mononuclears as well as polymorphonuclears. (2) While agranulocytosis is caused occasionally by other medicaments (benzol, salvarsan, gold, bismuth, and dinitrophenol), there can be no doubt that in the great majority of observed cases it is produced by amidopyrin. He adds that since the ætiological significance of amidopyrin has become a subject of general discussion in Denmark (August 1934), no new case of agranulocytosis has been admitted to the Blegdams hospital. Another case is recorded by G. S. Smith in a subsequent issue (5820, 607) of the same journal. The case shows the beneficial effect which may follow pentnucleotide therapy in agranulocytosis. The relapse which occurred gave opportunity for a second demonstration, in the same patient, of a granulocytic response after treatment with this product. The author adds: It seems likely that the ætiological factor in this case was amidopyrin, which had been taken over a long period in small doses contained in a publicly advertised 'tonic'". In view of the popularity of amidopyrin, taken by itself or in combination with other medicines, it is well that pharmacists should be alive to its possible danger. Observations to the same effect as those of P. Plum in " The Lancet " appear in report No. 76 (just issued from the Stationery Office, price 6d.) of the Ministry of Health " Public Health and Medical Subjects' series, with a cautious deduction, however, that such drugs " have a causal relation only with an uncertain proportion " of the total number of cases of agranulocytosis. — *Chemist and Druggist, (London). — Medical Times, September, 1935.*

Sulphur Therapy.—Much has been written concerning the wide therapeutic value of sulphur, but its use in widely different fields suggests that the theoretical basis of sulphur medication is largely empirical, Aa a result, the many beneficial results attending the administration of sulphur have been accompanied by a certain proportion of unfavourable prognoses. For example, the failure to observe aseptic precautions during intramuscular administration of preparations of sulphur in oil has frequently led to periostitis ; in some instances the dangers of an oil embolism have been encountered. Notwithstanding these difficulties, injections

of sulphur in oil have been widely employed within recent years in the treatment of a variety of conditions. Preparations of sulphur in oil have been used in the treatment of dementia paralytica and certain other nervous and mental disorders. Recently, a study of a series of twenty-three cases of dementia praecox treated with a preparation of sulphur in oil gave slight indications of improvement, although it was difficult to distinguish between therapeutic improvement and spontaneous amelioration. One of the most characteristic effects of the sulphur injections appears to be a leukocytosis which has been demonstrated to be due to an increase in polymorphonuclear cells. Probably the most beneficial results of sulphur therapy have been claimed in dermatology. This is particularly true with the advent of new preparations. Interesting comparisons have been made between the therapeutic value of colloidal sulphur and that of other forms of sulphur therapy. The application of this element in colloidal form was of no value for cutaneous conditions that in the past have not responded to other types of sulphur treatment. However, colloidal sulphur seemed to produce improvement in many instances in seborrhea, seborrheic dermatitis, acne rosacea, acne vulgaris and dermatomycosis. It has proved to be of value when applied as wet dressing in cases of subacute eczema and dermatomycosis. Certain types of fungous infecitons, for example ringworm of the feet, responded well to colloidal sulphur therapy. The latter treatment was, however, of little value in scabies, psoriasis or instances of pyogenic infections. These results, together with cases reported by other investigators, may stimulate the use of sulphur as a therapeutic agent in dermatology. Sulphur in the colloidal form should be employed in much lower concentrations than those used for other forms of sulphur. It is generally advisable to use the material in less than a 5 per cent solution. All preparations should be clear, free from an odor of hydrogen sulphide, of a *p*H of approximately 5.0, and correctly standardized as to sulphur content.—*J. A. M. A., August 3, 1935.—Texas Medicine.*

Empyema in Children.—Dr. L. F. Forres writing in the Bulletin of S. Juan de Dios hospital of his experiences of a study of 40 cases of empyema comes to the following interesting conclusions :—

1. It is the diminished quality of the breath sounds rather presence or absence whlch should guide one in the diagnosis of empyema in children.

2. Mortality is higher:

(*a*) In staphylococcus, streptococcus, and mixed infections—than in pneumococcus empyema.

(*b*) Under 2 years of age—than above 2 years.

(*c*) In the presence of certain complications.

3. Pneumococcus was the most frequent causative organism.

4. Preliminary aspiration should always be done to ascertain the type of infection. But thoracentesis is not always effective for permanent cure. The majority of cases sooner or later require drainage by the knife.

5. Pleurotomy should be reserved for weakly or very ill children. Thoracotomy is to be preferred, as it affords better drainage and freeing the lungs from adhesions.

6. Pneumococcus empyema is better treated by aspiration and rib-resection (no mortality in this series) than by pleurotomy (50 % mortality) The other forms of empyema give high mortality with any form of treatment.

7. Early operation for pneumococcus empyema and a delayed one for the other types, should be the rule.

8. Burying the rubber tube under the skin after rib-resection should be tried more extensively in order to judge its real merits.

In conclusion, it must be emphasized that the surgical treatment of empyema in children demands: (1) Thorough drainage of the thorax by rib-resection; (2) Freeing the lungs of adhesions; and (3) Respiratory exercises for re-expansion.

BOOK REVIEWS

An Introduction to General Therapeutics.—*By H. K. Fry*, D.S.O., B.SC., M.D., D.P.H., Lecturer in Materia Medica and Therapeutics in the University of Adelaide, 223 pages, 1935 (Cassell & Co., Ltd.)

This small book presents a concise survey of modern methods of treatment, dealing with the principles underlying their use, and their possibilities and limitations in practice. Four chapters are devoted to chemo-therapy, in which the various stimulants and depressants, tonics, hypnotics, purgatives are discussed. Massage, medical gymnastics, medical electricity, radiations and hydrotherapy are discussed in the next four chapters on Physio-therapy. Psychotherapy, Organotherapy, Immunotherapy and

Dietetics complete the rest of the book. The book is written in a simple manner and should be very useful to the medical man to formulate his ideas concerning the methods of treatment with which he is acquainted.

The Aswini Clinic, Calicut.—We have received a copy of the report containing a review of the work of the Aswini Clinic, Calicut for the year 1934-35. This institution was founded in April '34 by a band of enthusiastic medical men and women of Calicut to bring medical relief to the poor on efficient and up to date lines with public support and co-operation. The total number of cases treated during the period commencing from April '34 and ending in April '35 was 494. The expenditure incurred was Rs. 450-8-0. This works out at less than Rupee one per head per annum. The income was only Rs. 201/- and though working at a deficit, the organisers continue this utilitarian enterprise in the full hope that voluntary help from charitably-minded gentries and ladies will soon be coming in an abundant measure so as to make it self-supporting. We wish the clinic all success.

The Practical Medicine Year Books

I. **General Madicine.**—*By G. F. Dick*, M. D., *L. Brown*, M. D., *G. R. Minot*, M.D., S.D., F.R.C.P., *W. B. Castle*, M.D., *A. M. W. D. Strand*, M.D., and *G. B. Eusterman*, M. D., 1934, 843 pages, illustrated. [The Year Book Publishers, Chicago.] Price $ 3.00.

II. **Eye, Ear, Nose and Throat.**—*By E. V. L. Brown*, M. D., *L. Bolbman*, M.D., *G. E. Shambang*, M. D., *E. W. Hagens*, M.D., 1934, 621 pages, Illustrated. (The Year Book Publishers, Chicago). Price $ 2.5.

III. **Pediatrics.**—*By I. A. Abt*, D.SC., M.D., and *A. F. Abt*, B.S., M.D., 541 pages illustrated, 1934. (The Year Book Publishers, Chicago). Price $ 2.25.

The year book publishers are to be congratulated on the excellence of the series published this year. The three books before us present a review of the progress of the respective subjects as gathered from the pages of the world's periodicals. The book on general medicine is divided into five parts.

Part I. Infectious Diseases;
Part II. Disease of Chest.
Part III. Disease of the Blood forming Organs.
Part IV. Disease of the Heart and Blood Vessels.
Part V. Disease of the Gastro-Intestinal Tract.

Collaboration of men like George F. Dick, Lawrson Brown, George R. Minot William B. Castle, William D. Strand and G. B. Eusterman in the editing of their respective speciality is

proof enough of the outstanding authority and value of the contribution. Although there has not been much advance of considerable importance in General Medicine, yet a large amount of literature has appeared on the therapeutic side. Poliomyelitis serum treatment of lobar pneumonia, pernicious anæmia and related macrocytic anæmias, are some of the sections that would particularly attract the attention of the practitioners in this side of the world. A notable feature of the book is the inclusion of the opinions of the respective editors on subjects treated, wherever possible as a foot note.

The 1934 year Book of the Eye, Ear, Nose and Throat—Consists of three parts. Section on Eye contains many useful papers on the disease of eye. Lens and cataract, the Retina, Glaucoma and Surgery of the Eye are a few of the subjects that contain a good deal of new ideas that would interest the reader. The main object of these publications is kept up in this and every section in the book contains some newer conception of old ideas and as such will be found useful not only by the enthusiastic general practitioner but also by those that are engaged in the particular speciality.

Year Book of Pediatrics 1934.—This volume gives in a very clear manner the gist of progress in Pediatrics during the past year. Among the many subjects dealt with, the chapter on premature infants and the disorders of the new born, prematurity, asphyxia, convulsions, infant feeding, should prove of much value to all readers. The reader will observe that selections are taken not only from American Journals but also from the British, French, German, Spanish, Italian, Scandinavian, Swiss, Dutch and other publications. We recommend this book to all readers and its usefulness to all interested in the Pediatric practice cannot be over-estimated.

Manipulative Methods in the Treatment of Functional Disease.—*E. L. Hopewell-Ash*, M.D., 1935, pp. 92. (London : John Bale & Sons and Danielsson, Ltd.) Price 3 Sh. 6d.

The author describes in this book some of the reputed technique of manipulative surgery and medicine. The first section of the book deals with the Neuro-medical manipulation which includes a discussion on General technique, spinal surface manipulation, treatment of the abdominal sympathetic, Neuro-medical objective in the chronic Bronchitis group. The mental and nervous diseases common in every day practice and treatment forms the subject matter of the second part.

It is an interesting book written lucidly and we are sure our readers will find it very useful and instructive as this type of treatment of diseases is very common in India specially in the South.

INDEX TO ADVERTISERS.

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