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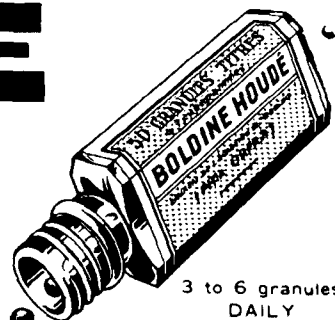
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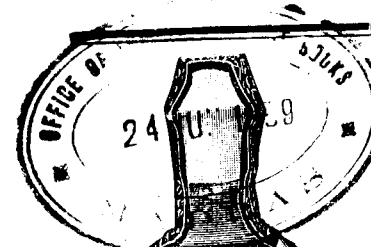
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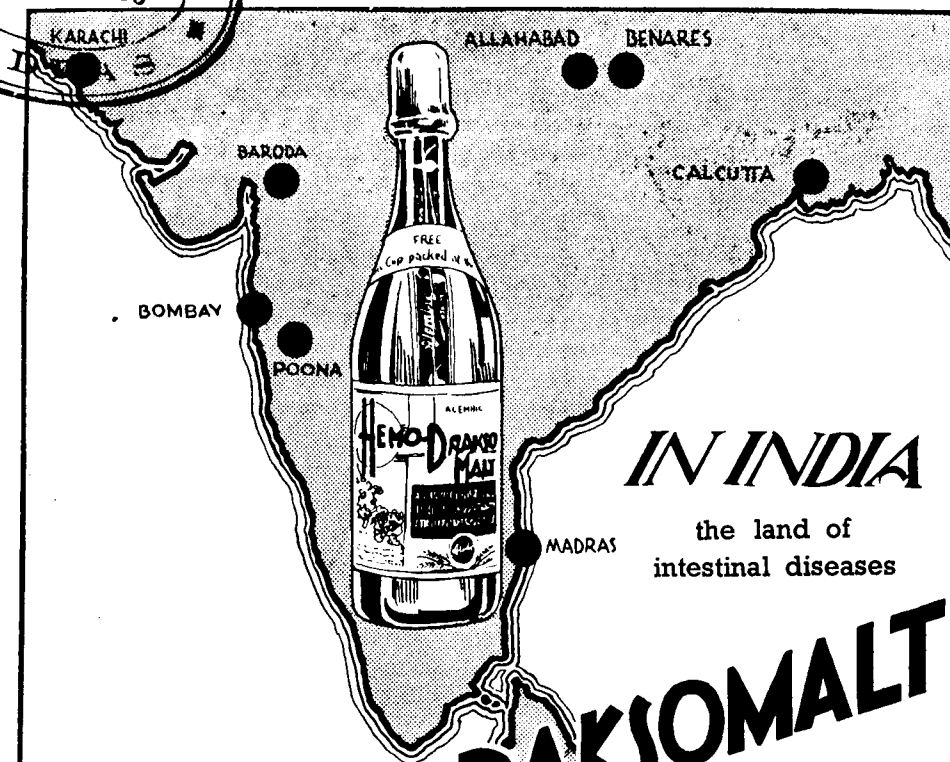
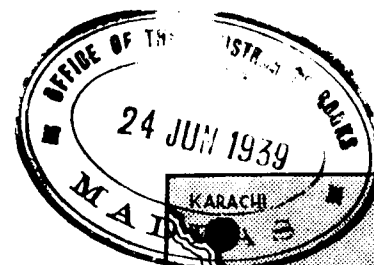
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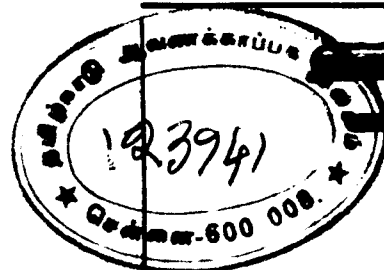
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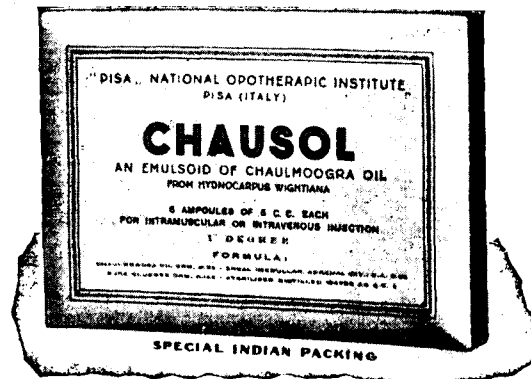
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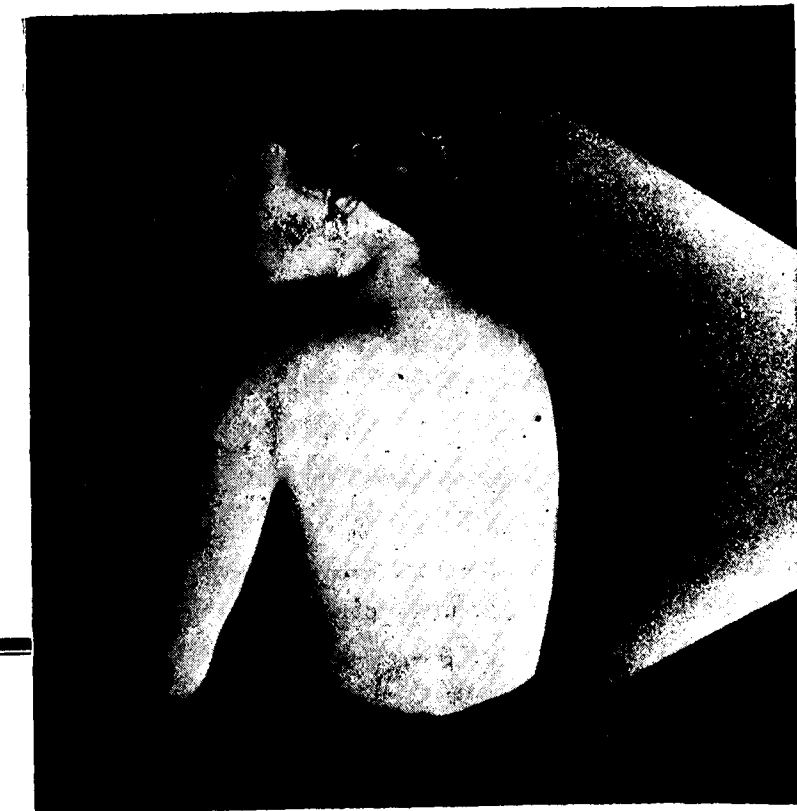
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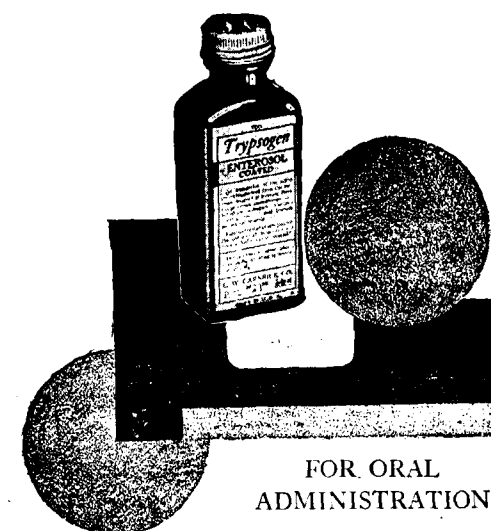
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ADDRESSES AND ARTICLES

The Nature of Acute Empyema and its Treatment

● Dr. Ratan Chand, L. S. M. F., M. O.,
Sikhanwala Dispensary, Sargodha,
Punjab

Purulent effusion into the pleural cavity is very rarely primary. Generally it is secondary due to infections derived from the neighbouring viscera—chiefly the lungs. It is classified according to the amount and situation of the effusion, eg., total empyema, localised or encysted empyema, interlobar empyema, empyema necessitatis and pulsating empyema. Bacteriologically it may be pneumococcal, streptococcal, mixed pyogenic and tubercular.

ETIOLOGY

1. In large percentage of cases, the infection comes from a pneumonic lung.
2. Some mediastinal affection may also cause it.
3. From the abdomen the mischief may ascend up to a pleura, as in cases of hepatitis, sub-diaphragmatic abscess, peritonitis, appendicitis and liver abscess. The writer once, while performing repeated aspiration on a huge liver abscess, gave the patient empyema which got secondarily infected.
4. From outside, as in penetrating injuries of the chest or during the course of artificial pneumothorax treatment of tuberculosis. In the latter case it may either be tubercular or due to secondary organisms. In some cases bursting of a superficial focus into the pleura may also give rise to this tubercular variety.
5. Infection may be blood borne, as in rare primary cases.

SYMPTOMATOLOGY

It is rather in the domain of the physician. However let me make a passing mention. Fever, pain, dyspnoea, cough and sweating are the chief symptoms. Deficient movements on the affected side, bulging of the interspaces and displacement of the apex beat (in massive cases) on inspection; stony dullness over the empyema area, skodaic resonance above the level of the fluid and hyper-resonant note on the other side on percussion; and absence of breath sounds and diminution of vocal resonance on auscultation are the chief signs in a typical case.

DIAGNOSIS

Diagnosis is not difficult. Aspiration should certainly be performed to confirm other findings and to determine the character of the micro-organisms in the effusion. It is also helpful in deciding the line of treatment. X-raying is of great help, in encysted and interlobar forms especially.

PROGNOSIS

Prognosis mainly depends upon the primary condition. Extremes of life are bad cases from prognostic view-point. Pneumococcal infections are rather benign as compared with streptococcal ones.

TREATMENT

There are three chief ways of dealing with the cases: (1) Aspiration (2) Intercostal drainage (usually closed) (3) Open drainage with rib resection:—(a) primary (b) secondary.

None of these can be universally applied to all the cases. One requires careful exercising of one's judgment as to which will be the proper method for a certain type of case. One should scrupulously observe the following principles in treating empyema:

1. Gradual decompression of the pleura is better and safer than rapid one.
 2. After evacuation of the pus, methods to hasten the expansion of the lung and obliteration of the cavity should be considered.
 3. Prevention of chronic empyema is of paramount importance.
 4. In formative stage open thoracostomy is always wise to avoid.
 5. It is unwise to continue too long with one method—even when progress has ceased.
- Now let us consider the various methods separately:—

Aspiration :—It has certainly its place and may be adopted (1) to determine the type of infection (2) to lessen the toxicity and embarrassment of the heart in the formative stage (3) to avoid, in weak patients and for the time being, other more elaborate methods which might jeopardize the chances of the sufferer (4) to localise massive effusions and (5) to fix the mediastinum by a gradual decompression. Moreover in children aspiration should always be the method of choice (at least to begin with). Some cases of pneumococcal and some small encysted empyemas respond well to this treatment alone. The position of aspiration is now reasonably well stabilized and there is almost universal agreement that this should be the first line of treatment.

Recently some surgeons have modified the technique of aspiration. They inject 40 c. c. of air for each 50 c. c. of effusion taken out.

With this air replacement there is less danger of sudden mediastinal shift, formation of adhesive septa and pockets in the cavity and injury to the lung which is kept away from the needle. This air is gradually absorbed and thus negative pressure encouraging re-expansion is created.

Intercostal drainage:—It should be resorted to in those cases where pus is too thick for aspiration, and patient too weak for rib section. Or it may be had recourse to after 4 or 5 aspirations. Some of the children are particularly intolerant to repeated pleural punctures; in them this method can be employed either straight off or secondarily.

It is done under local anaesthesia; first pushing in a trocar-cannula and then replacing this by a catheter (or a narrow tube) which is stitched tightly in the opening. The other end of the catheter is attached to a water suction apparatus. Some surgeons make a small opening with a knife (without using trocar-cannula) and then put in the tube, round which the wound is closely stitched. Again some do not employ sub-aqueous drainage, they keep the outer end of the tube or catheter clamped and utilise it for aspiration at suitable intervals (removing the clamp at the time).

One of the disadvantages of this method of treatment is that the tube or the catheter may get blocked by large flakes or fibrinous masses and we may have to do rib resection.

Open drainage with rib resection:—(a) *Primary*—This is indeed best from drainage point of view. The surgeon can have a good view of the cavity and any pockets or sub-divisions can also be dealt with satisfactorily. Moreover there is no question of clots or flakes interfering with drainage. It is best employed where pus is too thick for aspiration or inter-costal drainage. But mortality rate here is very high. In too early and in streptococcal cases it may lead to serious results. As a matter of fact the modern trend of thought is against the so-called "primary rib resection".

(b) *Secondary*—By this is meant having recourse to open drainage after a preliminary trial of the first two methods. As shown by the statistics of Utter and others, this method yields the best results. It is usually instituted after 5 or 6 aspirations (6 or 7 days) when the condition of the patient has improved and dangers of rapid decompression have passed, or when pockets have formed rendering the aspirations inadequate and difficult. This method is quite in consonance with the basic considerations mentioned above.

Generally the rib at the lowest level of the effusion is resected—usually the 8th in the

middle or posterior axillary line. Some people do not put in a tube; but it is always better to do so provided the tube just reaches inside the parietal pleura and is stitched at one place to the chest wall. The writer had the chance to treat a resistant case of chronic empyema in which the discharge remained undiminished despite the wide opening. On X-raying, a 5" long rubber tube was found to lie in the cavity. The surgeon who first handled the case might, by accident, have left unanchored the tube which later on slipped inside. Some surgeons close the wound after cleaning the cavity, and put in the tube through a stab wound. In some cases of pneumococcal pus the wound might after cleaning the cavity be totally closed and aspirations resorted to in the event of further mischief. But this is not so good. Further handling of the cases after rib resection is usually as follows:

(1) Daily dressings (2) Deep breathing exercises after 10 or 14 days (3) Removal of the tube as soon as the discharge has diminished considerably (4) Irrigations are not absolutely necessary—they might be done—always very lightly—if thought necessary. Irrigations can also be done during aspirations and inter-costal drainage. As they serve only a physical purpose so there is no quarrel as to the type of the fluid used.

Recently Koster and his co-workers have found that by open drainage, the patients no doubt do well; but the period of hospital isolation is 40 or 45 days on an average. They observed that in double empyema if only one side was drained, that side healed up very quickly. This is a new and useful idea. They coupled inter-costal drainage with gradual A. P. of the sound side and they have found that the patients left the hospital in 14-20 days on an average. The explanation is that by A. P. (as also by double empyema) the mediastinum is pushed to the drained side and thus pus is forced out. The lung on the A.P. side is partially collapsed, so the lung on the diseased side is encouraged to work and re-expand, thus the cavity is obliterated early. Their technique is:—

- (1) Under local anaesthesia a subcutaneous incision is made.
- (2) Through this a trocar-cannula (No. 26) is pushed in.
- (3) A snugly fitting catheter (with its outer end clamped) is made to replace the trocar.
- (4) The cannula is then taken out leaving the catheter in.
- (5) The wound is then closely stitched round.
- (6) A piece of rubber with a central hole is passed over the catheter and is cemented to the chest wall with colloidal or rubber solution. This may be reinforced by adhesive plaster strips to make the junction air tight. The outer end of the catheter is now drained sub-aqueously and is also utilised for irrigations. After the 2nd or the 3rd day, A.P. is induced on the sound side and 250-400 c.c. air is injected. This is repeated after every 2 or 3 days and is guided by the patients' endurance power and also by X-ray. Three or four refills are sufficient. After each refill, patient should not feel embarrassed by dyspnoea.

The writer treated two parallel cases of empyema on these two lines of open drainage and inter-costal drainage with A.P. and found that the time taken by the case treated by Koster's method was remarkably short. This single case, however, cannot be taken as conclusive. Moreover the rationale of this method is not free from objection, for instance:

(1) It hardly seems reasonable to bring about laboured respiration in a lung recently diseased with pneumonia.

(2) Reduction in vital capacity (caused by the A.P.) leading to dyspnoea is not in any way justifiable in a patient already acutely ill.

Yet this method requires a careful trial especially in patients who are robust and can stand it better. In patients with poor vitality and less tolerance power, it is better avoided.

Lastly I would like to mention that some cases of streptococcal empyema have been treated by some people with aspirations combined with prontosil injection into the empyema cavity. They have found the results to be dramatic. In view of the therapeutic value of prontosil, this drug may prove to be a substitute for the surgeon's knife in treating streptococcal empyemas.

SUMMARY

(1) A safe method of pleural drainage is that which utilises the principles of all the three methods in such a way as to get their advantages and avoid their dangers.

(2) Aspiration may be begun with in all cases, unless it is not feasible. In small encysted cases this alone will suffice.

(3) But if after 5 or 6 punctures no improvement takes place or pus becomes thicker for suction through a needle, closed drainage may be employed.

(4) If both these methods fail, open drainage may be resorted to. In total and large empyemas it is better to adopt open drainage direct after a few preliminary aspirations to tide over the formative stage.

(5) Trial may be given to the new method described by Koster.

(6) Prontosil is effective in streptococcal cases.

(7) Best method is secondary open drainage.

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"I am a believer in Serum Therapy"

● Dr. B. B. Sen, M. Sc., M. B., Director, Serum Institute of India (Union Drug Company)*

In the year 1890 Von Behring showed that animals could be protected against diphtheria by injection of diphtheria toxin and Behring and Kitasato produced immunisation against tetanus by injections of the toxin. The application of methods of passive immunisation to human beings was, however, questioned by many at that time. Behring was able to perfect his serum, and his product was placed at the disposal of doctors in the year 1894. Following these accomplishments a great variety of antitoxins and antibacterial serum were produced and used in the treatment of different infections.

Almost a quarter of a century after the epoch-making discoveries of Von Behring of diphtheria and tetanus anti-toxins, an attempt to manufacture anti-sera in India was seriously contemplated under the most unusual circumstances. In the year 1918 a case of diphtheria could not be effectively treated by the most renowned physicians of Calcutta for want of anti-diphtheritic serum in the market, during the last Great War. Foreign sera were at that time sold at an unusually high price. Bombay market was also tried but the sera were found to be out of market there altogether. This was the time when the need of serum-manufacturing in this country was deeply felt. It was the energy and zeal of that great patriot Sir Kailash Chandra Bose along with Sir Nilratan Sarkar, Dr. Bidhan Chandra Ray and others that this idea of manufacturing sera in India saw the light of day. Dr. Charu Brata Ray of Calcutta was the pioneer in the technical line of work and it was he who first produced anti-diphtheritic serum in India. His technique was of course crude. He used to tie the horses on all fours and they had to be thrown on the ground and assistants used to sit tight on the animal and then inject the toxins, which had to be at that time bought from foreign countries. After the animal was found to be suitable for bleeding as a result of titration of test bleeding, blood was collected in sterilised vessels. Improvement in technical details was then undertaken slowly after foreign training in the line, and also by help received from the directors of different standard foreign laboratories by correspondence.

* Extracts from his presidential address delivered at the Bacteriological Section of the A.I.M.L.A. Conference, Gauhati, December 38.

For the manufacture of sera, big stables have to be maintained with properly kept healthy animals under the control of veterinary surgeons. During the last 12 years of my experience with Australian as well as country-bred horses, I have found that country-bred horses are better in many respects. The superconcentrated Tetanus Anti-toxin of 7500 international units per c.c. was obtained from a country-bred horse and this was issued after deduction of 40 per cent units as 4400 international units per c.c. and the sample was sent to the State Serum Institute of Copenhagen from where a corroboration of my report was obtained. The proverbial superconcentrated Tetanus Anti-toxin of 4400 international units per c.c. was thus first issued by my humble self in the year 1933 from a country-bred horse and it has now been possible to gradually improve the strength per c.c.

In country-bred horses, again, we can start the process of immunisation at once (of course after negative Mallein test report) without waiting for acclimatisation. Average size of these horses is as good as the Australians. So the quantity of blood drawn at each sitting is the same in each kind without detriment to their health.

The first process in the manufacture of anti-toxins is the production of high-titre toxin. An intimate knowledge of chemistry is essential for the preparation of media. The tendency of the present-day is to produce toxins in infusion-free media, and to study the toxin-producing factors in chemically defined media.

After injections for a pretty long time, say about 6 months, serum is tested for its potency and if found satisfactory, whole bleeding is taken and pseudoglobulin containing anti-toxin is then biochemically fractionated and purified.

The difficulty comes in at the time of dialysis by which ammonium sulphate, which is used as the precipitant, is driven off and water gets in. Sometimes during this process, unusually big quantities of water get in, so that the final product, instead of being highly concentrated, becomes diluted. Even if the anti-toxin gets considerably diluted, it is better than the plain serum which is rich in undesirable euglobulin and particularly albumen fraction which is mainly responsible for serum anaphylaxis.

In India, now a days, high grade Diphtheria and Tetanus Anti-toxins are manufactured at a much reduced cost. Thus it has been possible for the manufactures to enable the poor

also to take advantage of serum treatment. The price of foreign sera had to be reduced as the foreign manufacturers also understood that the sera produced in India are in no way inferior in standard and potency. This is a distinct advantage for a poverty-stricken country like ours.

A number of investigators have found that local infective strains are in a way different from standard foreign strains. Thus inagglutinable strains have been found not only from blood-cultures of typhoid patients, but also from stool cultures of cholera patients and from cerebro-spinal fluid cultures of epidemic meningitis cases. Felix, for example, has found out that so far as bacillus typhosus is concerned, *inagglutinable* strains are highly virulent and he has been able to demonstrate a new type of antigen-virulence antigen VI from highly virulent inagglutinable strains. He has also shown by comparative study that vaccines prepared from inagglutinable and highly virulent strains of *B. typhosus*, confers a very high degree of protection whereas those made with agglutinable strains of low virulence were devoid of protective action. Similarly, cholera vibrios have been isolated by field workers from a comparatively high percentage of epidemic cases which are not agglutinated by standard serum prepared against standard Inaba strain. Difference between NAG and AGG strains of cholera, so far as antigenic efficiency is concerned, is yet under study. They say that serum prepared against NAG strains cannot give protection and that prepared against AGG strains can give protection. But protection against what? Presumably against AGG strains. This is not the only strain which affects the human system. NAG strains are also to be considered, as they are also responsible for epidemics here, if not in other countries. In exactly the same way, from 40% of C.S.F. of epidemic meningitis cases a highly virulent gram-negative diplococcus could be isolated in my laboratory which was not agglutinated by standard typed meningococcus sera. These are only a few instances.

Preparation of prophylactic vaccines therefore has become a problem. As a matter of fact, the question remains whether we are justified in excluding non-agglutinating locally isolated infective strains from prophylactic vaccines, by which we want to give certain amount of protection to the contacts with patients infected in a larger percentage with non-agglutinating strains than with agglutinating strains. The answer is yet in the hands of the research workers in the line.

I am a great believer in serum therapy. But I am not at one with those who advocate serum therapy only in homeopathic dose. Our mission is to save the suffering humanity by the prompt and judicious utilisation of ready-made antibodies at our disposal. Ordinary boils and furuncles or pimples are due to staphylococcus infection of a low grade in which the disease process is not developing an adequate immunity. When the infections are threatening the lives of the patients by breaking the leucocytic barrier and the infecting organisms spread into the surrounding tissues forming a very dangerous cellulitis and cause septicæmia, we have to think of serum therapy, firstly in very early cases, anti-bacterial and then anti-toxic.

As a matter of fact, anti-bacterial serum has been always found to be serviceable in early cases. Besredka's method of sensitisation of vaccines by contact with highly agglutinating corresponding anti-bacterial sera like sero-vaccines and sensimicrobes, gives the best results in such early cases.

This is because the antibodies absorbed by the living organisms from anti-bacterial serum gives the passive immunity which at once helps to increase the power of resistance and the beneficial effect of passive immunity is maintained by the active immunity of vaccine elements which help in the cure of the patients concerned.

I like to give you this timely precaution that judgment, whether a case that has gone beyond the limits of combined anti-bacterial serum and vaccine therapy, is a matter of opinion and requires the prudent eye of an experienced clinician. As soon as you decide that the case has gone a step on the danger side, anti-toxin alone, and anti-toxin in big doses, will be able to save your patient. It is no use playing with serum at that time, that is to say injecting small quantities of anti-toxin. I have heard dangerous cases of facial cellulitis being treated with only 10 c.c. or 20 c.c. of Staphylo anti-toxin. This is a dangerous procedure. Once the heart-muscle is allowed to be permanently damaged by the toxins elaborated by the hæmolytic staphylococcus, the case is gone. You may even find that the local condition is considerably improved, swelling disappeared, perhaps completely, cellulosic process subsided, but the patients are no more in the land of the living, due to heart-failure.

I reiterate my plea for co-operation between the bacteriologists and the clinicians, as I have sometimes found that infections by staphy-

lococcus aureus is often mistaken for streptococcal.

I will now refer to a discovery in my laboratory. Meningococcus bacteriophage was discovered in my laboratory along with the growth of meningococcus in the solid medium in the course of cultural examination of the C.S.F. from a case of meningitis. A paper³ on "Studies on Meningococcus Bacteriophage" was read before the Silver Jubilee Session of the Indian Science Congress, held jointly with the British Association for the Advancement of Science and was submitted for publication in the *Indian Journal of Medical Research* at Kasauli. The first para of the remarks of the Editorial Board on this paper is worth mentioning:—"In so far as this paper describes the discovery of meningococcus bacteriophage which is undoubtedly the case and which so far as is known, is a new finding, the paper is worth publishing, especially if his results of clinical trials are found encouraging."

Clinical trials were given to some of the cases in one infectious hospital with good results.

I will now refer to the treatment of typhoid fever which is one of the diseases that have so far baffled all our serious attempts at conquest. Uptil now there has not been found any specific remedy for this disease though workers from different countries are trying to find it out.

In coming to a proper diagnosis of a case of simple continued fever, other possible causes should be excluded first, with the help of appropriate laboratory investigations. Proper facilities are not always available and therefore materials are wasted in our country, where thousands of cases of continued fever are treated undiagnosed every year. It has been definitely established by Colebrook and Buxton that roughly 90% of cases give positive blood-culture results but less than 10% of cases give positive stool culture during the first week and that stool culture becomes positive in increasing percentage as time rolls on. So, it is practically useless to administer oral typhoid phage in suspected typhoid cases, early in the disease, as the bacilli become localised in the intestine not before the end of the first week. As a matter of fact, if we want to administer phage where it will get the maximum chance of attacking the infective organisms in case of typhoid, which is essentially a septicæmia, we must have to introduce it into the blood. It has been possible to cut short the disease by only a few intravenous injections of Veno-Typhoid Phage.

The only point of importance in the Veno-Phage administration is the finding of the reactionary dose. As soon as it is found out, the subsequent doses must be half the reactionary dose and it must be continued for at least three days, to avoid relapses. If there is toxic manifestation i.e., delirium, subsultus tendinum or hyperpyrexia we will be well justified in introducing specially prepared diluted phage intravenously. There are practitioners who, I find, are afraid of this reactionary fever. We must understand why this reactionary fever takes place. It is not due to shock caused by foreign protein of the medium used for the preparation of the phage, as the percentage of protein in the special medium used for the preparation of the intravenous phage has been minimised to a remarkable extent. The reaction is caused possibly by the direct bacteriolytic effect on the *B. typhosus* whereby endotoxin or toxic lytic product is set free. You need not be afraid now of the febrile reaction that is generally obtained with Veno-Phage alone as it has been definitely brought under check by the early and judicious administration of three doses of concentrated Typhoid Serum 10 c.c. each, prepared according to Felix method in my laboratory with the venophage. This much can be safely guaranteed that the Veno-Typhoid Phage which has been prepared in a special way in my laboratory is safe for intravenous administration. Uptil now I have got good reports of more than one hundred definitely controlled cases of typhoid and para typhoid fevers treated successfully by this new method of treatment i.e., combined Serum and Veno-Phage treatment, in different hospitals in Calcutta as well as by private practitioners.

Next question is the associated enterococcus infection which according to some is responsible for meteorism and intestinal hæmorrhage and the treatment of the local ulcerative condition of the intestine. The best way of treating a case of typhoid fever with phage will therefore be, combined serum and intravenous administration of Veno-Typhoid Phage alone in the first week, combined serum and intravenous administration of Veno-Typhoid Phage supplemented by the oral Typhoid Phage in the second week and combined serum and intravenous administration of Veno-Typhoid Phage supplemented by oral Entero-Phage in the third and subsequent weeks.

In conclusion, I have to express my satisfaction at the proposal of establishment of a bureau of standardisation of biological pro-

Blindness with special reference to Assam *

● Dr. G. S. Guha, M. B. (Cal.), M. D. (Berlin), D. T. M. (Hamburg)

The definition of blindness as the inability to see objects in light is not a proper one. Blindness really implies the inability to perceive light. But in our ordinary daily life, we see persons who although retain some light perception, still are helpless to eke out their livelihood and are therefore also called blind. The Advisory Committee on the welfare of the blind in England, therefore, includes among the blind all those who are "too blind to perform work for which eyesight is essential." Blindness therefore may be absolute or partial.

So one should realise how important it is even to have the ability of perceiving light. A man who can manage to walk about with difficulty, because he can perceive light only, is far happier than a person who cannot distinguish between light and darkness and is therefore absolutely helpless.

Apart from the ordinary type there are a number of clinical varieties of blindness. *Colour blindness* is the inability to distinguish between certain colours especially between the red and the green. This is a hereditary condition in which mostly males are affected but transmission occurs through females. The other interesting kind of blindness is *night*

* A paper read at the Gauhati Conference of the A.I.M. L. A., December, '38.

ducts in this country. It is necessary in the interest of the patients to get in the market, scientifically standardised serum with sufficient extra units just as in America, which is also a tropical country. There may be questionable preparations in the market of serum without sufficient extra units to cover the loss of potency upto the date of expiry but if an official standard of certification by unquestionable experts may be maintained, manufacturers will be quite at ease to satisfy them, and the practitioners also will be able to use controlled and standardised sera without the least hesitation.

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blindness in which the affected person sees much less in darkness than what a normal person should see, vision in day light being the same in both cases. This may be a hereditary condition due to a disease called the 'Retinitis Pigmentosa' or may be an acquired one due to the deficiency of Vitamin A in the diet. *Day blindness* is a phenomenon occurring in tobacco amblyopia, retrobulbar neuritis and in some other conditions, where the patient sees better in a dull rather than in a bright light.

We shall however leave aside these special types of blindness and restrict ourselves to the ordinary variety.

The causes of blindness may be either acquired or hereditary.

Of the acquired causes we may classify under as:—

- (A) *The diseases of the eye.*
 1. Ophthalmia Neonatorum.
 2. Phlyctenular Keratitis.
 3. Trachoma.
 4. Glaucoma.
 5. Senile cataract.
- (B) *General and constitutional diseases.*
 1. Syphilis.
 2. Gonorrhœa.
 3. Small-pox.
 4. Measles.
 5. Leprosy.
 6. Cholera.
 7. Epidemic dropsy.
 8. Diabetes.
 9. Nephritis.
- (C) *Dietary deficiency and metabolic disorders.*
 1. Xerophthalmia.
 2. Keratomalacia.
 3. Lamellar Cataract.
- (D) *Endocrine disorders.*
 - (1) Tetany cataract.
- (E) *Intoxications.*

Toxic amblyopia due to tobacco and alcohol.

(F) *Industrial conditions* either due to accidental injuries or to the poisoning by lead and derivatives of benzene etc. Other industrial affections are glass and iron-workers' cataract, miners' nystagmus etc.

Most of the above causes are so common that it is not worthwhile discussing them as space and time do not allow us to do so.

I shall, however, try to discuss a little about the hereditary causes of blindness for most of us do not give much importance to this neg-

lected etiology. It will no doubt be a great surprise to know that amongst blind persons of most of the European countries about one-third owe their blindness to heredity. This roughly holds good for our country also.

The conception of hereditary blindness is, however, not to be understood in the sense of absolute blindness. It is a "*practical blindness*", that is, a reduction of the visual power, which makes the person concerned incapable of receiving a regular school education or occupational training.

The hereditary eye conditions which cause practical or absolute blindness are due to:—

A. Hereditary malformations of the eye e.g., anophthalmia, Kryptophthalmia and high-grade microphthalmia and aniridia.

Near these severe hereditary malformations stands hydrophthalmia or infantile glaucoma. This hereditary malady is recessively inherited.

High degree of myopia is also in many cases due to a hereditary malformation of the eyes. The other striking hereditary malformation is conical cornea.

B. Certain hereditary degenerative and atrophic conditions of the eye, e.g.,

1. Familial degeneration of the cornea
2. Retinitis pigmentosa
3. Hereditary Optic atrophy
4. Maculo-cerebral family degeneration.
5. Amaurotic family idiocy.

C. Other hereditary conditions are:—

1. Albinism
2. Congenital cataracts.

D. Hereditary disease such as syphilis, e.g., Interstitial Keratitis.

The factors producing blindness have a different rate of incidence at different ages. In infants and in children, the largest percentage is due to ophthalmia neonatorum, then probably come avitaminosis and small-pox.

In adult life, the important causes of blindness are syphilis, gonorrhœa, trachoma, glaucoma, myopia and occupational conditions.

In old life, cataract, glaucoma and diseases such as diabetes and nephritis are the important causes.

The percentage of blindness in India is slightly higher amongst women than in men. This is probably due to the fact that a large percentage of Indian women spend some hours every day in cooking over smoky fires.

The last Census Report shows that the total number of blind people in Assam has arisen from 7,728 to 9,926 and the proportion of persons so afflicted per 100,000 of the popu-

lation has arisen from 96 to 107. The Brahmaputra Valley has the lowest proportion of blindness. The highest proportion of the blind are found in the Hill Districts. The explanation for the high figure of blindness in the Hills, in the opinion of the writer, is mainly due to the deficiency of Vitamin A in the diet of infants and children. In most of the hill areas, infants and children are not fed by cow's milk but instead by *pasted plantain*. It is a general belief amongst the hill people that milk is a sort of 'pus' from the body of the cow and therefore is not suitable for human consumption. The children are therefore deprived of the fat soluble Vitamin A, the rich source of which is the fat of the milk. The writer has seen quite a number of cases of xerophthalmia and keratomalacia amongst Khasi children who live in villages.

If we take into consideration the various causes of blindness, theoretically it should not be a difficult task to prevent blindness to a great degree. The routine use of silver-nitrate drops into the eyes of every new-born baby can absolutely eradicate ophthalmia neonatorum. By vaccinating against small-pox it is possible to control small-pox properly and thus save a large percentage of the blind people from the effects of small-pox. By improving the hygienic conditions of life of the people and by proper segregation it is not difficult to drive out such a disease as trachoma. By the administration of properly balanced diet containing vitamins such diseases as xerophthalmia, keratomalacia may be cured and prevented. The dangers of such diseases as syphilis and gonorrhoea should be clearly shown to the public and thorough treatment to eradicate these maladies should be done. Myopia should be properly treated with glasses and by other hygienic measures. Persons who suffer from syphilis or who have certain malformations of high degree should not be allowed to marry. Such persons are not allowed to get married according to laws in Nazi Germany. Many of the industrial factors which cause injury to the eyes can be entirely prevented by the use of appropriate guards, screens and goggles. In cases of accidental penetrating injuries of the eye the danger of the development of sympathetic ophthalmia should always be present in the mind of the medical practitioner, and all cases of penetrating wounds of the eye should be placed immediately under the observation of an Ophthalmic Surgeon.

Lastly, let us not forget that epidemic dropsy has already caused a large number of blindness due to glaucoma. This disease

Diagnosis of Acute Joint Pain with Fever *

● Dr. K. L. Sen Sarma, L. M. F., A. M. O.
Hoogrijan T. E., P. O. Hoogrijan, Assam

When considering acute joint pain with fever, the following are the common possibilities which one must consider.

(i) Rheumatic fever (ii) Gout (iii) Acute Rheumatoid Arthritis, (iv) Traumatic Arthritis and (v) Acute Tubercular Arthritis.

One must also consider the joint affections in or as a complication of other disease, as for example:—(1) Gonorrhoea (2) Dysentery (3) Pneumonia (4) Undulant or Malta fever (5) Dengue (6) Typhoid fever (7) Scarlet fever (8) Meningococcal Meningitis (9) Anaphylactoid Purpura or Henoch's Purpura (10) Septicæmia or Pyæmic Arthritis.

Lastly comes another affection which though not in the joint, may simulate an arthritis and it is osteomyelitis.

To differentiate these affections, the main points in each may be noted as follows:—

1. *Rheumatic Fever*:—Swelling of a big joint with fever upto 102°F or more in young adults. Distinct swelling of synovial area. Affection is migratory in character. Effusion never suppurates. Heart is often affected in the form of endo, peri or myocarditis or even pan-carditis. Dramatic improvement usually follows the exhibition of salicylates. Sometimes it is ushered in the form of hyperpyrexia in which the temperature rises even to 110°F or with nervous complications as convulsions, meningitis or multiple neuritis. Aschoff's nodes or fibrous nodules form in membranes or

* Read in the monthly meeting of Tingri Valley Branch A.I.M.L.A. on 26-2-39.

occurs in epidemic form usually after the rains. The causal factor was previously supposed to be a sort of fungus growing in rice, but recently the mustard oil theory has been revived and emphasised. Mustard oil is used in cooking in Bengal, Assam and in certain other Provinces of India, where epidemic dropsy is common. Therefore by limiting or absolutely forbidding the use of old, stored rice and adulterated or old mustard oil from bazars it is perhaps possible to check this dreadful malady.

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tissues around the joint in this Valley. Sudden death may occur from myocarditis or hyperpyrexia.

2. *Gout*:—Acute pain and swelling in the small joints with fever up to 100—102°F, in a richly fed middle aged man with a family history of gout. Tophi form in the ear-cartilages or in the smaller joints. These tophi may ulcerate and discharge a chalky substance. Low uric acid in urine and high uric acid in blood just before the attack are special features. The covering of the joint is thickened. Recurrences are common.

3. *Acute Rheumatoid Arthritis*:—Occurs in middle aged debilitated females as fusiform swelling of joints with pain. Joint affection is not shifting in character. Contracture with deformities follows. The affection is periarticular without bony changes.

4. *Traumatic Arthritis*:—History of trauma, effusion of synovial area marked. Not shifting. Usually non-suppurating.

5. *Tubercular Arthritis*:—In young subject there may be a history of trauma. Pain not relieved by salicylates. Primary focus in the body often found. Definite diagnosis may be made by X-ray. Tuberculin reaction positive.

As a complication arthritis is found in:—

1. *Gonorrhoea*:—In the acute stage of the disease one big joint is inflamed with high fever. In this stage examination of the urethral discharge will reveal the diagnosis. The effusion into the joint is turbid but often sterile. Joint affection is not shifting in character. There is a limited response to salicylates.

2. *Bacillary Dysentery*:—Arthritis of multiple joints. Symptoms of the disease present.

3. *Pneumonia*:—Arthritis of bigger joints during acute stage or within a fortnight of crisis. Pus forms in the joint.

4. *Undulant or Malta fever*:—Not very common in Assam. Temperature chart characteristic. (Bouts of fever lasting two to three weeks alternate with remission.) The swollen joints are very painful.

5. *Dengue*:—Fever falls on 4th day and rises again on 6th or 7th day with rash like measles and swelling of the big joints with effusion.

6. *Typhoid Fever*:—Arthritis may be seen in the 3rd week of acute stage.

7. *Scarlet Fever*:—Arthritis may be seen at the end of the first week, when there is no difficulty in diagnosis of scarlet fever. (typical temperature chart with typical tongue and rash.)

8. *Meningococcal Meningitis*:—No difficulty arises as symptoms of meningitis are obvious.

9. *Anaphylactoid purpura or Henoch's purpura*:—History will help in diagnosis. May be a complication of serum sickness. Joint is not much swollen. Fever up to 99 to 100°F. may be noted. Vomiting, colic or diarrhoea may be present.

10. *Septicæmic or pyæmic Arthritis*:—This form is very acute with much pain and swelling. Tends to suppurate. High fever with rigors present.

Osteomyelitis:—Occurs most commonly in children. Swelling of the joint is sudden with very acute pain. The patient will not allow one even to touch the limb. One joint only affected in early stages. There is a history of previous injury on searching inquiry. X-ray will clinch the diagnosis as the affection is actually of the epiphysis of bone which is necrosed.

To assist diagnosis, acute joint pain with fever may be re-classified as follows:—

1. *Cases without marked general symptoms or history of injury*:—

- Rheumatic fever.
- Gout.
- Acute Rheumatoid Arthritis.
- Acute Tubercular Arthritis.
- Gonorrhoeal Arthritis.
- Dengue.
- Purpura Anaphylactoid.
- (c) and (f) are very rare in Assam.

Gout may be distinguished by its preference for small joints.

2. *Cases with history of injury*:—

- Septicæmic or pyæmic Arthritis.
- Traumatic Arthritis.
- Osteomyelitis.

3. *Cases with marked general symptoms*:—Arthritis complicating

- Septicæmia.
- Dysentery.
- Pneumonia.
- Undulant Fever.
- Typhoid.
- Scarlet Fever.
- Meningococcal Meningitis.
- (d) and (f) are very rare in Assam.

It is very important to differentiate between acute osteomyelitis and acute rheumatic fever in children.

In acute rheumatic fever the affection is essentially migratory in character whereas in acute osteomyelitis it is constant. This important fact may be summed by the expression. "*Monoarticular rheumatism in children does not exist.*" Confirmation of the diagnosis is best made by X-rays.

Diagnosis of Chronic Joint Pain *

● Dr. M. A. Hazarika, L. M. P., A. M. O.,
Dirial T. E., Hoogrijan, Assam

I have grouped in this paper the following main diseases which usually cause chronic joint pain and I will attempt here to describe them one by one in a very brief way touching on essential diagnostic points.

1. Chronic Gout.
2. " Rheumatoid arthritis.
3. Osteo-arthritis.
4. Chronic Spondylitis deformans.
5. " Infective arthritis.
6. " Gonorrhœal "
7. " Syphilitic "
8. " Tubercular "
9. " Hysterical Joint disorder.
10. " Neuropathic arthritis.

1. *Chronic Gout*:—There is often a history of previous attack with characteristic onset especially in the early hours of the morning. The patient is aroused with severe pain in the metatarso-phalangeal articulations of the great toe or sometimes the metacarpo-phalangeal joint of the thumb. Such recurring attacks limited to the great toe or thumb occurring in a gouty family leave no question regarding diagnosis. But when after an attack or two in one toe or thumb the other joints are affected, that is to say, when the joint pain, becomes poly-articular then difficulty in diagnosis is likely to arise. Then we will have to search for other findings of gout, of which the presence of tophi in the ears (due to deposition of sodium-biurate and which can be easily recognised under the microscope with its characteristic needle-shaped crystals) is a very important diagnostic point. Patients with chronic gout are usually found to be alcoholic in habit living on a high protein diet. It occurs mostly in middle aged males between 35 to 50 years. Deposition of sodium biurate occurs at first in the articular cartilages, then in the ligaments and capsular tissues, etc., so that in the course of years the joints become swollen, irregular and deformed. X-rays show these deposits. Patients with chronic gout are often dyspeptic and have arteriosclerosis with thickening of arteries and high blood pressure. Urine analysis shows diminished excretion of uric acid. Chemical examination of the blood shows excess of uric acid.

* Read in the monthly meeting of Tingri Valley Branch A.I.M.L.A. on 26-2-39.

2. *Chronic Rheumatoid arthritis*:—This disease, often referred to as "chronic rheumatism", a term which is very liberally used for all kinds of chronic joint pains without any discrimination, should only be diagnosed in cases showing the following diagnostic points. A history of previous attack of joint pains wandering from one joint to another with involvement of bigger joints symmetrically. Chronic rheumatoid arthritis is characterised by the presence of swelling of the joints, partly due to effusion and partly to thickening of the synovial membrane and other ligaments. In neglected cases there may be fixity of the joints due to intra-articular adhesions but there is never any lipping of the cartilages or new formation of bone as in osteoarthritis which I shall shortly describe. Above all, presence of chorea, erythema and rheumatic nodules, especially about the elbows and wrists give evidences of rheumatoid arthritis. The heart may show a systolic murmur of endocardial origin. Therapeutic response of the joint pains to salicylates also indicates rheumatic origin. If effusion in the joints is found and if it is examined under the microscope, it shows polynuclear leucocytosis, but true pus cells are never found.

3. *Osteo-arthritis*:—or so-called arthritis deformans. The onset of this disease is usually chronic from the very commencement. Age of onset generally between 50 to 60 years. It is poly-articular in its usual form and females are more frequently attacked. Pain often comes on in wet weather, being more worse at night. Deformity of the joints is present owing to thickening of the capsules and osteophytes, and over-growth of bone. Ulnar deviation is very characteristic. There may be limitation of movement and wasting of muscles. In advanced cases small bony swelling (Heberdens Nodes) usually on the distal side of the terminal interphalangeal joints can be found. X-ray helps to diagnose the disease demonstrating the lipping of the joint margins and the presence of osteophytes. Chronic traumatic arthritis such as due to a sprain or strain, fracture or dislocation should be carefully differentiated from osteo-arthritis by history of trauma, though the pathological changes are practically identical. Common joints affected are the hip, knee, shoulder and thumb and the diagnosis should be arrived at by the above findings, e.g., localised chronic pain in the particular joint involved being worse at night with limitation of movements and wasting of muscles etc.

4. *Chronic Spondylitis deformans*:—In this form of arthritis deformans there is chronic

pain in the vertebral joints, especially in the lower dorsal and lumbar regions contrasting with the acute type in which the cervical region especially is affected. In this chronic type rigidity of the spine is common. Nerve root pressure as shown by pain, paræsthesia, muscular atrophy, etc., may be present. Sciatica and referred pain may also occur. Chronic gonorrhœa may also affect the spine, and produce rigidity. It is to be excluded by the history and by laboratory findings of gonococci.

5. *Chronic infective arthritis*:—In this variety chronic recurrent joint pain occurs as a result of chronic intestinal stasis and chronic bowel infection associated with pyorrhœa alveolaris and septic throat. It is fairly common in people past middle age. The joints affected may be swollen periodically, resulting in fibrous ankylosis eventually.

6. *Chronic Gonorrhœal arthritis*:—In this disease both small and big joints may be involved. Bursæ, fibrous tissues and tendon sheaths may be affected along with the joints. Gonorrhœal "tender heel" is very common. The joint affection is usually progressive and joints may be affected one after another but the disease especially injures one, causing permanent mischief. Suppuration rarely occurs. For diagnosis the history of a previous attack of gonorrhœal urethritis, e.g., itching of meatus, scalding pain on passing urine and a thin mucoid discharge from the urethra etc., are very helpful. The diagnosis is confirmed by the finding of gonococci in stained smears of urethral discharge obtained after prostatic massage, as at this stage of the disease it may not be possible to obtain an urethral smear without prostatic massage.

7. *Chronic Syphilitic arthritis*:—Both small and big joints are involved in this form of arthritis, often symmetrically. Pain and tenderness of the joints may be slight with nocturnal exacerbations. When there is effusion into the joints as a result of chronic synovitis (the condition known as hydrarthrosis) pain may disappear completely. The history of an acute attack of syphilis is very helpful. Wassermann re-action and the Kahn test will confirm the diagnosis of syphilitic affection. The therapeutic effect of mercury, pot. iodide and neosalvarsan etc., is also of no less importance in this respect and may be very useful in clearing up the diagnosis.

8. *Chronic Tubercular arthritis*:—In this form of arthritis young ill-nourished children are the victims. It is mono-articular as a rule and often big joints are involved e.g., hip, knee, shoulder etc. The so-called "white

swelling" due to pulpy degeneration of the synovial membrane is very characteristic. There may be marked atrophy of the muscles related to the affected joints. Lung signs are often absent. In advanced cases when the articular ends of the bone are involved there is chronic pain and impairment of movements. Ultimately abscesses form as a result of bony erosion leading to multiple sinus formation and permanent destruction of the joint.

9. *Chronic Hysterical Joint disorder*:—In this affection usually a large joint is affected. The joint is painful, tender and muscles are contracted. It is commonest among women between the ages of 15 and 30 years. A neuropathic family history is very important for diagnosis. No changes are seen under X-ray and the joint is found normal under general anaesthesia. The condition is curable by psychotherapy.

10. *Chronic Neuropathic arthritis or so-called Chronic Charcot's disease*:—It is a form of arthritis which closely resembles osteo-arthritis which I have already described. As a rule there is no articular pain in this variety but occasionally there may be chronic pain from distended soft parts and skin around the affected joint. Enormous effusion, atrophy of the ends of the bones and a tendency to produce a flail joint are the especial features of this disease combined with the usual manifestations of tabes dorsalis.

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CAMERON PRIZE FOR PROF. DOMAGK

At a meeting of the Court of Edinburgh University the Senatus reported that the Cameron prize for 1939 had been awarded to Dr. Gerhard Domagk, Institute for Experimental pathology and Bacteriology, I.G. Farbenindustrie, Elberfeld, Germany, in recognition of his discoveries—the well-known Prontosil—which initiated the treatment of diseases of bacterial origin by compounds belonging to the sulphonamide group.

The Cameron Prize is awarded to a person who, in the opinion of the Senatus has in the five years immediately proceeding the award made any highly important and valuable addition to practical therapeutics.

An Interesting Case of Amoebiasis complicated with Bacillus Flexner Infection

• Dr. A. C. Das, L. M. P., L. T. M., Asst. Pathologist, B. W. Medical School, Dibrugarh

In the year 1936, when I was in charge of the Clinical Research Hospital, Shillong, a case was admitted for treatment of chronic dysentery. The short history of the case was as follows :—

The patient was a Gurkha male of about 20 years old. He hailed from the suburbs of Shillong and gave a history of having passed blood and mucous stools for 6 months, accompanied with abdominal pain and tenesmus.

He said that acuteness of the disease lasted for about a fortnight during which period he passed several motions (about 15 to 20 times) during day and night. He had slight rise of temperature too. Stools consisted of faecal matter mixed with blood and mucus. There was severe pain in the lower abdomen, especially during defaecation and tenesmus. As no medical help was available there at that time, he said that he took some indigenous drugs—the juice of some herbs for 3 or 4 days after which he felt a little better. Frequency of stools lessened, the quantity of blood and mucus was also less than what it was before. Since then he had been passing 7 or 8 motions daily. The character of the stools were ever-changing, sometimes better sometimes worse.

On admission his condition was as follows :

He was much pulled down—emaciated to a great extent and looked very pale and anæmic.

Hairs—Rough.

Temperature—Just above normal.

Respiratory System—Nothing abnormal.

Heart—Normal in size and position.

Pulse—Rapid, feeble and low tension.

Tongue—Coated.

Spleen—Not palpable.

Liver—Palpable and tender.

Urinary System—Nothing abnormal.

Blood smear—Microscopically no Malaria Parasite or L. D. bodies seen.

Stool—naked eye examination: semi-liquid, plenty of faecal matter mixed with blood and mucus, acid in reaction.

Microscopically—Cellular exudates scanty, R. B. Cs and pus cells predominating. Large number of E. histolytica in vegetative form. No C. L. crystals or cysts of E. histolytica seen.

Bacteriological examination of the stools showed lactose fermenters only.

TREATMENT

Patient was put to bed in complete rest. A mild dose of saline was given and the specific treatment of amoebiasis was begun with emetine hydrochloride at once. Half a grain of emetine with 10 minims of adrenaline chloride (1 in 1000) solution was injected hypodermically every day, till 6 grs. were

pushed to complete the course of treatment (considering the condition of the patient Emetine was not administered in full doses). Simultaneously with this treatment Mag. Sulph. 2 drs. was given every morning and a general stimulant mixture three times a day was continued. He was put on a simple bland liquid diet with glucose water.

On the 4th day of his admission into the hospital when he had got only 2 grains of emetine, his motion was again examined microscopically and no E. histolytica was detected, but scanty cellular exudates still persisted. Emetine injections were continued till altogether he received 6 grains and the stool again was examined carefully. It was found that the number of stool decreased to some extent (about 4 to 5 times in 24 hrs.) but they were not formed, the faecal matter was mixed with blood streaks, and mucus still persisted.

Suspecting that the infection might not be one of pure amoebiasis, a bacteriological examination of stool was done again. On culture B. Morgan was isolated this time and a special 'Phage' of the same was prepared in the Pasteur Institute, Shillong, which was administered to the patient without any improvement. Rather, the condition of the patient had been growing from bad to worse. He had been passing loose motions 8 to 9 times daily with both blood and mucus in the faeces.

Failing in all these attempts, bismuth and salol treatment was resorted to, together with small doses of opiate.

Still the patient was getting worse day to day, losing all his vitality and accompanied by dehydration and emaciation to a considerable extent.

During this period the lower bowels were washed with antiseptics and astringents all through. Rectal and subcutaneous salines were given regularly.

Strict attention was paid as regards diet. The patient did not improve with all these measures.

In order to find out the real causative factors which were still undetected repeated bacteriological examinations were undertaken resulting in the isolation of Bacillus Flexner.

Therapeutic bacteriophage (prepared by the Pasteur Institute of Shillong, which contained different strains isolated from cases of bacillary dysentery) was given. He improved quickly to our great astonishment. Stools were formed and yellowish in colour, blood

(Continued at foot of page 208)



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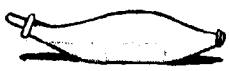
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Indian Institute for Medical Research

The third annual report of this Institute for the year 1937-38, issued last month, reveals a creditable performance of research work despite the financial handicap which has been its misfortune to suffer from since its inception. It is the one and the only private medical research institute in our vast country organised to meet the research needs of the profession. All its workers are, at present, honorary. The financial resources of the Institute are derived from the proceeds of the Diagnostic Section, and donations, grants and subscriptions. During the year under report the income under the former was Rs. 12,672 and under the latter Rs. 1,305.

That only a small sum was donated and subscribed shows in unmistakable language the Institute's struggle for existence. But for the proceeds from the Diagnostic Section and the magnificent spirit of self-sacrifice and determination of its workers, the Institute would have been still-born. It is a thousand pities that this important Institute has been left to take care of itself with nothing more

substantial than the optimism of its workers that some day, somehow, the needed help would come.

The Government of India, at any rate of Bengal, should have already rushed to its rescue, and unless substantial grants are given to it neither new subjects for investigation can be undertaken with confidence, nor the old work completed with success. We do not know whether this appeal of ours will be heard in proper quarters, but this much we can say that it is the duty of the Government of India or of Bengal to give a recurrent grant of a lakh of rupees annually lest this laudable enterprise of private research may not die of sheer starvation. We know that the Government is financing the Indian Research Fund Association. We know also that this Association has been doing splendid work. If only a fraction of what is granted to this Association is given to the Indian Institute for Medical Research, which it well deserves, it will derive a little strength and show its capacity for more useful work. Public beneficence is indeed welcome but it has been so spare and spasmodic in spite of frequent appeals from popular leaders that it will be a futile folly to hope for it in any near future. If none of these helps materialise, it will be the duty of the profession to subscribe generously and make this institution live to serve them.

Unlike similar institutions, the Indian Institute for Medical Research allows membership to all registered medical practitioners on a modicum of annual subscription¹, and this would entitle them to all the publications of the Institute apart from the voice which they would have in its management. If the strength of such members is substantial, it may even be able to start a monthly research journal which would keep the practitioners posted with recent knowledge about research done in the Institute and outside. What the Institute needs today is both moral and material support. We hope that this appeal to the profession would not go in vain.

The one outstanding feature of the Institute's work during the year under report is the concentration on applied research. We bring this into prominence because there is a subconscious feeling in the minds of even the members of the profession that research is only of academical interest and its utility is both problematical and remote. Even the Medical Research Council of England, which has done excellent work during recent years,

¹ Rs. 12 per mensem.

has been accused of too much attention to what is called academic research in preference to applied research, and has been advised to concentrate more on the latter than on the former, if for nothing else but to get some return for the huge investment on the Council. We believe however that research must be both academic and applied, though in a poor country like ours applied research must inevitably take the precedence.

This is exactly what the Indian Institute for Medical Research has set before itself and the report under review shows how it is grappling the immediate problems peculiar to our country. The bacteriology of puerperal fever, the serum treatment of cholera and typhoid, the possibility of a vaccine treatment in certain protozoal diseases such as malaria and amoebic dysentery, the nutritional assay of common foodstuffs and the planning of adequate dietaries formed some of the chief items of investigation and research, a few of which we review below.

There will, perhaps, be common agreement with the finding, already corroborated by the Medical Research Council, that the source of streptococcus in puerperal fever is not, in the majority of cases, from the patient herself but from the contacts. Out of 44 cases investigated only from three was hæmolytic streptococcus obtained from throat swab. This is almost a conclusive evidence to show that meddlesome midwifery and infection from contacts are the principal sources of puerperal

(Continued from page 206)

and mucus almost nil, frequency reduced to twice a day. He was then treated for anaemia, general debility, etc., and discharged cured after a month. He was altogether more than 2 months in the hospital.

INTERESTING POINTS

1. Microscopic examination of stool revealed a complete picture of *E. histolytica* infection—scanty cellular exudates and presence of innumerable *E. histolytica* in vegetative form.

2. In a chronic case of dysentery the character of cellular exudates together with *E. histolytica* in stools is not a safe guide to exclude the bacillary type, and as this case shows, the possibility of mixed infection should be borne in our mind.

3. This case emphasises the necessity of frequent bacteriological examination of faeces in cases of apparent amoebic infection which does not yield to specific treatment.

4. Efficacy of phage treatment in suitable cases.

sepsis. Another interesting fact which the report reveals is that "there were a number of acute cases of puerperal fever due to staphylococcus." This is a timely caution to those who are exclusively obsessed with streptococcal theory, and it is quite possible that in this country the role of staphylococcus may be no less important in the aetiology of puerperal fever than streptococcus undoubtedly is in a large number of cases.

Serum treatment of typhoid and cholera, we may say, is in the embryonic stage, but the Institute hopes to perfect the preparation of specific anti-sera against these two diseases. The preliminary clinical trials have been reported to be successful. The anti-typhoid serum is prepared by immunisation of animals with filtrate of highly alkaline broth culture, and lately modified by inoculating the latter with a large amount of agar culture. Dr. Veng Sarkar of Bombay observed that there was "undoubted evidence to show that the anti-typhoid serum diminished the toxæmia very quickly with corresponding fall in temperature within 2 to 5 days after its administration. But to guarantee against failure in some cases, the report suggests the advisability of using more than one strain of *B. Typhosis*, including Vi strain for the production of toxin. Cholera serum is advised only in highly toxic cases of cholera. We think this is a very sound advice, but this should not be taken to mean that one should wait for the full development of cholera-toxæmia to administer serum. The general rule for serum therapy is early administration, and in cholera time is the very essence of treatment if anti-cholera serum is not to fall into disrepute. The report advocates one single intraperitoneal transfusion of serum, 75 c. c. diluted with 200 c. c. of warm normal saline. The effect of oleum recini in reducing or preventing pulmonary oedema in cholera has been discussed in the *Journal*² by Dr. H. Ghosh, Director of the Bacteriological Department of the Institute. This is again emphasized in the report. Other factors in connection with cholera are also mentioned, viz., association of secondary micro-organisms with *V. cholera* induction in rabbits of cholera-like diarrhoea by the injection of filtrate of broth culture of *V. cholera*, and the pathogenicity of *B. pyocyaneus* in producing severe cholericoid or dysentery-like symptoms. These questions are still under investigation.

The researches into protozoal immunity, a very complicated and new field of work, have been the particular hobby of this Institute. We are glad to note that its efforts in this

² Jan, 1939.

direction have not been without some success. Drs. Roy and Niyogi of this Institute, the former our Associate Editor, have published a preliminary note on the possibility of successful cultivation of plasmodium knowlesi in our last month's issue, and the results so far achieved have been encouraging. A very significant result has been that two of the Rhesus monkeys which were previously immunised with malarial antigen prepared from *P. Knowlesi* withstood the infection even when inoculated with heavy doses of parasites. It has also been observed that the same vaccine has curative effects also. Similar investigations are being conducted in respect of *Leishmania* and *amoeba*.

The idea of evolving a prophylactic and curative vaccine for some at least of the protozoal diseases is an enchanting one, if not altogether new or novel. Protozoal immunity is really a more complicated problem than bacteriological immunity, and correspondingly there may be a great difficulty in preparing a suitable and specific protozoal vaccine. This particular research may be very interesting but, in our opinion, not likely to be so fruitful as to justify the optimism of the report. The recent advent of chemo-therapy, particularly the sulphonamide groups, is bound to check and limit the range of usefulness of specific anti-sera and vaccines. In fact the United States of America has spent an enormous amount running to millions of dollars in the preparation and distribution of pneumococcus type serum, and it now finds that M. & B. 693, a variant of Sulphonamide³, is just as effective as, sometimes more than, specific anti-pneumococcus serum. We hope that the workers of the Indian Institute for Medical Research would take due note of the possible inroads of chemo-therapy into the realm of serum and vaccine which was till yesterday the stronghold of bacteriologists, and thus guard themselves against love's labour being lost.

On the whole, the report gives an useful account of some recent researches undertaken by this Institute, and although the work is limited to a few specific problems owing chiefly to want of funds, the results so far obtained are really a landmark in medical research in this country, and certainly a credit to a private organisation working against great odds. It has a bright future, and this could be hastened if the members of the profession take a lively interest in its successful working, and

if the Government are generous enough to recognise and help indigenous talents.

Medical Refugees In India

The plight of the Jews in Central Europe, mobbed in the street and pilloried in the press, is one of the most tragic in history.

During the last few years anti-Jewish laws and persecutions have been going on apace with such melancholy meanness and speed that this ancient and industrious people have been literally rendered homeless and forlorn. This inconceivable but none the less real tragedy is too deep for tears and too gruesome to detail. Even were some of these people truly guilty, the punishment which has been ruthlessly meted out for the whole community for the probable guilt of a few is beyond all canons of human justice and forbearance.

Not only the common Jew but also those who enriched the world with literary and scientific contributions had to flee from their country and seek shelter in hospitable shores. Many were there who committed suicide out of sheer shock and shame. A great pall hangs over these despised and down-trodden people.

To find shelter and occupation to the Jewish refugees has by itself become a major problem to such of those countries which have not yet lost "the milk of human kindness and charity".

England, France and the United States have done their best. But what of our country?

Even so early as in 1937 our Bombay correspondent wrote:

"Your readers may know that there had been a sort of temper shown by some medical associations in Bombay—notably the Bombay Medical Union—against some of the German Jewish doctors coming and settling in India. The question asked was: why should these be allowed to practise here when Indians are not allowed to do so in Germany? That is indeed an unassailable position under ordinary circumstances. But your correspondent would submit that these doctor emigrants are settling in this country not under ordinary but under extraordinary circumstances. To apply the principle of reciprocity to this set of forlorn persons would be inhuman, if not illegal..... Ours is a land of perennial hospitality and let us not grudge it to those who seek it."

Since this was written, the exodus of Jews, and particularly the Jewish physicians, has been on the increase, and many in the profession, chiefly those in our cities, seem to be alarmed at this unexpected incursions in the already competitive and unremunerative field of private practice.

This feeling was echoed in one of the resolutions of the last Meerut Conference of the Indian Medical Association. To which, Mrs.

³ 2 Sulphanilly-aminopyridine.

¹ Ind. Med. Journal, Vol. 31, No. 6, June 1937, p. 232.

Vijayalakshmi Pandit Nehru, Minister of Health, U.P. who opened the Conference, replied :

" I appeal to the profession to take a wide view of the question of bringing Jewish doctors into India. The only idea behind this has been to secure the services of experts who will serve our country and help to train our own people."

We are not blaming the Indian Medical Association for passing the resolution of the kind it had passed. On the other hand, we know that it represents the opinion of the organised profession in this country. But we believe there is unnecessary alarm over this question. It is quite possible to accommodate the Jewish doctors without injustice to our own practitioners. We readily admit that there is no room for foreigners in the field of private practice for the same reason which Dr. Crisp² puts it on behalf of Great Britain :

" Competition is now out of place in a field where the workers are already finding the harvest so poor that it is unfair to introduce new ones in the name of charity."

But they could well be employed by the Government and Municipal Bodies, either as public health officers, teachers in medical schools and colleges, school health officers or as research workers, provided they possess the necessary qualification, and the organised profession consulted before such appointments are made.

We appeal to the profession to take a charitable view of the whole matter. None realise it so well as ourselves that the Indian Medical profession today is itself in need of help from the powers-that-be and that it has no margin for charity even were it willing. If still we appeal to them to be generous, it is because we should hold up our great traditions for hospitality to the oppressed and persecuted nations of the world. Let us not forget that India has given a hearty and willing asylum to many a persecuted people since the time of Roman oppression of the first Christian movement. Our country is vast and our people by nature profoundly hospitable. Let the weary and the oppressed of the world find a warm corner in our country.

² *Lancet*, March 4, 1939, P. 519.

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CURRENT COMMENTS

The Nature of Chronic Ulcerative Colitis

There is no doubt that many cases of ulcerative colitis are mistaken for specific dysenteries notwithstanding negative findings for entamoeba or B. Shiga or Flexner. The mistake is realised when specific treatment fails. The diagnosis becomes patent after a careful sigmoidoscopic examination. While its pathology is fairly obvious, its aetiology is still a matter of doubt and uncertainty. Ray and Chopra³ are, therefore, well justified in saying that the problem of ulcerative colitis remains unsolved. In a recent survey of 120 cases, it has not been possible for them to determine any single aetiological factor, least of all any specific bacteriological infection. It is surprising that such a wide-spread necrosis of the large intestines could be brought about by non-bacteriological cause. Their findings are almost in agreement with those of Mackie⁴ who believes that chronic ulcerative colitis is a complex expression of the interaction of several different factors. Ray and Chopra arrive at the same conclusion when they say that many factors combine to produce devitalization of the mucus membrane of the large intestine leading to chronic ulceration. Of these, avitaminosis, allergy, faulty body mechanics, emotional disturbances, streptococcal infection and pre-existing dysentery are stressed. The fact that only 4% and 3% of their cases showed infection with E. histolytica and B. dysenterica respectively compels them to stress the non-dysenteric character of chronic ulcerative colitis. On the other hand, they say that it presents some features comparable to those of chronic eczema or neuro-dermatosis. It is also curious, they say, that exacerbations of chronic colitis, in nearly 50% of cases were associated with some previous emotional disturbances of a serious nature. This view is again in concord with that of Culinan⁵ who suggests that emotional upset is a most important factor.

With such uncertain aetiology, effective treatment would be no easy task. It has to be arrived at by the usual method of trial and error. But in all cases, rest, diet and vitamin therapy should form the basic treatment, while symptoms like diarrhoea may be treated with isabgol, kaolin or bismuth and opium. Chopra and Ray found rectal instillation of cod liver oil or emulsion beneficial while they also recommend "Torantil" (Bayer for

³ *I.M.G.*, Feb. 39, p. 65.

⁴ *Jr. of A. M. A.*, Dec. 3, 1938, pp. 2071-2076.

⁵ *B. M. J.*, Dec. 31, 1938, pp. 1351-1356.

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A National Health Policy

● Dr. V. Krishna Row, L.M.S., Medical Officer, Presidency College, Madras

[This is the second of the series of the articles written by the author and it deals with Physical Education Policy. The first article which appeared in our last month's supplement discussed a scheme of School Medical Service and the last of the series which would appear in our next issue will be on the financial aspects of the scheme proposed by the author. Ed., I. M. J.]

PHYSICAL EDUCATION POLICY

"Physical education" is defined by the Chief Medical Officer of the Board of Education, England, as the "building up of the bodies and personalities of the children by means of regulated physical exercises," and with this definition, I hope, there would not be any disagreement; and this could be made the starting point for a further exposition of the subject. Apart from the definition, the *aim* of physical education, as expressed by Lord Dawson of England, is "not to produce a nation of trained athletes, but rather to ensure that by the proper training and development of body, men and women may be enabled to carry out their daily work to the utmost of their ability, and enjoy their leisure with that sense of well-being, which comes from the possession of a sound mind in a sound body."

The main urge for improving the physical activities of the various nations and their introduction into the politics of their countries, has been the keen and intense desire to keep every child and every citizen *physically fit* for military purposes. The British Physical Training and Recreation Act of 1937, is designed to give effect to the Government's scheme "for improving the health and physique of the Nation". In the words of the London "Spectator," the essential aim of this new Act is "to preserve and develop

the physique, which has been built up by the medical services, which are now available to any one from before birth to the age of the leaving school."

The demonstrations of physical activities of students and pupils, organised under educational institutions and public bodies, do not touch the *crux* of the problem, have no direct bearing on the physical health and well-being of the children, as one would naturally expect from such highly commendable physical activities and exhibitions. Physical education or training to-day has become synonymous with the playing of cricket, hockey, football, and sports, etc. It is not possible to get out of this groove immediately. Compulsory playing of games and sports will not give the strength and muscular development, which is needed in any sound system of physical education. The British Board of Education has recommended that "at least 2-3 hours should be devoted to *gymnasium and physical exercises, in addition to the time allowed for games*". The Skeen Committee long ago recommended that "good physical stamina, sound and well-developed body, and pluck are certainly some of the qualifications, essential for an officer. A definite policy should be laid out to *raise the standard of physical fitness*". But till to-day, neither the Government nor the public leaders have paid any attention to this

pressing health problem. *Propaganda* is necessary, but where children and the youth of the land are concerned, it must be directed along well-defined channels, if the aim and purpose of physical education is to be fulfilled, namely, to improve the health and physical well-being of the masses, with the definite object of increasing the physical fitness and efficiency of the able-bodied; and thus contribute to the Nation's health and wealth, in all walks of life.

Of the various Nutrition Indices formulae, to determine the state of nutrition of the pupils, all have become obsolete, due to lack of uniform application, for all ages, heights, and weights. But all the same, Livis formula has been worked out among the various nationalities in the World; and I have worked this formula and made it applicable to South Indians. This could be made the basis for further researches into the nutritional index of South Indians, and to devise ways and means to improve the physical fitness. The latest method of assessing the "state of nutrition" and that adopted by the Board of Education, England is that impression of the child, produced on the medical examiner, regarding the physical well-being, as 'Excellent,' 'Normal,' 'Sub-normal' and 'Bad.'

Indigenous exercises.—It is necessary to refer to the revival of indigenous physical exercises to increase the body-build and development, health, and physical efficiency of Indians, which are in keeping with national sentiments and outlook on life, by such voluntary associations in Madras and elsewhere, like—

- (i) Bratachari movement in Calcutta;
- (ii) Sivaji Vyayam Mandal in Madras;
- (iii) Physical culture associations in Mysore and other States.
- (iv) Talimkhanas to teach wrestling and gymnastics;
- (v) "Keep-fit" system;
- (vi) Kalari systems in Malabar;
- (vii) Congress Volunteer Corps, Boy Scout Associations and similar organisations—their physical exercise activities; and,
- (viii) Yogic Health Institutes in North India and Bombay.

The benefits of these voluntary physical Associations, should not be overlooked.

Now, unfortunately, these indigenous games are tabooed by the present Physical instructors, and an unwarranted controversy between the indigenous exercises and foreign sports and games; body-build exercises *versus* "sportsman" exercises; and all the prejudices between the two types of exercises, exercise value *vs.* educational value etc., is raised. This mentality is undesirable. We have to take the best in both the systems and eschew the rest, for our ideal is higher than what either of these systems aims at.

Physical exercises, whichever be the type, to build body and health of the pupils would be useless, if the elementary conditions of health cannot be maintained—namely,

- (i) Good food; (ii) Sleep and Rest.
- (iii) Exercise; and (iv) Cleanliness.

The food or nutrition policy.—There must be a well-nourished body to derive full benefit from physical as well as from mental exercises. The direct beneficial effects of wholesome food on the constitution are well known. The problem of sound nourishment, what constitutes a satisfactory diet, and how best to apply our present knowledge on these matters, is of great importance. Sooner or later, a national nutrition plan and policy* would have to be evolved. A *satisfactory diet* to build health and body-build should satisfy the following conditions—physiological needs of the body; psychological motives that create and satisfy the appetite; social customs and castes; economic conditions; and environmental factors. Fetish should not be made of vitamins and vitamin products, "health-giving" and "body-building" special foods; and other motivated advertised food-stuffs.—"Smoke Passing Show Cigarettes, enjoy good health." People need to be taught how to feed more wisely, and to avoid dietetic errors, by the elimination of which *only*, could they look for any real measure of success in the physical training campaign. The problem of malnutrition (insufficient feeding) in India is more a question of injudicious feeding than in the nature of inadequate total supply of food.

The present Outlook.—The physical Educational authorities in Madras, are making fine distinctions between "Physical Education", "Physical Culture" and "Physical training". These distinctions do not serve any useful purpose now, for India is not even standing-by at the starting line of physical education, and much less in a position to understand them.

The defects in the present position regarding Physical educational policy are—

1. Lack of interest and enthusiasm among pupils for exercises;
2. Lack of interest among school-managers, regarding exercises and health of the pupils;
3. Slow degeneration of physical health and body-build of pupils;
4. Deletion of gymnasium and its exercise value;
5. Present-day costly games and athletics;
6. Absence of medical examination to determine the physical condition of the pupils;
7. Poor economic conditions of the pupils;
8. Present administration of Physical education is defective, and not conducive to organised and systematic work, with benefit to the individual or the Community.
9. No right "leadership" to guide physical exercise classes;
10. No definite policy of the Government to bring Physical education into the realm of politics of the country; and
11. There is no *gradual growth* of physical education and its activities, from Elementary schools to Colleges; the physical education has begun at the wrong end, at the top, with grown-up students, instead of at the bottom (elementary school pupils).

* "Nutrition policy of India"—*Indian Medical Journal*, December, 1938.

For the evolution of suitable physical educational policy, it would be most profitable to consult the following publications:—

(i) The "Physical training scheme," prepared by Mr. H. G. Beall, Director of Physical Education, Calcutta.

(ii) Mr. H. C. Buck's scheme of physical education;

(iii) The Report of the Physical education Committees of the Bombay and Central Provinces Governments.

(iv) The course of training in Germany, which has reached the high water-mark in Physical education and training.

Between the "physical training scheme," adopted at Calcutta University and that of Mr. Buck in Madras, there is not much difference, except that the former emphasises the "exercise value" to a greater extent.

As regards the *German school* of Physical training, the following principles and practical courses of Physical education are laid down by Dr. Rust, Minister for Education, Germany.

The gymnastics—all school children are divided into 3 groups, according to the age of the pupils. The 3 groups are—

(A) "I can," (B) "I will," and (C) "I must."

The first group of children (age 6-10 years)—"I can"—are to be divided into play for easy games—tricks of agility and exercises free from combative elements;

The second group of children (age 10-14 years)—"I will"—is intended to stress the will to achievement through competitive sports—running, throwing, jumping, and gymnastics—all these to develop the "will power."

The third group of children (age 14-19 years)—"I must"—The pupil's sense of responsibility and obligation to achievement are to be developed, under the motto, "I MUST"—competitions and duels are to be encouraged.

Another fourth group (age 19 years till the sunset of life):—

Kraft durch Freude (Strength through joy) movements, are encouraged, which are very popular among all classes of people in Germany—all these physical activities are undertaken with the definite aim of improving physical fitness, in the scheme of regeneration of her youths.

These courses of physical education and training all brought into real politics, with the sole object of making the German nation "physically fit" have reached such a high degree of perfection that they have drawn the open admiration and advocacy of the same principles and courses to be introduced into England, by a special delegation of British Educationalists, who toured Germany in 1937 to study the physical education and its activities.

Universities and Physical Education.—As early as 1826, the Harvard University enacted a statute that "it belongs by law to the faculty of the University to authorise exercises conducive to health... The students generally showing a disposition to take a part, the corporation provided the

requisite apparatus". The universities generally, and Madras University in particular, cannot absolutely divest themselves of their responsibilities, regarding physical education, inasmuch as they have

- (1) a University Training Corps; and,
- (2) a part-time Officer in charge of physical education (games and sports). The responsibilities of the University towards the health and physical well-being of the scholars have been well emphasised by the Calcutta University Commission Report (1917-19); and also by the Skeen Committee. Not only this, a member of the British Education Fellowship Delegation, (Mr. S. Davies) has justly emphasised the University's role towards this pressing physical health problem.

The Madras University is roughly spending about Rs. 12,000 per annum on physical education. This amount could be better utilised; and physical education on national and rational lines, could be re-organised and started on a sound basis, with a full-time paid Officer (University Director of Physical Education). This would result in economy and efficiency, and thus contribute to the physical well-being of the citizens of to-morrow.

Recommendations

The aim, functions, activities, and the policy of Physical Education, to be pursued in Madras as elsewhere in India must be demonstrably in the interests of India—to raise the man power and make every citizen able-bodied and physically fit to carry his daily avocation in all walks of life. Therefore, my recommendations are—

(i) a School Medical Service to be constituted, for periodical and regular examination of all pupils—Part I scheme.

(ii) Government must chalk out a scheme of Physical Educational policy, on National lines on the model of Western countries, as suited to the children of the soil.

(iii) The following Acts must be enacted—

- (a) Compulsory Physical Training Act.
- (b) Public Health Act.

(c) Report of weekly Census of mortality of the school-children—to study the definite causes of infantile mortality and to take necessary steps. This should be a special report and not included in the general report.

(iv) Physical health activities should begin in Elementary schools and continue into the higher classes, in a gradual and systematic manner, till the physical education and its activities become merged into one, namely *community-hygiene and physical health* in after-school life;

(v) The "individual child" must be made the basis of the whole physical educational programme;

(vi) Graded, regular, and systematic exercises to be given daily to all pupils;

(vii) Military drill to be made compulsory for all classes; and for this no permission of the Army Department is required;

(viii) A sufficiency of full-time paid Physical instructors, to carry out the policy of Physical training;

(ix) Teachers to be trained in gymnasium games and athletics, and other kinds of remedial exercises, (Swedish drills), as an *objective* course;

(x) A Public Health Act to enforce the supply of pure foods;

(xi) Provision of enough public play-grounds. The present school playgrounds are hardly worth commenting upon;

(xii) Propaganda: To carry on a "Physical fitness" campaign as in England to-day, not to speak of other advanced western countries; and

(xiii) Conduct refresher courses during vacation for the physical instructors, and hold District Conferences of the Instructors, and the Public, after the District tour is finished by every Inspecting Physical Instructor.

Administration: The administration necessary to carry into effect the above recommendations, regarding Physical Education, and training on the most modern lines, is as follows:

The Staff must be full-time paid workers and their duty must not be diverted into any other channels of work, in the schools or Colleges, as is done at this moment. Every school or college should have one Physical instructor for every group of 200 pupils. Work should be thorough and efficient. These Instructors must be paid out of the school-funds. For the efficient supervision of the Physical educational programme, an establishment of Inspectors is necessary.

The School Physical instructors could be paid Rs. 35 per month. They will work during the working hours of the school or college, as the case may be, just like any other teacher. Then the effect of the Physical Instructor on the psychology of the students is really worth counting, and he will become a "force in the College and not joked at, as at present.

Conclusion: To sum up, the Government should first frame a general *National health policy* while chalking out a scheme of physical education, and honour its proper and due status in the body-politic of our country. Its aim should be national, to secure the harmonious growth of the body and mind, and to improve the physical fitness, abso-

lutely necessary for any situation in life. Its objective must be to live healthily, and to increase the efficiency and man power of India, the view advocated by the Skeen Committee and by Sir John Anderson, His Majesty's Lord Privy Seal, who has opined that "the man-power of India should be mobilised for the good of the Indian Nation." With this objective in view, all the above recommendations should be considered.

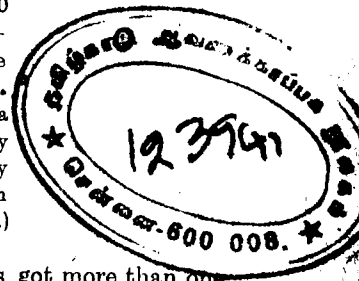
The School Medical Service (Part I) and the Physical education (Part II)—both items of the National health policy, are organically related to each other; the former is an essential preliminary, for the proper ascertainment of the health of the pupils, while the latter ensures the physical health and body-build of the child and grown-up citizen, in the scheme of regeneration of Indians—as an able-bodied Nation. In one of his lectures at Madras, Swami Vivekananda stressed the necessity of physical health, in these words—"Be strong, my young friends, this is my advice to you. You will be nearer to Heaven through the football than thro' the study of the Gita...You will understand the mighty genius and the strength of Krishna better with a little of strong blood in you. You will understand the Upanishads better and the Glory of *ATMAN* when your body stands firm on your feet and you feel yourselves as men....The Atman can never be realised by the physically weak. He can be only realised "By the Strong, by the Hardy."

My scheme is economical and self-supporting. The provincial Governments, especially the Congress ones, are concerned in formulating educational, agricultural, prohibition, and other reforms, meant for the benefit of the masses. A health policy is a major question, and it is none the less important than the other reforms or policies. The present moment is the most propitious to inaugurate a Health Policy. By adopting this health policy and physical training scheme, we can certainly raise the level of health and physique from C₃ to A₁ status of our youth within a decade from now. It is thus that the autonomous Provincial Governments would justify their existence and earn the gratitude of the Nation.

The apathy of the Government and the opposition of vested interests stand in the way of the smooth progress of the licentiates. This is the time when the licentiates should speak with one voice and with the full force of their strength. Join, therefore, the Association and make it serve and speak for you. If you let slip this opportunity, you will regret for ever. A spirit of indifference and exclusiveness will mar the fate of 40,000 licentiates in our country. Jus ponder over these words, and decide rightly.

Proceedings of the Sixth Provincial Conference of the Bengal Branch of the All-India Medical Licentiates' Association

(Bengal has spoken with no uncertain voice about the need for urgent medical reforms. It is a great pity that a province which has been in the vanguard of every reform movement in India during the last 100 years—in religion, politics and science—is today under a pall of frustrated progress. Its Government, though elected, seems peculiarly to be irresponsible—definitely so in matters of medical school education. Drs. Mukherji and Maitra, whose addresses are extracted below, give a painful account of the state of Medical Schools in their province. They urge for the abolition of the inefficient schools and use the money thus saved to improve the standards in the rest. They also deal with other problems, some of which are of inter-provincial interest. *Ed., I. M. J.*)



Burdwan 9th April 1939. The 6th Provincial Conference of the Bengal Licentiates was held at Burdwan and the session lasted for two days (8th and 9th). Dr. S. C. Mukherji, L.M.P., M.L.A., opened the Conference and Dr. Fitch, I.M.S. opened the Exhibition. One of the novel features of this Conference was the flag-hoisting ceremony by Dr. S. C. Mukherji. The flag had four colours with a red-cross symbol on the left. Red signified "Fight"; deep blue "Obey"; purple "Believe"; green "Unite"; and the Red-cross "Service". The Conference had a full compliment of delegates and visitors. The addresses of the President and of the Chairman of the Reception Committee were punctuated with frequent cheers.

Dr. Satyacharan Maitra, Chairman of the Reception Committee, in the Course of his address said:

MEDICAL SCHOOLS IN BENGAL

It may correctly be said that all the energies of our Association are at present concentrated on this problem of all problems. The solution of this problem alone will solve all the other problems the Association is fighting for. I am bold enough to declare that there is no other problem before the Association excepting to secure the proper education for the Licentiates, which will entitle them to be recognised as qualified medical men in their own country at least. The Central Government have realised the justice of this demand long ago but could not give effect to them, till very lately, in October, 1938, a Conference of the Representatives of all the Provincial Governments met at Delhi and unanimously accepted this policy of introducing reforms in the curriculum of the medical schools. Some of the Provincial Governments have acted up to this policy, before the Conference at Delhi took place and that is in the Province of Madras. The Governments of Bombay, the Punjab, United Provinces and Assam have declared their intention and are also beginning to act up to this policy. So, practically speaking, the problems of our brethren in those provinces are solved or about to be solved in a short time. Unfortunately for us in Bengal, there is no sign of such a reform, although this Government is also bound by this policy. Bengal has got six Government owned Medical Schools and three non-official

ones. No other Province has got more than one Government Medical School, excepting Bombay which has got two. Introduction of reforms means some additional expenditure to the Government. A Government with one medical school can easily afford to improve it, but how can the Bengal Government who are running almost deficit budget every year, can undertake to reform their nine medical schools? It is for this reason at any rate that some of the schools must be closed down to introduce efficiency in others. On a former occasion when the Jalpaiguri Medical School was on the verge of disaffiliation, the rich Tea Planting interest of the place intervened and paid a large sum of money to keep the school alive, but it is curious to find that these Tea Planters do not employ the passed students of Jalpaiguri Medical School in any important or responsible post of theirs.

I. M. COUNCIL ACT

Sister and Brother Delegates, if any condemnation of the present system of teaching is necessary, it is provided by the same Government. The Indian Medical Council Act has the impudence to declare the 75% of medical men of the country educated in the institutions of the Government of the country as unrecognisable, the Licentiates who are considered as duly qualified in their own province are refused recognition in the I. M. Council! I repeat, in the words of one of my distinguished friends, that it is an "Outlawry" perpetrated on the Licentiates.

PROVINCIAL MEDICAL COUNCIL AND S. M. FACULTY OF BENGAL

A system of communalism has been introduced into different parts of the medical profession and the Provincial Register is a standing disgrace, having three separate classes of electorates in it. Repeated representations have failed to give the Licentiates their due representation in the Governing Body of the S. M. Faculty, although other Provinces have given the Licentiates their due though meagre representation.

Sister and Brother Delegates, I will invite your attention to the fact that the very institutions where you are educated, shun you as unemployable—visiting Surgeonships and Physicianships in these Hospitals are closed against the Licentiates.

however experienced and qualified they might be. The teacherships of Pathology and Physiology, which were hitherto reserved for the Licentiates, have now gone over to others. May I then ask, why this farce of training is still being continued?

Medical Licentiates, in the services of the Government, are put to great hardships in the matter of their allowance, transfer and pay, which I would leave to the delegates to discuss and place before the proper authorities.

The absorption of the posts of the Sub-Assistant Surgeons by the Assistant Surgeons is another anomalous situation for us. Our critics may say that while we are claiming for the unification of status and education why should we complain about this? This amounts to saying "*Heads we win and tails you lose*"; i. e., while you are doing nothing towards the unification of the status by improving the education of the Licentiates, yet you claim to enter into their houses ousting them without providing any shelter. The Licentiates are prepared to enter into competitive examinations, in the matter of securing services, on equal terms with their graduate brethren. So long as these are not accomplished the *status quo* must be maintained. I shall be failing in my duty if I do not invite your attention to the hardships of our brethren in the Service of the District Boards, Municipalities, Railways, and in the mining boards and Tea Estates. I regret very much that instances have been reported to us, where the Medical Licentiates are treated scarcely with any courtesy at all.

Dr. A. D. Mukherji, President-elect rising amidst applause said in the course of his interesting address:

Dr. Maitra, sister and brother delegates, ladies and gentlemen,

MEDICAL EDUCATION IN BENGAL

The Medical licentiates of Bengal have passed through various stages since their first creation in Bengal in the year 1822, during the regime of the East India Company down to the present year. Although they have contributed in no small measure to the popularity and stability in this country of the modern scientific system of medicine, viz., allopathy, their claims to gain rightful places in the profession and society have been ignored by all concerned. The Universities and medical colleges came in much later in 1858, but conditions in them have gone through marked changes because of occasional interference by the General Medical Council of United Kingdom firstly and the Indian Medical Council lately.

Unfortunately for us, the education that were given to us since 1822 were only very slowly improved to reach a stage in 1895, when a four years' course was introduced in the two existing medical schools of Bengal, at Calcutta and Dacca.

The State Medical Faculty of Bengal was created by the Bengal Government in 1914 to co-ordinate education in different medical schools and to confer diplomas. The diploma granted by the State Medical Faculty of Bengal so far received

recognition by different Provincial Medical Councils but the recently formed Indian Medical Council could not recognise the same as they do not conform to its requirements. Thus distinct and definite classes of medical practitioners, viz., graduates and licentiates in addition to the British qualified doctors are in existence in Bengal. This class distinction has made our position anomalous in view of the perpetuation of the caste and compartment system in the profession,—an outcome of the time-worn policy of "Divide and Rule." The existence of our class of practitioners might have been necessary in the past for military needs of the East India Company and for supplying cheap medical aid to the people, but to-day I do not think they are needed.

With the introduction of the reforms in 1921, the then Public Health Minister of Bengal in his exuberance to extend medical aid, wanted to multiply the number of medical schools in district Head-quarters, and during his administration two Government schools at Burdwan and Mymensingh, three non-Government schools, two at Calcutta and one at Bankura, came into existence. Subsequently in pursuance of this policy, two more schools at Jalpaiguri and Chittagong have been opened, making a total of nine schools. The question of medical needs of the Government and country was not a new problem then and I fail to understand how Government could launch upon such a narrow policy of opening out medical schools, which do not possess requisite staff and proper equipment. Even after so many years of their existence, to-day, most of them are faced with disaffiliation by the Bengal Council of Medical Registration. In no other province of India the quality has been so sacrificed for the sake of quantity as in ours.

We have also noticed with great concern the rapid lowering of the standard of education with the opening of these ill-equipped and improperly staffed medical schools in the mofussil on account of dearth of sufficient clinical and other materials, essential for the running of efficient and up-to-date training centres. Besides, there is hardly any further necessity to have such a class of doctors at the present time, when there is practically no demand from the public for these doctors, as the positions which they occupied in the services of District Boards, Municipalities and other local bodies and private firms, are now-a-days to a great extent being filled up by medical graduates on the same emoluments. The people at large also prefer to get the benefit of better type of doctors turned out by medical colleges and of late, many of the latter are settling up in practice in the countryside, which could never dream even of the benefit of qualified doctors a decade ago. It is often said that as the doctors who pass out of the medical schools are to settle in rural areas, their knowledge needed not be of a sufficiently higher order but I, with many others, do not share this narrow view. On the contrary, I feel that scope for consultation facilities being totally absent in villages, those who would go to settle there ought

to possess a more thorough knowledge before they are called upon to treat cases. Under no circumstances, quality should be sacrificed for quantity, however great the need may be. Regarding the mofussil medical schools of Bengal I beg to refer to a report of the Surgeon-General with the Government of Bengal, in which he writes amongst other things "It is not to be expected that doctors trained in these indifferent hospitals can contribute anything to increased public confidence in Western medicine. The policy of district medical school would be sound enough if we could provide really efficient teaching staffs and up-to-date, well-equipped and well-staffed modern hospitals. We provide neither." This is the state of affairs in most of the present medical schools of Bengal, which will be further evident from the replies supplied by these schools to the enquiries made by the Director-General, I.M.S., a couple of years ago.

I have on behalf of the Bengal Council of Medical Registration, visited these schools several times and can say that majority of them do not possess requisite materials for training members of the profession. We, therefore, have protested against this policy of opening and running these rickety schools and shall go on doing so till this unwholesome policy of the Government is not revised.

I may here mention that of all Provincial Medical Councils of India, the Bengal Council of Medical Registration, first set itself to inspect these schools and in conjunction with the State Medical Faculty of Bengal, it has unanimously recommended to the Bengal Government to raise the preliminary qualification for admission into medical schools to I.Sc., pass certificate and to lengthen the course from 4 to 5 years. These unanimous recommendations have been sent to the Government two years ago but no definite order has so far been received. These recommendations when conceded, I am sure, would lead us nearer to the standard laid down by the Indian Medical Council. The Government of Madras has already introduced drastic reforms in medical education, followed by the Bombay Government, but we in Bengal are in the same old stagnant condition, so far as school education is concerned, although the seed of scientific system of modern medicine was first sown in Bengal. Madras not only gave a lead in the matter of reform in medical school education but at the instance of the Hon'ble Dr. Rajan Public Health Minister, a conference of Health Ministers of different provinces was held in December, 1937, which decided amongst other things, "upon the adoption of one uniform standard of medical education throughout India, without lowering the university standard." The Public Health Minister of Bengal attended this Conference but although considerable time has passed by since then, we are not aware of any move on the part of Bengal Government towards the introduction of this long overdue reform. In November, 1938, the Government of India through the Director-General of I.M.S. convened a Conference of representatives of Provincial Governments and States, Provincial

Medical Councils and State Medical Faculties or Examining Bodies to determine what should be the standard of education in medical schools of India, in view of the fact that medical science has made rapid strides and that some of the provinces were going ahead of others and there should be uniformity in the training obtained in these schools. The Conference has unanimously passed Resolutions of which you are already familiar.

I was privileged to attend this Conference as the representative of the Bengal Council of Medical Registration and I placed your case there. From the trend of events I can foresee that at no distant future we will have the standard of education in Medical schools raised to that laid down by the Indian Medical Council. The Bengal Medical Council will not, I can assure you, cease to agitate till these reforms in the Medical schools of Bengal are introduced. But the present Bengal Government, though in office for more than two years have not yet committed itself one way or the other, so far as medical education in schools is concerned. I think it is high time that they should shake off their indifference and fall in line with other major provinces, which are rapidly moving on right lines. These reforms will not only improve the condition of our group of the profession but also benefit the masses of this country who will get service of better class of doctors which they have a right to demand; and this will also help in the solidarity and unification of the medical profession as a whole.

Our association is now very rightly demanding the establishment of one uniform minimum standard of medical education all over India, without which invidious and inequitable caste system existing in the profession cannot disappear, and the present class hatred cannot go.

After the introduction of these reform whether we should still have the diploma conferred by the State Medical Faculty or get the university recognition on the model of diplomas and degrees of Conjoint Boards and the Universities of England, is a controversial question. But I think when one has to devote 5 years in a medical school after getting the I.Sc. certificate, why should he not strive to get university recognition which will ensure only one portal system of education. In America and other progressive European countries, excepting the United Kingdom, there is only one medical qualification, viz., M.D. Although in England there are diplomas and degrees, if an estimate is made it will be found that there are more degree holders than diplomates, and the degrees are much more popular than diplomas in spite of the fact that in that country there is little difference in the training obtained in the university or in the schools under the Conjoint Board.

Attempts are being made to do away with the diploma course in England, and to hand over the question of medical education to University. We believe that unless one system of medical education is introduced, the division in the profession into separate water-tight compartments will continue

and we will never have an united medical profession in this country. Besides when the experts who met recently at Delhi, have opined that medical education should not be of any other standard than that laid down by the Indian Medical Council and which has been accepted by some of the provinces, let us hope that the Bengal Government will not lag behind and accept these recommendations without any further delay. This will, I am sure, enhance the cost of maintaining these schools but there is no help for it. With the inauguration of provincial autonomy, Government have added considerably to their running cost and I do not find any reason why Government should not shoulder the responsibility of improving these schools, which will ultimately benefit our country men. To those who make the oft-repeated plea that this change will make education costlier and consequently medical aid will be dearer, I may mention that medical men are available in Bengal at such a low salary and such a small fee, even in remote villages, that it can never be said to be costly. In any case I believe that peculiar economic condition of this country does hardly allow the system of medicine we advocate to be popular in the country-side where people do not have two full meals a day. Attempts should therefore be made to raise the economic standard of our people and arrange for the extension of medical relief by the State and local bodies. Disease does not make any difference in the manifestation of its symptoms in the poor or the rich or in a villager or a citizen. In this country the transport facilities and the habitation of people in scattered areas make practice all round the year a difficult task in the villages. Better transport facilities are needed. We make emphatic demand that our educational standards be raised without further delay. If the Bengal Government think that with the limited resources at their disposal they are not in a position to improve all the schools, let them close down the worst of them and improve the rest with the money thus saved.

BENGAL MEDICAL COUNCIL

It is a misfortune that the caste system of the profession has been of late manifested itself in the publication of the Annual Medical List of the Bengal Council of Medical Registration, in which British qualified doctors, graduates and licentiates and others are shown separately and their elections are also held separately. It is desirable that a common register alphabetically arranged is published as was done before and the elections to the council are held on Joint electorate basis. This will to some extent ease the existing class war in the profession.

Although our group contains nearly 7000 registered doctors as against about 4000 graduates, and 400 British qualified, we have got only 3 seats whereas graduates have 4 and British qualified 2. This is unjust as we contribute largely to the funds of the council. In these days when numerical strength counts much, we claim at least 6 seats in the council. The Bengal Council of Medical

Registration has recommended 4 seats for our group of practitioners 3 years ago but the Government have not yet come to any decision in the matter.

STATE MEDICAL FACULTY

The State Medical Faculty of Bengal was created to confer diplomas mainly on the products of the medical schools. It is an anomaly that we have no place on its governing body. We feel that as the faculty is concerned with prescribing the syllabus for study and examination of licentiates mainly, it is imperative that at least two seats are reserved for us to safeguard our interests there.

The State Medical Faculty of U. P. and the Medical Examination Boards of Bihar & Orissa and C. P., which were constituted subsequent to the Faculty in Bengal, have allowed seats to our brethren and we fail to understand why the same privilege be denied to us.

This faculty has of late conferred its honorary fellowship to a large number of medical men and in spite of the fact that there are many eminent and professionally efficient men amongst us, only Dr. B. M. Das Gupta of the School of Tropical Medicine has been able to receive this distinction. I have seen that those upon whom this distinction has been conferred feel shy to declare that they are fellows and seldom mention them as such. My firm belief is that if this honour is conferred on some of us, they will preserve this as proud distinction and will try their utmost to make the same popular.

QUACK PRACTICE

I have noticed the growing unemployment and absence of scope for honest practice by qualified medical men in rural areas on account of the costlier nature of our treatment, poverty of the masses, absence of transport facilities and last but not the least the infestation of the villages and some cities with quacks who are either self made or are manufactured by the large number of bogus medical schools, which have, of late, cropped up all over Bengal without any check. This to my mind calls for direct and early Government action to save the ignorant and poor people of the province from the clutches of these quacks, who are doing positive harm to the country and are making our system of medicine unpopular by improper use. It is a pity that many qualified medical men of repute are running some of them knowing fully well that these schools will never come up to the minimum requirements laid down by the Medical Council of Bengal.

POISON LICENSE

In addition to this the indiscriminate issue of Poisons Act licenses in the districts to the unqualified persons, have encouraged the quacks to make use of poisons and injections without any restriction. This is against the principles of this Act and we assert that Poison license be only issued to registered medical practitioners and passed compounders, who own dispensaries only and not to all and sundry who apply for the same.

I think some restrictive measure like that of Burma should be introduced in Bengal for the use of hypodermic syringe and surgical instruments by those who are not registered practitioners.

NEW AMENDING ACT

You must have seen the other day in the proceedings of the Bengal Legislative Assembly the move made by some of the legislators to amend the Bengal Medical Act to include the unqualified practitioners within the Register of the Council with a view to earn cheap popularity with a section of the people who are doing more harm than good to the country. It is very unfortunate that in spite of the unanimous recommendation of the Bengal Medical Council against such Bills, our present Public Health Minister lent his indirect support to this Bill and assured the house that he would soon bring an official Bill in a modified form to meet the objects contemplated in the Bill under discussion.

This Bill, if passed, will certainly confer certain rights and privileges to the unqualified persons who neither had proper training in Medicine and nor are prepared to face any test. This will further complicate matters in the profession. I enter my emphatic protest against this measure and the undue solicitude shown to a class of people who are positive menace to the profession and society.

RURAL MEDICAL RELIEF

I have given this matter my consideration and I feel that with the provision of large sums of money for rural reconstruction in Bengal by central and provincial governments, the services of medical men should be utilised by the government by employing them as medical and health officers in charge of village units comprised in each Union Board. If this is done along with other ameliorative measures, I am sure, they will be able to rouse up sanitary consciousness of the masses of the villages and rural life will be made worth living at no distant future. I learn that the Public Health Department of the Bengal Government is evolving such a scheme and I can assure that large number of our members will be quite willing to offer their services.

INDIAN MEDICAL COUNCIL

Our exclusion from the purview of the Indian Medical Council because of the defective nature of the education of our group, has made our position very peculiar and we have thus been denied status and recognition in our own land. We must mention that the education given to us was not of our own choice but Government's and they are not in any way justified in relegating us to the cold shade of neglect at the present state. Although this council was established 5 years ago, so far nothing has been done by the Government to bring us under the scope of this council without which there is hardly any hope for co-ordinating medical education in all the provinces of India.

OTHER SYSTEMS

The problem of practice in Bengal has been further complicated by the creation of State Medical Faculty of Ayurveda, which consists of not only Kavirajes but a considerable number of lay men to prescribe standards which these indigenous practitioners are to follow. But till regulations are introduced all the existing kavirajes have been entitled to register themselves. If it is thought the indigenous system should have some firm basis I would suggest the creation of chairs in all Medical Institutions for teaching this system side by side with the Scientific system. By this, profession will be enriched and time will come when the two systems might unite to the advantage of the people.

Attempts are being made to establish Unani and Homoeopathic faculties in Bengal. These I am afraid will further worsen matters because in their desire to earn cheap popularity, our present ministers in Bengal do not seem to visualise things in their true perspective. When they could not accede to the recommendations of recognised bodies like the Bengal Medical Council and the State Medical Faculty in reforming medical school education in Bengal, how can they be expected to come forward with a genuine desire for the improvement of any system of medicine?

POST GRADUATE TRAINING

It is a pity that in spite of proper desire on the part of many of us, the door to higher education has been so rigidly closed against us that it is well nigh impossible to undergo further training in India and abroad.

It is unfortunate that our members in Government service are not granted study leave whereas graduates in service are allowed this privilege.

SERVICES

The question of ameliorating our service grievances is a serious and urgent one. So far as Government service of our brethren is concerned whenever the question of retrenchment came in for consideration of the Government, our group had to suffer much by way of reduction of pay, teaching and other allowances, etc. Those of them who are in teaching institutions have been very hard hit by the withdrawal of teaching allowances which is so essential for those who want to devote themselves in the art of teaching. I suggest that a separate set of medical service be created for supplying the need of the different medical schools of Bengal.

If this be the state of discontent amongst the Government service brethren, the grievances of those under District Boards and other local bodies are not less. They are denied living wages and other amenities of life though they have to work under very adverse circumstances.

The plight of our brethren in Railway services is also great; their pay has been reduced to a great extent and the privilege of travelling in upper classes while on duty has been done away with.

The manufacturing houses, also taking advantage of the growing unemployment in the profession have begun to give them ridiculously low wages and are exploiting them for their own ends. We should in this Conference formulate what should be our attitude towards those firms which are exploiting us as our contribution for the stability of these firms is not inconsiderable. It is a pity that the premier firms of Bengal are not meting out to their licentiate employees a just treatment and I beg to say that their noble qualities are being utilised for their selfish ends.

But due to circumstances beyond their control, they are compelled to take up these appointments but that is no reason why the employers should take undue advantage over the profession.

To cope with the acute unemployment problem of the profession I would suggest that our members should explore other avenues, e. g., manufacture of surgical instruments and appliances, orthopaedic stores, vaccines, sera and other proprietary remedies and foods, etc. I know these lines will not be able to absorb all of us but if properly planned, these might solve the unemployment question of some of us.

LIFE INSURANCE COMPANIES

Some of the Indian Life Insurance Companies are meting out different treatment to us so far as the payment of fees for examining lives of proponents in spite of the fact that the work done by our brethren is similar to and in no way less onerous than that done by the graduates. Minimum fees for examining these cases should not be less than Rs. 8-per case.

HONORARY SERVICE

Of late, there has developed a tendency to run our hospitals with honorary staff. This is perhaps due to acute unemployment and overwhelmingly large number of doctors available for these works. I must say that this system is not working satisfactorily as in great majority of cases these honorary officers do not discharge their duties as efficiently and regularly as their paid brethren do. Superior visiting appointments might be made honorary for the senior members of the profession who have piled up money but the junior and new entrants to these posts should not be exploited to run these hospitals. The service of these men being available free in the hospital even those of our countrymen who can well afford to pay the doctor do take advantage of their free service in the hospital and help in the economic loss to the profession. Hospital facilities should be available to the poor free but our well-to-do people must be made to pay for these services in hospital.

I have in my humble way, tried to review the various grievances we are labouring under and if I have left out any point it is not due to my lack of

sympathy but to shorten the already lengthy address.

Before I conclude I would appeal to you to strengthen the All-India Medical Licentiates' Association, the oldest medical organisation of ours which has a glorious past and which if moulded on right lines with your advice and guidance, I am confident, will be of immense service to you in the future.

I would further appeal to you to shake off the feeling of inferiority and despair which sometimes become greatly manifest and which are stumbling blocks to our progress in many cases. We must resolve to vindicate our keen sense of self-respect by giving up this complex and hold our heads high with other groups in the profession and if we can achieve this our dues will not be denied to us any longer.

Lastly, I suggest that those of us who have time energy and money should enter into legislatures and other public bodies not only to safeguard our interests in these institutions but to create public opinion in our favour which in these days of democracy will be of great help to us.

With these observations I can assure you that any lead given by you in this Conference will have my earnest consideration and there will be no lack of effort or zeal to tackle them as best as lie in my power.

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BEWARE OF IMITATIONS



RESOLUTIONS PASSED

1. This Conference is of emphatic opinion that the Standard of training for obtaining the minimum requisite qualifications for scientific modern medicine in Bengal, be that laid down by the Indian Medical Council which has been accepted by the Government of India Conference on Medical School Education, held in November, 1939.

This Conference requests the Government of Bengal, Medical Council of Bengal, and State Medical Faculty of Bengal, to give effect to the above resolution, without any further delay and if it is found that all the Medical Schools of Bengal cannot be brought to this standard, those schools which will not be able to come up to that standard, should be closed down.

Proposed by Dr. A. N. Roy.
Seconded by Dr. K. D. Sen Gupta and carried unanimously.

2. This Conference enters its emphatic protest against the recent move in the Bengal Legislative Assembly to amend the Bengal Medical Act to admit the unqualified practitioners into the Register of the Medical Council.

This Conference appeals to the members of the Legislative Assembly not to lend their support to Bills of this nature and also appeals to the Indian Medical Association, Calcutta Medical Club and British Medical Association to take up this question and convene a joint meeting for this purpose.

3. This Conference views with concern the rapid increase of quack practitioners dealing with allopathic system of medicine in rural areas of Bengal and resolved that the operation of Poisons Act be strictly enforced in Bengal, so that no such person can use poisons; and that restrictions regarding the use of injections and instruments, as in Burma, be introduced in Bengal.

Resolved that the Government of Bengal be requested to force the closing down of the non-affiliated private allopathic medical institutions with a view to check the unhealthy competition from the quacks coming out of these bogus institutions.

Resolved further that the Bengal Medical Council be requested to take disciplinary action against the Registered Medical Practitioners who will identify themselves with these institutions.

Proposed by Dr. D. K. Dutt.
Seconded by Dr. A. N. Roy. Carried unanimously.

4. While approving the decision to split up the two subjects of Physiology and Pathology, this conference learns with great concern the recent desire of the Government of Bengal to take away the posts of Teacherships of Physiology and Pathology from the Sub-Assistant Surgeons' group.

This Conference is of opinion that as the Teachers so far recruited from the group of Sub-Assistant Surgeons have acquitted themselves creditably in the discharge of their duties, the teaching of these subjects be left to their charge as before.

Proposed by Dr. S. C. Maitra.
Seconded by Dr. A. C. Rai. Carried unanimously.

5. This Conference is of opinion that the rural health units in Bengal be placed in charge of qualified Registered Medical men in preference to Sanitary Inspectors as the former will be able to carry on curative and preventive works simultaneously.

Proposed by Dr. K. D. Sen Gupta.
Seconded by Dr. J. N. Roy. Carried unanimously.

6. This Conference requests the Government of Bengal to open at least one Health unit in each union, as soon as possible.

Proposed by Dr. S. C. Mukherjee, M.L.A.
Seconded by Dr. A. N. Roy. Carried unanimously.

7. Resolved that this Conference protests against the imposition of conditions in the appointment of Licentiates as Teachers of Hygiene in the Secondary and Intermediate Schools of Dacca under the Board of Intermediate and Secondary Education of Dacca while the B.T. and B. Sc. Teachers are appointed in these posts without any such restriction. It is an injustice against the Licentiates, who are trained in the Medical Schools in Hygiene and allied subjects for 4 years.

Resolved further that the authorities be requested to remove this unjust ban against the Licentiates.

8. Resolved that the State and private Hospitals and allied institutions be thrown open to all deserving Registered Medical Practitioners for Post-graduate training.

Proposed by Dr. Basak.
Seconded by Dr. A. C. Rai. Carried unanimously.

9. Resolved that deserving Licentiates be not debarred from being appointed as visiting Medical Officers in all Public Hospitals in Bengal.

Proposed by Dr. K. R. Roy.
Seconded by Dr. B. Basak. Carried unanimously.

10. This Conference has learnt with concern that the Licentiates are excluded in recent years from being appointed as Examiners by the State Medical Faculty of Bengal and requests the State Medical Faculty of Bengal to appoint some examiners from these groups as had been the practice in the past.

11. This Conference protests against the imposition of additional Tax of Rs. 30/- on profession and calling by the Government of Bengal.

Proposed by Dr. S. C. Maitra.
Seconded by Dr. K. P. Roy. Carried unanimously.

12. Resolved that the Insurance Companies be requested through the Secretary, Insurance Association, to give effect to the recommendation made by the Committee formed by the Indian Medical Association with regard to the fees paid to the Medical Examiners and in respect of their appointment.

Proposed by Dr. A. C. Rai.
Seconded by Dr. S. K. Singha. Carried unanimously.

13. This Conference is of emphatic opinion that the pay allowed to Medical Licentiates by the District Board and Municipalities are not at all adequate, and in most cases, these Medical Officers are not appointed as Ex-officio Members of the Committees.

Resolved that the District Board and Municipal authorities be requested to increase the pay of these officers and include them as ex-officio members of the Committees.

14. This Conference learns with great concern the treatment meted out to the Medical Licentiates by the Indian Manufacturing concerns, so far as their pay and prospects are concerned.

This Conference requests the Provincial Branch of this Association, to take up this question with the manufacturing houses and try its utmost to remove these grievances.

Proposed by Dr. G. Mukherji.
Seconded by Dr. A. D. Mukherji. Carried unanimously.

15. This Conference requests the Government of Bengal to publish transfer and postings of Sub-Assistant Surgeons in Calcutta Gazette for information of the public.

Proposed by Dr. S. C. Maitra.
Seconded by Dr. R. Basak. Carried unanimously.

16. Resolved that the flag introduced by the Provincial Conference be referred to the General Secretary of the All-India Medical Licentiates Association with the request that the design be given publicity in the Indian Medical Journal and elicit the opinion of Branches and

members as regards the advisability of having this flag of the Association in future.

17. Resolved that this Conference is of opinion that the various difficulties with regard to the service conditions which have been repeatedly brought to the notice of the Government, have never been given any consideration by the Government, so, a committee be appointed with the following members to deal with the service difficulties as gathered from the various departments and arrange deputations and explore all other avenues to remedy them. This Committee will also arrange to explore all avenues to give effect to the resolution passed at this Conference, particularly in the matter of introducing the improved scheme of education in the Medical Schools of Bengal.

1. Dr. A. D. Mukherjee, President.
2. Dr. A. N. Roy, Secretary, Calcutta Branch.
3. Dr. A. M. Malik.
4. Mrs. Dr. N. O' Brien.
5. Dr. K. P. Sen.
6. Dr. A. Mukherjee, Provincial Secretary.

18. Resolved that this conference conveys its thanks to the Superintendent of the Ronaldshy Medical School, Major K. S. Fitch, I. M. S., for his sympathy and kind help towards the success of the Conference.

19. Resolved that this Conference conveys its thanks to the Superintendent of Police, Burdwan for the kind help rendered by him to the Reception Committee.

20. Resolved that this Conference conveys its thanks to the Maharajadhiraja Bahadur of Burdwan for his sympathy and kind help towards the success of the Conference.

21. Resolved that this Conference conveys its thanks to the Reception Committee and Volunteers for the very excellent arrangements of the Conference.

Proposed from the Chair

Carried unanimously.

22. A vote of thanks to the chair was proposed by Dr. S. C. Maitra, who brought the Conference to a close.

Madras Public Health Act

[The following are extracts from the Press Communique issued by the Government of Madras explaining the provisions of the Public Health Act recently passed by the Madras Legislature. It may be mentioned that this is the first Act of the kind in this country, and if this succeeds, as the Hon'ble Dr. Rajan hopes, half the conquest of preventable diseases would be achieved.

Ed., I. M. J.]

The Madras Public Health Act, 1939 (Madras Act III of 1939), is a very important measure, the first of its kind in India. It contains such provisions as are considered essential for the advancement of public health in this Presidency. The Act supplements the provisions of the existing law in regard to public health matters, and the existing law will continue to be in force except to the extent to which it is definitely in conflict with the provisions of the Act, in which case, the latter will prevail.

Besides making many important changes in regard to administrative matters, among which may be mentioned the constitution of a public health board, the assignment of specific functions to the Director of Public Health, and the securing of due control over the public health establishments of local authorities, the Act makes provision for the following matters:—Water supply, drainage, sanitary conveniences, the abatement and prevention of nuisances, the prevention and eradication of infectious diseases, the treatment of venereal diseases, maternity and child welfare measures, mosquito control, reservation of areas for residential purposes control over insanitary buildings, and the abatement of overcrowding, control of lodging houses, food control and sanitary arrangements at fairs and festivals.

Local authorities have been divided into two categories, namely, (a) urban local authorities, and (b) non-urban local authorities. The former will include the Corporation of Madras, municipal councils, and panchayats specially notified as urban local authorities. The provisions made as regards certain matters are more stringent in the case of urban local authorities.

WHOLESOME WATER

The Act requires every local authority in respect of which a direction is issued by the Government, to provide a sufficient supply of drinking water for the consumption of its inhabitants. With a view to implement

the obligation thus laid on local authorities, provision is made for the levy of a water-tax. The levy will be obligatory if the Government so require. All revenue derived from the tax is to be devoted exclusively to works of water-supply.

Detailed provisions have been made for providing additional sources of water-supply and for preventing the contamination of existing sources of water-supply. The Health Officer is given power to control insanitary sources of water-supply, whether private or public, and to ensure their proper maintenance and to direct their closure, if necessary. The District Collector or any other officer appointed by Government may also institute inquiries regarding the quantity or quality of water supplied in a local area and if he finds that any defects should be remedied or improvements made, he may call upon the local authority or other persons concerned to execute the necessary repairs or improvements within a specified time. The Director of Public Health will also have power to direct the execution of necessary improvements to sources of public water-supply.

Power has been taken to divert water from water mains belonging to a local authority, for supplying water to an area outside its limits, on condition of making reasonable payment.

The purity of drinking water supplied by Railway administrations is ensured by a provision to the effect that samples of the water supplied by the administration for drinking purposes shall be submitted for analysis by a proper authority.

New dwelling houses are not to be permitted to be occupied unless provision is made in the houses themselves or within a reasonable distance therefrom for a sufficient supply of wholesome water.

DRAINAGE AND PUBLIC CONVENIENCES

All urban local authorities are laid under an obligation, so far as their funds permit, to provide drainage systems and to maintain them properly.

The Health Officer will have power to direct owners of properties to provide efficient means of drainage for their premises, wherever necessary.

The discharge of sullage and sewage water into public streets and the contamination of streams and water courses are prohibited.

New buildings in an urban local area will not be permitted to be occupied unless the Health Officer certifies that they have been provided with sufficient means of drainage.

Local authorities are required to provide a sufficient number of sanitary conveniences for the use of the public and to keep them in proper order. New buildings are to be provided with suitable sanitary conveniences, and power has been taken to require the construction of additional sanitary conveniences in existing buildings. It is laid down that no one should injure or improperly foul any latrine used in common by the occupiers of two or more premises or by the members of two or more families.

ABATEMENT OF NUISANCES

An exhaustive definition of 'nuisance' has been incorporated in the Act. In general, any noise, dust, smell or vibration which is prejudicial to the neighbourhood will fall within the scope of the definition. Any person aggrieved by a nuisance will have the right to complain to the Health Officer about it, and the Health Officer is given power to call upon the person responsible for the nuisance to abate it. If the nuisance is not so abated, the local authority may itself arrange for the abatement of the nuisance and recover the cost of doing so from the person responsible.

Houses which are rendered unfit for human habitation by reason of any nuisance existing in them, will not be permitted to be occupied until the nuisance is removed. Persons are prohibited from easing themselves or throwing rubbish in public streets. Where a person eases himself in a private open place, he is required immediately to cover up the excreta with earth. Where a nuisance is committed by the member of any family or household, the head of the family or household will be held responsible therefor.

PREVENTION OF INFECTIOUS DISEASES

'Infectious disease' has been defined in very wide terms. In addition to plague, small-pox, chicken-pox and cholera, it will include acute influenzal pneumonia, anthrax, cerebro-spinal fever, diphtheria, enteric fever, leprosy, measles, rabies, relapsing fever, scarlet fever, tuberculosis, typhus and any other disease declared by the Government to be an infectious disease. If any infectious disease breaks out or threatens to break out in any local area, the local authority concerned is required to employ such additional staff, and to lay in stock such medicines, equipment and appliances, as may be considered necessary by the Health Officer whose decision will, subject to an appeal to the Director of Public Health, be final. In times of emergency, the Health Officer may himself make the necessary provision, submitting a report in due course to the executive authority.

Isolation hospitals and wards for the treatment of infectious diseases are also to be provided by the local authorities.

The Health Officer will have power to prohibit the use of water from sources in which infection is suspected. Power has been taken to remove infected persons to hospitals, with due safeguards in the case of goshas. Persons suffering from infectious diseases are prohibited from spreading infection by resorting to public places like markets, theatres, hotels, etc. Nor can an infected person take part in the making of any

articles of food or engage himself in any occupation which is likely to spread the disease.

NOTIFIED DISEASES

Certain infectious diseases have been classified as notified diseases. Acute influenzal pneumonia, anthrax, enteric fever and relapsing fever will not fall within this category. In the case of notified infectious diseases, more stringent provisions have been made, and these are mentioned below.

Any building or place may be entered and taken possession of by the Health Officer if such entry or possession is required to prevent or control the disease. The Health Officer is also given powers to enter and inspect places where cases of infectious diseases are suspected to exist. Power is taken to destroy huts and sheds if such destruction is necessary for preventing infection.

Every medical practitioner, whether registered or not, and including a hakim or vaidya, is bound to give information of any case of notified disease which he comes across in the course of his practice in municipal areas to the executive authority, the Health Officer or the Sanitary Inspector, and in rural areas to the Health Officer, a Health or Sanitary Inspector or the village headman. Managers of factories, keepers of lodging houses, heads of families, and owners and occupiers of houses have also to report cases of notified disease occurring in their premises. Medical practitioners will also be under an obligation to report cases of enteric fever and tuberculosis, though these are not notified diseases.

Power has been taken to direct the closure of lodging houses. Persons suffering from notified infectious diseases are prohibited from sending their clothes to laundries or public wash-houses, nor may they enter public conveyances except in special cases after giving due notice and taking adequate precautions. Dead bodies of persons who have died from notified diseases should not be retained for more than 12 hours without the permission of a Health or Sanitary Inspector, and any Magistrate may order any such dead body to be disposed of unless friends or relatives of the deceased undertake to dispose of the body within the time specified by the Magistrate.

VACCINATION

Power has been taken to prohibit assemblies of more than 50 persons, to prevent the entry of persons from infected areas, and to restrict trade in grain and other articles which may cause the spread of infection. Power has also been taken to make vaccination and preventive inoculations compulsory, but a person having conscientious objections to vaccination or inoculation may obtain an order of exemption from a Magistrate on condition of isolating himself and the members of his family to the satisfaction of the Magistrate. Occupiers and owners are laid under an obligation to destroy rats, mice and other animals susceptible to plague infesting their premises.

Local authorities are required to make proper arrangements for the treatment of venereal diseases and the prevention of infection therefrom. Every physician treating or examining a person suffering from a venereal disease is required to impress upon the patient the necessity for treatment until a cure is effected, and to instruct him in measures necessary to prevent the spread of the disease.

Any person who is free from venereal disease may, on payment of a fee of five rupees, obtain a certificate to that effect from any medical practitioner included in a panel of practitioners published by the Government in that behalf.

Power has been taken to make rules regarding the maternity and child-welfare measures which local authorities should be bound to carry out.

MOSQUITO CONTROL

Ample provision has been made for preventing the breeding of mosquitoes. The provisions will, however, come into force only on the extension thereof to a local area by a notification issued by the Government. The keeping of collections of water on which mosquitoes breed or are likely to breed is prohibited. The Health Officer may require owners and occupiers to take measures specified by him for preventing the breeding of mosquitoes in their premises, and on their default, he may himself carry out the measures and recover the cost of doing so. Anti-mosquito works, whether established by the Government or by the local authority, or by the owner or occupier concerned at the instance of the Government or of the local authority, are not to be interfered with in any way.

REGISTRATION OF LODGING HOUSES

Every urban local authority is required to notify the localities which should be reserved for residential purposes within a year of the date on which the Act came into force or within such further time as may be given by the Government. The local authority may at any time add to the list of these localities. In localities so notified, no new factories, workshops or work-places can come into existence and the operations of the existing factories, etc., will also be subject to control. A notification reserving any area for residential purposes may be issued only after obtaining the approval of the Director of Public Health as well as that of the Director of Town-Planning. Any person aggrieved by the issue of any such notification will have a right of appeal to the Government.

The above provisions may be extended to any non-urban local authority to which such extension is considered desirable.

The construction of new buildings on insanitary sites has been prohibited. Back to back houses should not be constructed without the previous permission of the Health Officer. Dwelling houses which are unfit for human habitation may be ordered to be vacated until they are rendered fit for such purposes.

ABATEMENT OF OVERCROWDING

Landlords are required to maintain dwelling houses in a habitable condition and except temporarily on occasions such as marriages and the like, to prevent overcrowding therein. The question whether any dwelling house or class of dwelling house is or is not maintained in a habitable condition or is or is not overcrowded, will be determined by rules made by the Government.

These provisions will apply only to municipal areas in the first instance, but power has been taken to extend them to non-municipal areas also if necessity therefore is felt.

Every keeper of a lodging house is required to register himself under the Act. Persons who were keeping lodging houses before the Act came into force are allowed a period of three months to get themselves registered.

Registration will be effected by the executive authority and against his refusal to grant or to renew registration, an appeal will lie to the local authority. Power has been taken to make rules for securing that lodging houses are conducted in an orderly manner and with due regard to the laws of public health. A lodging house-keeper who is convicted of any offence will have his registration cancelled. The executive authority may require that a notice board bearing the words "Regis-

tered lodging house" should be affixed in some conspicuous place on the outside of the lodging house.

FOOD CONTROL

The sale or keeping for sale of unsound food is prohibited. A dealer in food who keeps unwholesome food will be presumed to have kept it for sale until he proves the contrary. Similar provisions will also apply to the sale or the keeping for sale of animals intended for human consumption which are diseased. If a child under seven years of age is found selling unwholesome food, the parent or guardian of the child will be liable to punishment as if he had himself sold such food.

The consumption of the flesh of any animal which has died on account of disease or other natural causes has been prohibited. The plea that such consumption took place as a matter of custom, or as a matter of right on account of services rendered in removing dead cattle etc., will not be accepted.

The Health Officer has been given adequate powers to prohibit the import of meat into any local area, to enter upon and inspect premises used in the food trade, to deal with diseased persons handling food, to investigate into outbreaks of epidemics caused through milk or dairy produce, to inspect dairies and to prohibit, if necessary, the supply of milk or other dairy produce from such dairies.

FAIRS AND FESTIVALS

The Government have been given power to notify a fair or festival as one which should be governed by the provisions of the Act, and to define the limits of the fair or festival site. In such cases a tax may be levied on persons leaving the notified fair or festival centre by inland-waterways, and tolls may also be levied on vehicles (other than motor vehicles) or animals entering the notified fair or festival centre.

Adequate notice is to be given to the local authority concerned in regard to the holding of any fair or festival. The obligations of the local authority in regard to the sanitary arrangements to be made have been clearly defined. Unwholesome food which is the most common medium for the transmission of diseases may be seized and destroyed. Authorised persons may enter and occupy any building or place in the fair or festival centre for purposes connected therewith; due notice should be given in case the buildings are occupied and the owner or occupier of the land or building will be entitled to a reasonable rent and to compensation for damage. Private sources of water-supply which may be sources of infection may be closed or disinfected by the Health Officer. The accommodation for payment of temporary visitors to the fair or festival is also brought under control by requiring that the occupiers of the houses concerned should obtain licences.

POWER TO ARREST OFFENDERS

Police Officers have been given power to arrest persons committing in their view offences against the provisions of the Act. Members of the public health establishment not below the rank of a Health or Sanitary Inspector may similarly arrest persons committing in their view offences against the Act or against any other Act relating to public health matter. Arrested persons should not however be detained in custody after their names and addresses have been ascertained, without an order from the Magistrate, for a period exceeding twenty-four hours. Adequate powers of entry and inspection have been given in all cases to enforce the provisions of the Act. The infringement of the provisions of the Act will generally be punishable with fine, and where the breach continues after conviction or the giving of a notice to discontinue the same, provision is made for the levy of a daily fine.

As already pointed out, the Act contains several important provisions regarding administrative matters. Perhaps the most important of these is that which requires every municipality to earmark not less than 30 per cent of its income from all sources other than Government grants, for expenditure on medical relief and public health in its area and every district board or panchayat similarly to earmark not less than 12½ per cent of its income for such purposes. The Government have however been given power to vary this requirement in exceptional cases.

PUBLIC HEALTH BOARD

The Act constitutes a Public Health Board for the Province. The Board will consist of nine members, namely, the Ministers for Public Health and Local Administration, three members of the Madras Legislature nominated by the Government, the Surgeon-General, the Director of Public Health, the Sanitary Engineer, and an additional officer appointed by the Government. The Minister for Public Health will be the President and the Director of Public Health, the Secretary of the Board. The Board will advise the Government on all matters which may be referred to it and will co-ordinate public health work in the Presidency.

The Director of Public Health had no statutory power of controlling the operations of local authorities in public health matters. The Act confers on the Director power to recommend to any local authority such measures as he may consider necessary to improve public health in its area and the local authority is bound to adopt the measures so recommended unless, on a reference made to them, the Government otherwise decide.

The scale of public health establishments employed by local authorities (other than the Corporation of Madras) will be determined by the Government. The authorities who may make appointments to the public health establishments, their conditions of service, and their duties will be governed by regulations made by the Government from time to time. Government have also taken power to compel the employment of a Health Officer by any local authority if they consider such employment essential. Power has been taken to appoint registered medical practitioners as additional Health Officers to local authorities in times of emergency, on a paid or an honorary basis. The Director of Public Health is given power to transfer any member of the public health establishment of one local authority to the public health establishment of another local authority, and also in times of emergency to assign one or more members of the establishment of one local authority for temporary duty in the area of another authority.

The Health Officer will have adequate power of control over the staff working under him. All appointments and punishments of persons belonging to such staff will be made by the Health Officer subject to the approval of the executive authority, any difference of opinion between the Health Officer and the executive authority being resolved by the Government. The Health Officer will also exercise the functions of the executive authority in public health matters to such extent and subject to such appeal and control as may be prescribed by the Government.

Bombay Medical Council

The following are extracts from a summary of the proceedings of the meeting of the Bombay Medical Council held on 6th February 1939.

The Council proceeded to consider the application of Mr. M.S.J. De Souza, Retired Military Sub-Assistant Surgeon, for the restoration of his name to the Bombay Medical Register and resolved that his name be restored to the Register.

The Council proceeded to consider the question raised by the Bombay Medical Union whether, in view of clause (j) of rule I in section II of the Code of Medical Ethics, a registered medical practitioner can attend, in response to a manufacturer's invitation, at functions wherein scientific films, etc., are shown by firms or manufacturers or their agents or where trade medical films are exhibited by Medical Associations, and it was resolved that so long as no reference is made to any proprietary product, it is not in contravention of clause (j) of rule I in section II of the Code of Medical Ethics for medical practitioners to attend any such functions.

The Council proceeded to consider a motion made by Mr. U. B. Narayanrao (1) that Government be recommended to pass an enactment penalising those using the prefix "Doctor" or "Dr." other than by registered medical practitioners and those holding a doctorate of a recognised University and (2) that the Council appoint Visitors to attend and be present at the professional examinations required for obtaining the qualifications of the Licensing Bodies in this Province, and it was resolved, as regards the first proposal, that as the point raised therein is already covered by the Bill to Prohibit the Conferment of Unauthorised Medical Degrees, etc., and Assumption thereof, no further action is necessary in respect of this proposal. As regards the second proposal, it was resolved (i) that, so far as the medical examinations of the Bombay University are concerned, it be suggested to the Medical Council of India that they may associate 2 nominees of the Bombay Medical Council with the Inspectors appointed by the Medical Council of India to inspect the Medical Colleges in the Province of Bombay, and that, should the Medical Council of India not agree to the above suggestion, the Bombay Medical Council should appoint their own Visitors to be present at the University Medical Examinations, and (2) that with regard to the examinations of the College of Physicians and Surgeons of Bombay, the question be considered along with the other items suggesting the appointment of Visitors to attend and be present at the examinations of the D.O.M.S. and the D.G.O. of the College.

The Council proceeded to consider the following reply received from Government with regard to a previous resolution of the Council (viz., that the Council is of opinion that the practice of getting countersignature on medical certificates granted by registered medical practitioners is against the principles and spirit of the Bombay Medical Act, VI of 1912, [section 10 (2)] and recommend to Government to put a stop to this practice):—

Government's reply.—"Medical certificates granted by registered medical practitioners recommending leave to Government servants are ordinarily accepted by Government and the heads of Government offices in this Province, provided that the certificates are in the form prescribed by Government. It is only in special cases where an excessive amount of leave is recommended, or where the head of the office has special reasons that the right of calling for a second medical opinion from the Presidency Surgeon or the Civil Surgeon is exercised. In the circumstances Government is unable to accede to the request made by the Bombay Medical Council."

and it was resolved that Government be requested to inform the officers to whom medical certificates are referred that they should comply with rule 8 in section II of the Code of Medical Ethics, which is quoted below:—

"8. When it becomes the duty of a practitioner occupying an official position to see and report upon a case of illness or injury, he should communicate with the practitioner in attendance, so as to give him the option of being present. The practitioner seeing the case officially should scrupulously avoid interference with, or remarks upon, the treatment or diagnosis that has been adopted."

The Council proceeded to consider the requests for the recognition of the D.O.M.S. and the D.G.O. of the College of Physicians and Surgeons of Bombay for registration as additional qualifications and inclusion in Table (G) given in the Bombay Medical Register and, dealing with the proposals of the Executive Committee for the appointment of first of Visitors to attend and be present at the examinations for these qualifications, it was resolved that the following Visitors be appointed to attend and be present at the examinations for the L.C.P.S. of the College:—

The President ... For Surgery, Midwifery and Examination for the D.G.O.
 Dr. P. C. Bharucha ... For Medicine.
 Messrs. C. J. Ghia and V. D. Sathaye. ... For Ophthalmology and Examination for the D. O. M.S.

The Council proceeded to consider the question raised for the revision of the Code of Medical Ethics and, after taking into account the views received from Medical Associations, etc., on the subject, it was resolved that the Council do not think any change is necessary in the Code of Medical Ethics.

The Council proceeded to consider the draft Bill to Provide for the Registration and Inspection of Nursing Homes received from Government for the opinion and suggestions of the Council and it was resolved that the Bill be approved, subject to certain alterations suggested therein by a Sub-Committee appointed to consider and report on the subject and by the Executive Committee.

The Council proceeded to consider a Government letter asking for the advice of the Council whether certain medical graduates of the Tilak Maharashtra Vidyapeeth, Poona, or any of them, should, in view of the circumstances mentioned by Government, be registered under the Bombay Medical Act, 1912, and it was resolved that under the provisions of the Bombay Medical Act, 1912, the practitioners mentioned by Government cannot be registered.

The Council proceeded to consider a Government letter regarding the question of reservation of seats for the Province of Sind on the Bombay Medical Council and it was resolved that the Government of Sind be allowed to nominate 2 representatives on their behalf for nomination as members of the Bombay Medical Council.

The Council proceeded to consider a Government letter in connection with the proposal that it be urged again on the Government of Portuguese India that all medical practitioners registered under the Bombay Medical Act, 1912, should be permitted to practise medicine in Portuguese India on a reciprocal basis, and, after taking into account the circumstances mentioned by Government, it was resolved that the matter be dropped.

The Council proceeded to ballot for the election of an Executive Committee for the year 1939-40 and, in accordance with the result of the ballot, declared the following six members as duly elected to the Committee:

Lieut.-Col. S. L. Bhatia, M.C., M.A., M.D., I.M.S.
 Mr. C. A. Amesur, M.S.
 Mr. U. B. Narayanrao, L.C.P.S.
 Dr. B. G. Vad, M.D.
 Mrs. Tarabai Kotamraji, L.C.P.S.
 Mr. V. D. Sathaye, B. Sc., L.C.P.S.

The Council proceeded to consider a motion given notice of by Mr. Narayanrao, proposing that the word and brackets "(Hon.)" be inserted after "F.C.P.S." appearing in the Bombay Medical Register against the names of those who had obtained that Diploma of the College of Physicians and Surgeons of Bombay, etc., etc., and it was resolved that the matter be referred to the Executive Committee.

The Council proceeded to consider a Government letter forwarding, for the remarks of the Council, the various resolutions passed by the Conference on Medical School Education held in New Delhi on the 7th and 8th November, 1938, and it was decided to express the opinion that the resolutions may be accepted, subject to the following remarks, viz:—

(a) That resolution No. 1 may be accepted with the presumption that the expression "modern scientific medicine" therein means what is usually known as Allopathy; and
 (b) that resolution No. 3 may be accepted with the addition of the words "or, within 5 years" after the words "can be fully met."

United Provinces Medical Council

MINUTES OF THE MEETING OF THE UNITED PROVINCES MEDICAL COUNCIL HELD IN THE COMMITTEE ROOM OF THE OFFICE OF THE INSPECTOR-GENERAL OF CIVIL HOSPITALS, UNITED PROVINCES AT LUCKNOW ON 31ST MARCH, 1939.

1. The following resolution was passed unanimously, all standing:

"That the United Provinces Medical Council places on record its expression of deep sorrow at the sad demise of Dr. S. L. Sharma and of appreciation of the valuable services rendered by him as a member of this council, and directs the Registrar to send a message of condolence to Mrs. Sharma and other members of the bereaved family."

2. The minutes of the last meeting of the United Provinces Medical Council held on 9th December, 1938, were confirmed.

3. The audit and inspection note on the accounts of the United Provinces Medical Council for the year 1937-38, with the Registrar's note of explanation, were considered and the Registrar's explanation accepted.

4. Resolved that the D. T. M. and H. and D. C. H. qualifications, granted by the Royal College of Physicians, granted by the Royal College of Physicians of London and the Royal College of Surgeons of England, be registered as additional qualifications.

5. The Council unanimously rejected the suggestion that Sanitary Inspectors and vaccination staff should be trained and authorized to inoculate against cholera and plague. The Council came to this decision after mature consideration and on weighty grounds, as the risks involved would be too serious.

6. Some of the members of the Council having testified that to their knowledge Dr. Mahudavalla had done nothing to warrant the removal of his name from the register, it was unanimously decided that Dr. Mahudavalla's name should be included in the register.

7. Resolved that the name of Dr. Surendra Singh, M. D. (Vienna), may be registered.

8. It was resolved that the name of Dr. Kishori Kumar Mathur, M. D. (Vienna) may be registered.

9. The case against Dr. Jagannath Prasad Sinha, M.B. B.S. (Regn. no. 2853) of Benares, was considered.

It was resolved unanimously—

"That the Council do judge Dr. Jagannath Prasad Sinha to have been guilty of infamous conduct in a professional respect and do direct the Registrar to erase from the medical register the name of Dr. Jagannath Prasad Sinha."

Dr. Jagannath Prasad Sinha may however apply for his name to be registered in the Medical Register at the end of twelve months. He must then satisfy the Council that he has not done anything against the code of medical ethics.

10. The report of the Standing Committee which met on 30th March, 1939, was read and their recommendations were accepted.

11. The Council unanimously endorsed the following resolution of the United Provinces Branch of the Indian Medical Association:

"Resolved that in sub-section (viii) of section 2 (Part II) of the United Provinces Indian Medicine Bill, 1938, published in the *United Provinces Gazette* of 19th November, 1938, Part VIII the words 'Registered Practitioner' be replaced by the words 'Registered Vaid' or 'Registered Hakim' and that a copy of this resolution be forwarded to the Hon'ble Minister and another to the President, United Provinces Medical Council."

and also suggested that the words 'registered vaid or hakim' be substituted for the words 'registered practitioner, registered medical practitioner, or duly or legally qualified practitioner' wherever these words are used in the Bill, and the words 'Ayurvedic or Unani' be added before the words 'medicine, surgery or midwifery' in section 39 of the Bill.

12. The Council unanimously endorsed the following resolution passed at the United Provinces Medical Conference held at Agra in October, 1938:

"Resolved (a) that this Conference notes with concern the increasing evil of quackery in United Provinces, where all sorts of suffixes and prefixes simulating recognized medical degrees or diplomas are being assumed freely by unqualified persons to advertise themselves as qualified medical men and requests the Government to take necessary measures to protect the public and the profession from the consequences of this evil, and
 (b) that in the opinion of this Conference it is now high time that the Government should make it a penal offence for anyone to use the prefix Doctor or Dr. before his name."

SERVICE NOTES

(As per Resolution No. 18 of Gauhati Conference, A. I. M. L. A., we are publishing below only the transfer and leave of such of the Sub-Assistant Surgeons in each province who are only members of the Association. The numbers given against their names indicate their membership roll number—Ed., I. M. J.]

Punjab—March 1939

- 1680 Dr. Bakhtawar Singh, M. S. M. F., on reversion from the Delhi Province to Dhar Dispensary, Simla.
 2888 „ Dayal Singh, General Duty, Civil Hospital, Hoshiarpur, to General Duty, Civil Hospital, Bhewani, Hissar District.
 1249 „ Muhammad Abdullah, granted extension of leave for 25 months.
 3229 „ Chanan Singh Thakar, General Duty, Civil Hospital, Jullundur, to general duty, Civil Hospital, Hissar.
 2426 „ Abdul Razaq Faruqi, on return from leave to Lalgah Dispy., Dera Ghazi Khan District.
 2147 „ Daulat Ram Mediratta, L. T. M. (Cal.), General Duty, Mayo Hospital, Lahore to Abohar Dispensary, Ferozepur Dist.
 3229 „ Chanan Singh Thakar, General duty, Civil Hospital, Hissar to General Duty, Civil Hospital, Bhewani, Hissar Dist.
 2089 „ Som Datt Vaid, granted extension of leave for 8 months.

Bengal—15-2-'39 to 15-3-'39

- 892 Dr. Jayanta Kumar Bose, Jail Hospital, Pabna, held charge of the Serajgunj Sub-division and Dispy. on 6-2-'39.
 106 „ Jatindra Mohan Mazumdar, Supy. duty, Sadar Hospital, Mymensingh to Jail Hospital, Jessore.
 100 „ Karunamoy Banerjee, held charge of the Diamond Harbour Sub-division and Dispy., 24 Parganas on 8-2-'39.
 106 „ Jatindra Mohan Mayumder, Hony. Jamadar, held charge of the Sherpur Dispy., Dist. Mymensingh on 2nd and 3rd Feb. '39.
 1892 „ Jayanta Kumar Bose, Jail and Police Hospital, Pabna, held charge of the Serajgunj Sub-division and Dispy., on 13th Feb. '39.
 1757 „ Anant Nath Tarafder, acted as Special Officer, Admission Room, Campbell Hospital, Calcutta, from 10-12-'38 to 19th Jan. 1939.
 1078 „ Priya Nath Ghosh, Sadar Hospital, Rangpur, held charge of the Nilphamarj Sub-division and Dispy. on 22-2-'39.
 3404 „ Sailendra Nath Choudhury, Sadar Hospital, Krishnagar, Nadia, held charge of the Mahapur Sub-division and Dispy. on 28-2-'38.
 857 „ Suresh Chandra Das Gunta, Sup., Sadar Hospital, Comilla, Tippera, leave on average pay for 4 months.

unless he possesses a degree of doctorate from any recognized university or possesses a medical qualification from one of the medical institutions recognized either by the Indian Medical Council or one of the Provincial Medical Councils or both."

ASSOCIATION NOTES

Proceedings printed below refer only to the Branches of the All-India Medical Licentiates' Association, unless otherwise stated.

Tingri Valley (Assam). Meeting held on 26-2-39. Dr. J. C. Dutta was on the chair. 10 members were present.

Proceedings of the last meeting were read and confirmed. The circular No. 1 of the General Secretary and the letter from the Provincial Secretary, congratulating the members for opening this new Branch were read by the Secretary.

The following members were elected unanimously to represent this Branch in the provincial standing committee: Drs. J. C. Dutta, M. L. Bhuyan.

The following scientific papers were read: (1) Acute joint pain with fever by Dr. K. L. Sen Sarma, (2) Acute joint pain without fever by Dr. D. D. Sarma Barua, (3) Chronic joint pain by Dr. M. A. Hazarika. Dr. K. P. Hare spoke on the subject. All the members took keen interest in the discussion.

Gauhati (Assam): A public meeting was organised by the above Branch. Dr. B. Barua, M.B., Member, Indian Medical Council, presided.

Drs. Barua and G. S. Das, Provincial Secretary stressed the need to raise the standard of medical education and the following resolution was unanimously passed:

"Resolved that, in view of the decision of the A.I.M.L. Association, the recommendations of the Representative Conference at Delhi for Medical Education and the Health Ministers' Conference, held at Madras, to adopt one uniform standard of Medical Education throughout India without lowering the standard of University Education, the Government be urged to raise and improve the standard of the Berry White Medical School at Dibrugarh, the only medical institution in Assam, to five years with I.Sc., as pre-medical qualification and to gradually convert it into a Medical College."

Monthly meeting held on 30-3-39. Dr. D. R. Sen was voted to the chair. 9 members were present.

(1) The General Secretary's circular No. 6 and an appeal were read and the President and Secretary spoke at length urging upon all the members to be more enthusiastic about our medico-political emancipation and the non-members to join the Association for the sake of unity and strength.

(2) The following resolutions were moved and passed:
 (a) That the members of this Branch view with grave concern the recommendation of the Assam Retrenchment Committee regarding the proposed scale of pay and prospects etc., of the Sub-Assistant Surgeons both in civil, medical and public health department and, as their present scale of pay are not at all satisfactory to enable them to live a decent life, most respectfully request the Government for favourable consideration.
 (b) That deputation be sent to wait upon the Government at Shillong for the above, as early as possible.

(c) That the members are requested and reminded to pay up their subscription for 1939 without delay.

(d) That the Provincial Secretary be requested to move the respective authorities concerned to give due consideration and necessary effect to the resolutions passed in the last annual conference, held at Gauhati in December, last.

(e) That the proceedings of the Branch meetings be printed and sent to all the members for information, as a part of propaganda.

(f) Read letter from Provincial Secretary circular No. 4-39 dated 18-3-39 regarding the copy of a letter from the Chief Medical Officer, Oriental Life Insurance, to the Manager of the Company at Bombay, for the opinion of the members.

(g) The members of this Branch are of opinion that the statements made by the Chief Medical Officer, against L.M.Ps. in general are misleading and as such the Provincial Secretary be asked to contradict the same by a befitting answer with facts and figures and publish the same in local papers for the perusal of all the members.

Special meeting held on 7-4-39. Dr. P. C. Dwara presided.

Resolved that this meeting while recording its full sympathy for the opium prohibition scheme, earnestly requests the members of the Association to volunteer their services and co-operate whole-heartedly for this noble cause of eradicating the menace of opium addiction.

Bombay. General body meeting held on 10-4-39.

Resolved that this Branch fully approves the move of the Bombay Government to enforce total prohibition from 1st August 1939 in Bombay and offers its full support and services to the cause.

This meeting congratulates the Government of Bombay on their inauguration of the literacy campaign for mass education in Bombay and offers its co-operation in the move.

Hissar (Punjab) Meeting held on 12-3-39. 9 members attended. Dr. Bhagwan Dass Tanya presided. The subject for discussion was notified to be "Contraception—its theory and practice".

In view of the conditions of severe famine prevailing in the Hissar District and the Government establishing many famine relief camps to prevent it and anxious to tackle the question of nutrition of the stricken masses the Civil Surgeon, Dr. Bhagwan Dass at the outset explained the idea of the Government and emphasised the need of strenuous work to be put in by the medical staff, working at the relief camps especially with regard to the symptoms of under-nutrition and distribution of cod liver oil elaborately as supported and provided by the Government for the purpose. He also desired that the effects of under-nutrition on the human frame and the effects of cod liver oil should be carefully noted, recorded and put up for discussion at the next meeting.

The minutes of the last meeting were read and confirmed.

Letter from Dr. Gopal Singh was read and the reply of Dr. Kapur, Provincial Secretary, after reference from the Branch Secretary, was considered to be satisfactory and advisable from practical point of view.

Notice of the next provincial executive committee to be held on 11th April 1939 was read out and the need explained by the Branch Secretary, Dr. Rawal expected to attend the meeting.

The communication between the Branch Secretary and the Honorary, Treasurer of the Mother Association was read on the subject of realisation of the annual subscription and the Branch Secretary's proposal as approved by the Treasurer was approved.

The Branch Secretary, Dr. Rawal, who attended the last Gauhati conference as a delegate, gave a brief account of the conference and the election of Drs. Kapur and K. C. Wohra as General Secretary and Honorary Treasurer was recorded.

The postage account of the Branch from 26-9-38 to 12-3-39 was put up, checked and passed and it was resolved that the same be forwarded to the G. S. for payment.

Rawalpindi (Punjab): First meeting was held on 8-12-38 with S.B. Dr. Lahna Singh in chair. 10 members were present.

A Branch of the A.I.M.L. Association was formed and the following resolutions were passed.

Resolved that a Branch be formed with the following office-bearers: S.B. Dr. Lahna Singh—President, Drs. Jewan Singh and Manohar Lal—Vice-Presidents, Dr. Chanan Lal Sabharwal—Honorary Secretary.

Resolved that Dr. Som Raj Issar be elected as delegate to the Gauhati Conference and Dr. Manohar Lal as substitute.

Resolved that meetings be held on the last Saturday of each month.

Dr. Lahna Singh kindly offered a room in his house to be used as the office of the Branch where all meetings will be held.

Amritsar (Punjab): General meeting held on 8-1-39. 7 members were present.

Read and confirmed the proceedings of the General meeting held on 4-12-38.

Resolved that the bill of contingencies for December 1938 amounting to Rs. 1-11-6 be passed and forwarded to General Secretary for payment.

General meeting held on 26-3-39. 4 members were present.

Read and confirmed the proceedings of the meeting dated 8-1-39.

Read circular No. 6 dated 21-3-39 from the General Secretary and resolved that the Branch Secretary be advised to repeat the reply contained in resolution No. 5 of 16-10-38 of this Branch.

Read circular No. 7 and recorded.

That the contingent bill of the Branch Secretary from 5-1-39 to 26-3-39 amounting to Rs. 2/5/- be passed and forwarded to the General Secretary for early payment.

That in view of the fact that amendments to the Punjab Medical Registration Act II of 1916 are at present being considered by the Punjab Medical Council, this Association urges upon R. B. Dr. Mathra Dass, the representative of our constituency, to demand that the strength of the Punjab Medical Council be raised by 2 seats, these being filled by the medical licentiates and that at least 2 nominated seats should go to the medical licentiates by selection from a panel of names from Punjab branch of A. I. M. L. Association. Out of 8 three at present go to the British qualified medical graduates and 5 to the Punjab medical graduates.

That the Provincial Secretary be requested to place the above proposal before the next meeting of the Executive Committee at Lahore on the 2nd April 1939 to find ways and means to carry on intensive propaganda to ensure the success of the above proposals.

Read and considered the questionnaire received from the Punjab Government Committee on the indigenous systems of medicine and the Branch Secretary be advised to communicate the views of this Branch to the General Secretary.

Mymensingh (Bengal). Annual general meeting held on 9-3-39. 21 members were present. Dr. H. Bagchi presided.

The Branch Secretary read the report of the working of the Branch for the year 1938-39, a summary of which is given below:

The year under review is an eventful one from various stand-points. Perhaps for the first time in the history of this Branch three members of this Branch attended the last Gauhati conference as delegates and visitors. There they had the privilege to hear and mix with many members from different parts of India. They are really proud of some of them who are happily free from the usual defeatist mentality and inferiority complex of our class and who are trying their level best in all possible ways to remove the obstacles standing in the way of our progress. Let us follow their example and elevate ourselves and the class. You will be glad to know that there has been a comeback on the part of some energetic members who left the fold of our Association for some reason or other. We have also got several new members during the year. There are more than 300 physicians of our class in this district but only 15 of this town and about 25 outsiders are the members of the Mother Association. This is deplorable. We should make all possible efforts to increase this to a laudable number. I have tried to recruit some by personal contact and recently I have sent an appeal to almost all the physicians of this district. I humbly beg your full co-operation in this matter.

One word about the Mymensingh Medical Association via our Licentiates' Association. The Mymensingh Medical Association was mainly conceived and given effect to by some energetic members of our class in order to have a common platform for all classes of registered practitioners to exchange their views freely to remove misunderstanding and to improve the status of the profession in general in various ways. I presume there has been a controversy over the point of joining that Association. The point of contention is that by joining that we will jeopardise the progress of our own one. But I find no reason for such fear. Of course it is our bounden duty to maintain and improve our own Association first. And I think there will be no dearth of members of our class who have got the energy to join both and help in improving both. I hope to be excused for the unavoidable digression. Kindly pardon me, for all the shortcomings during my secretaryship.

Altogether 12 meetings of this Branch were held during this season.

INCOME	RS. A. P.			EXPENDITURE	RS. A. P.		
	Rs.	A.	P.		Rs.	A.	P.
Balance of the previous year	6	7	3	M.O. to Treasurer	16	4	0
Local subscription	15	0	0	House rent (arrear)	36	0	0
Mother Association membership fee	22	0	0	Propaganda work	6	14	0
Contingency allowance from Treasurer	7	3	0	Contingency	9	13	9
Revival of the dead savings bank a/c. of the Branch	195	12	6	Balance:			
				In Saving bank	165	12	6
				Cash in hand	11	10	6
Total Rs.	246	6	9	Total Rs.	246	6	9

Office-bearers for 1939-40: Drs. H. Bagchi—President, M. N. Roy—Vice-President, B. Chowdhury—Secretary, S. Bagchi—Joint Secretary, M. C. Aich—Auditor. *Executive Committee:* Drs. H. Bagchi, M. N. Roy, B. Chowdhury, S. Bagchi, T. N. Bhattacharjee, M. C. Aich, A. Haque, M. Motaich, A. Talukder.

Emergency meeting held on 19-3-39. 9 members were present. Dr. M. N. Roy was on the chair.

The following resolution were passed unanimously: Resolved that Dr. A. D. Mukerjee of Calcutta be elected president for the ensuing 6th All Bengal Medical Licentiates' Conference to be held at Burdwan on the 8th and 9th April next.

Resolved that any two of the following members will represent this branch as delegates to the ensuing Provincial Conference: Dr. T. N. Bhattacharjee, M. A. Motilal, J. K. Chakraborty, A. Talukder, A. Chowdhury.

As it is the desire of the Provincial Conference that each Branch will manage the T. A. of the delegates, this Branch

resolved that the actual T. A. will be paid by local subscription or from the Branch Fund.

Resolved that Dr. T. N. Bhattacharjee and the Branch Secretary, Dr. B. Chowdhury, be the members of the Provincial Standing Committee from this Branch.

Various resolutions to be moved in the ensuing Provincial Conference were discussed.

Nadia (Bengal). Monthly meeting held on 12-3-39. 12 members were present.

The proceedings of the last meeting were read and confirmed.

Circular No. 1. from the General Secretary read and considered. This Branch follows this rule No. 111 all along.

Letter No. BS. Nad. 1 dated 25-2-39 from the Secretary, Reception Committee, Bengal Provincial Conference, Burdwan read and considered. The Secretary of this Branch is requested to comply with them at an early date.

Monthly accounts for February 1939 were examined and passed.

The members considered the election matter of the ensuing Bengal Medical Council and selected three candidates for the same.

Scientific discussions on Hemoptysis were made by the members.

CORRIGENDA

In our May Supplement, page 96, the proceedings of Tingri Valley Branch, dated 26-3-39 have been wrongly printed under "Dibrugarh." We regret the error. Proceedings of 26-2-39 of the same Branch appear in this issue. *Ed., I. M. J.*

CONSOLIDATED ACCOUNTS OF THE ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION

Receipts	RS. A. P.			Payments	RS. A. P.		
	Rs.	A.	P.		Rs.	A.	P.
To Subscription (old and new)	646	12	6	By Printing I. M. J.	590	3	9
" Advertisement	1185	5	0	" Establishment	390	0	0
" Interest	1	5	0	" Office Rent	60	0	0
" Miscellaneous Rs. 3/-, Loan from G. Secy.	313	10	6	" Stationery	8	4	9
Dr. Narayana Rao Rs. 10/-				" Travelling allowance	40	4	0
Loan from F. Secy. Dr. Mastakar 7/4/6 only				" Postage etc.	188	12	3
The amount donated by late R. B. Dr. Saraju Prosad Rs. 283/6/- only				" Miscellaneous	99	11	9
Total	2147	1	0	" Other Printing	58	14	0
Balance from last month	62890	14	10	" Propaganda work	77	1	0
Grand Total	65037	15	10	" Expenses for Branches	106	4	0
DETAIL OF BALANCES				" Scientific Section (Printing)	5	8	0
New Loans	8200	0	0	" Subscription to foreign Journals...	87	3	2
5 Years Postal Cash Certificates	6511	14	0	" Office Equipment (Adrema Addressing Machine)	300	0	0
G. P. Notes	10891	9	0	" Reception Committee Gauhati	69	13	0
Govt. Bonds for 1943	5600	0	0	" Loan returned to Finance Secy. (Dr. A. D. Mastakar, Bombay)	15	0	6
6½% Govt. Bond for S. S.	10000	0	0				
With Dr. S. P. Sen Gupta Ex-Manager	818	12	1				
Postal Savings Bank with President	2155	3	11				
With Branches	416	6	0				
With Editor:							
In hand	177	6	0				
In Bank	1163	3	3				
In Stamps	29	6	6				
With General Secretary:							
In hand	3	5	8				
In Bank	316	14	4				
T. A. Advance to F. Secy., G. Secy. & clerk							
Rs. 100							
Rs. 165							
With Treasurer:							
In hand	257	10	3				
In P. N. Bank	1928	6	6				
In P. S. Bank	14805	14	2				
Total	16391	14	11				
Total	62940	15	8				

Total ... 2097 0 2

Balance in hand ... 62940 15 8

Grand Total ... 65037 15 10

CONSOLIDATED ACCOUNTS OF THE ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION

Receipts		JANUARY 1939		Payments	
		Rs. A. P.		Rs. A. P.	
To Subscription (old and new)	...	4621 5 0	By Printing I. M. J.	...	694 15 9
„ Advertisement	...	1485 14 6	„ Establishment	...	595 0 0
„ Interest	...	7 10 0	„ Office Rent	...	50 0 0
„ Miscellaneous Rs. 3/5/- only, Dr. S. P. Memorial Fund Rs. 1/- only	...	35 6 0	„ Stationery	...	21 13 3
Loan from Finance Secy. (Dr. A. D. Mastakar, Bombay) Rs. 16/4/6 only	...		„ Travelling allowance	...	2124 1 6
Loan from General Secretary (Dr. M.L. Kapur, Karnal, Rs. 14/12/6 only	...		„ Postage etc.	...	490 4 3
Balance from last month	...	62940 15 8	„ Miscellaneous	...	221 1 6
Total	...	6150 3 6	„ Other Printing	...	1 14 0
Grand Total	...	69091 3 2	„ Propaganda Work	...	
DETAIL OF BALANCES			„ Expenses for Branches	...	65 4 6
New Loans	...	8200 0 0	„ Furniture	...	97 3 0
5 Years Postal Cash Certificates	...	6511 14 0	„ Audit fee	...	50 0 0
G. P. Notes	...	10891 9 0	„ Advertisement Commission	...	5 0 0
Govt. Bond for 1948	...	5600 0 0	„ Office Equipment (Adrema Addressing Machine)	...	200 0 0
6½% Govt. Bond for S. S.	...	10000 0 0	„ Loan returned to Gen. Secy. (Dr. U. B. Narayana Rao of Bombay)	...	10 0 0
With Dr. S. P. Sen Gupta Ex-Manager	...	818 12 1			
Postal Savings Bank with President	...	2155 3 11			
With Branches	...	416 6 0			
With Editor :—					
In hand	105 11 3				
In Bank	1063 1 11				
Postage stamps	162 4 3				
		1331 1 5			
With Ex-Gen. Secy.—(Dr. U. B. Narayan Rao, Bombay)					
In hand	...				
In Bank	...	7 4 0			
With Treasurer :—					
In hand	190 10 0				
In P. N. Bank	355 4 6				
In P. S. Bank	17986 8 2				
		18532 6 8			
Total	...	64464 9 1	Total	...	4626 10 1
			Balance in hand	...	64464 9 1
			Grand Total	...	69091 3 2

CONSOLIDATED ACCOUNTS OF THE ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION

Receipts		FEBRUARY 1939		Payments	
		Rs. A. P.		Rs. A. P.	
To Subscription (old and new)	...	1009 14 0	By Printing I. M. J.	...	580 1 1
„ Advertisement	...	965 3 0	„ Establishment	...	401 0 0
„ Interest	...	1 0 0	„ Office Rent	...	50 0 0
„ S. P. Memorial Fund Rs. 3/14 (Rs. Three annas fourteen)	...		„ Stationery	...	16 10 3
„ Miscellaneous	...	115 6 0	„ Travelling allowance	...	252 9 0
Total	...	2091 7 0	„ Postage etc.	...	192 8 9
Loan from Dr. Manohar Lal Kapur (Gen. Secy.) Rs. 111/8/- only	...		„ Miscellaneous	...	64 7 2
Balance from last month	...	64464 9 1	„ Other Printing	...	
Grand Total	...	66556 0 1	„ Propaganda work	...	
DETAIL OF BALANCES			„ Expenses for Branches	...	4 4 0
New Loans	...	8200 0 0	„ Furniture	...	
5 Years Postal Cash Certificates	...	6511 14 0	„ Audit fee	...	
G. P. Notes	...	10891 0 0	„ Reception Committee Gauhati	...	318 0 0
Govt. Bond for 1943	...	5600 0 0			
6% Govt. Bond for S. S.	...	10000 0 0			
With Dr. S. P. Sen Gupta, Ex-Manager	...	793 12 1			
Postal Savings Bank with President	...	2155 3 11			
With Branches	...	16 6 0			
With Editor :—					
In hand	52 0 6				
In Bank	1134 2 10				
In Stamps	156 2 3				
		1342 5 7			
With Ex-Gen. Secy.—(Dr. U. B. Narayan Rao of Bombay)					
In hand	3 0 0				
In Bank	0 0 0				
		3 0 0			
With Treasurer :—					
In hand	67 1 0				
In P. N. Bank	840 13 3				
In P. S. Bank	18304 15 2				
		19212 13 5			
Total	...	64726 7 0	Total	...	1829 9 1
			Balance in hand	...	64736 7 0
			Grand total	...	66556 0 1

JUNE, 1939]

CURRENT COMMENTS

allergic cases and ascorbic acid for rectal hæmorrhage. Elimination of mental worries though often difficult should yet be attempted.

Even with correct and assiduous treatment, prognosis is fairly bad, and the worst part of it is that the patient may get into a state of chronic invalidism.

Chronic ulcerative colitis is thus the despair of the physician and an enigma to medical science. The only relieving feature is its small incidence.

Control of Puerperal Fever

Puerperal fever in India has yet to show diminution in its incidence. While, as a rule, it is amenable to serum or chemotherapy, its prevention which is more important is beset with innumerable difficulties in our country. It is still lamentably true that the common child-bearing woman fights shy of qualified midwives even when the State arranges for domiciliary treatment. There is no doubt that things are improving and the Local Bodies are taking an increasingly lively interest in the matter. But the millennium is far beyond our ken.

Hospital midwifery has, no doubt, advanced and a reasonable amount of safety has been assured to the parturient woman. But the tragedy in our country is that greater number of moribund cases are admitted which swell the hospital mortality and thus wrongly bring discredit to the institution.

It is not that we are lacking in knowledge regarding the aetiology of puerperal fever, nor of the methods of prevention and treatment. But the actual and effective control of puerperal fever goes far beyond these requirements. It is a socio-economic problem. It is a question of availability of maternity help. It is also a question of persuading the people to avail themselves of the already existing maternity clinics.

Untreated low grade puerperal infection, more than the serious and fatal cases, is, we consider, one of the fertile causes of recurring morbidity among pregnant woman. Every pregnancy becomes a danger, apart from chronic invalidism which is the lot of such women. This is a typical condition resulting from lack of prevention.

The hopes of effective control of puerperal sepsis is none too rosy in our country. Increasing institutional and domiciliary midwifery is indeed the bed-rock of prevention, but what is equally important is the education of the people to take advantage of what is now offered by the government and municipalities. Intensive propaganda is the first step, and we

stress this point because we have a feeling that this is not being steadily kept up by the powers-that-be and Social Welfare Centres. For a work of this kind which is inevitably slow, spasmodic and occasional propaganda is a poor substitute for persistent propaganda.

The Tuberculous Patient

Thanks to the recent anti-tuberculosis campaign in this country, the tuberculous patient is now assured of some sort of public attention. Early diagnosis and early treatment in a sanatorium are not impossible ideals and with the net work of organisation contemplated by the King George Anti-Tuberculosis Fund this aspect of the problem may be solved within the next decade. But the after-care of tuberculous patients discharged from sanatoria and tuberculosis hospitals is one which may baffle solution. Unemployment, already a growing menace in this country, is a definite impediment to the after-care of the tuberculous patient. Even were employment available, the employers may not be willing—and rightly—to employ workers with sub-standard capacity. Tuberculosis colony on Papworth model is an alluring idea, but we wonder whether it is feasible under our present political and social circumstances. Thus the problem of the tuberculous patient is a tangled one in which optimism has little scope. Efforts are therefore to be concentrated on early diagnosis before the patient's health is completely shattered. Given the co-operation of the public, and of course the patient, the evil may be nipped in the bud and prevented from pursuing its malignant career.

6th Provincial Conference of Bengal Licentiates

While every Provincial Government is busy finding ways and means to improve medical school education it is lamentable to learn that Bengal, acknowledgedly the intellectual centre of India, is sleeping over the problem. Madras, the most conservative of all provinces, has forged ahead in all medical matters, particularly medical relief and medical education. The United Provinces has appointed a Medical Reorganisation Committee to inquire into and advise the Government regarding the necessary changes in medical administration and education. Bombay has resolved to adopt the one-portal system of medical education. Punjab is on the brink of initiating great medical reforms. But we do not find Bengal anywhere or any near this picture. It is no wonder that both Drs. A. D. Mukherji and

Satya Charan Maitra, President-elect and Reception Committee Chairman respectively of the 6th Bengal Provincial Conference held recently at Burdwan*, have spoken in a language of despair and anguish. In spite of protests from the Bengal Medical Council, a Statutory Body whose advice it is not safe to ignore, the Government of Bengal has been like a Rip Van Winkle knowing neither night nor day. Would it now at least wake up to the realities of the situation? Inefficient schools must not be reared in the name of cheap medical relief. Medical relief would yet be cheap even if seven out of nine schools in Bengal are abolished today. Dr. Mukherji is therefore right when he says:

"Under no circumstances quality should be sacrificed for quantity however great the need may be."

And he quotes the Surgeon-General's report:

"It is not to be expected that doctors trained in the *effluent medical schools* (italics ours) can contribute anything to increased public confidence in Western Medicine. The policy of District Medical Schools would be sound enough if we could provide really efficient teaching staffs and well-equipped hospitals. We provide neither."

When a public worker like Dr. Mukherji whose experience in matters medical is profound and who is not accustomed to use the extreme language of a propagandist—as is evident from his restrained and reasoned presidential address—and when the Bengal Surgeon-General also thinks alike on a topic of such importance as medical education, it is rather depressing to see the want of enthusiasm on the part of the Government. We fondly hope that it may after all be due to its other pre-occupations. We would again appeal to the Hon'ble Minister of Health to devote a little time to a study of this question and save Bengal from the calamity of half-knowledge in medicine.

Bengal Medical Registration Act

Madras has given the lead in amending its Medical Registration Act and putting it on a right basis. There is no reason why Bengal, in no way inferior to Madras in any respect, should not do so. Academical communalism is as pernicious as its counterpart in politics and society. Particularly it is repulsive to the very fundamental principle of medical registration and medical ethics. Dr. Mukherji shares the same view and appeals to his Government to amend the Bengal Act. He suggests a joint-electorate. But we differ. Where is the need for a joint-electorate in an academical body like a Medical Council? General electorate is, we believe, the only right method of election

* See supplement for full Proceedings.

to the Medical Council. Perhaps the Bengal graduates in medicine are afraid of being deluged by the overwhelming numbers of medical licentiates. Our impression of the Bengal graduates does not justify this fear, and even if this is true, we believe, they can be influenced to shed their fear. The caste in the profession—the result of a curious system of medical education—must go. Half-way house like the joint-electorate may give a temporary shelter, but it will still have the stenching smell of professional caste. Let us demand general electorate boldly and truly. That will be a demonstration of the solidarity of the profession notwithstanding the efforts of interested persons who want to divide it and rule.

Bengal Medical Amendment Act

What is asked is not given. But what is not asked and needed by the organised profession is given. We read in Dr. Mukherji's address that legislation is on the anvil to include the unqualified practitioners within the Bengal Medical Register. This is an amazingly reactionary move, particularly in the face of unanimous opposition by the Bengal Medical Council. No wonder that Dr. Mukherji is forced to say:

"I enter my emphatic protest against this measure and the undue solicitude shown to a class of people who are a positive menace to the profession and society."

Well may the Government of Bengal repeal altogether the Bengal Medical Registration Act which would be less dangerous than this contemplated amendment! Medical Register is a public document intended to help the people to know the really qualified men on whom they could rely for medical relief, but if this Register becomes a medley of the qualified and the unqualified its statutory significance and public utility are lost. It will be a commercial catalogue for which the labour of legislation is not needed. Any enterprising printer may do it better.

The present Bengal Government have indeed become a puzzle even for fair critics!

MEDICAL LICENTIATES • IT IS YOUR DUTY TO JOIN THE ASSOCIATION • NO GREAT CAUSE HAS BEEN ACHIEVED WITHOUT UNITY • WITHOUT ORGANISED EFFORTS • THIS IS THE TIME TO SPEAK WITH ONE VOICE • WHO ELSE WOULD WORK FOR YOU IF NOT YOUR ASSOCIATION • YOU HAD A GREAT PAST • MAKE YOUR FUTURE GREATER • SHAKE OFF THE TRAMMELS OF INFERIORITY COMPLEX • ASSERT YOURSELF AND ACHIEVE •

POST-GRADUATE ARTICLE

Tuberculosis in India

• Dr. Samuel Ram Singh, M.C.P.S.
(Punjab), D.T.M. (Cal.)

(1)

The soil and the seed

[In this column, the two theses on Tuberculosis in India which secured a prize of Rs. 50 each, from the Scientific Research Committee of the All-India Medical Licentiates' Association will be published. But as the articles are too long for a single publication, we are publishing them in series edited under suitable captions. The winners of the prize are Dr. Samuel Ram Singh of Delhi and Dr. T.C. Basu Chowdhury of Agra.]

It may however be noted that the original prize offered was Rs. 100, but as the judges who scrutinised the theses felt that none of them deserved the award, the Committee decided to divide the award between two best theses among those received, just as a token of encouragement. *Ed., I.M.J.*

Being surrounded by the magnificent and ancient relics of this great land and writing from the out-door clinics of one of the best and busiest hospitals of India about pulmonary tuberculosis of which the writer sees at least seven cases on the average daily, he feels justified to go out of the subject to depict a bit of the past and present history of this country. India was a great and mighty nation in her past history and civilisation. Even today it yields vital raw products, and is a centre of great culture. In output of hides, jute, tea, rice and sugarcane it ranks first in all the world and second in cotton. India has given religion to practically one-third of the world's people. The country occupies an area of 1,808,679 square miles on the globe. It contains a population of 370 millions of people which is one-fifth of the world population. There is today a political, social and industrial renaissance heading perhaps for unforeseen and dramatic changes and has no doubt falsified the claims of one who wrote the phrase: *Unchangeable East*. But this picture is no matter for delight when one thinks of the present poverty of her people and ravages of many diseases, chief among them being the subject of this thesis.

INCIDENCE

It is roughly estimated that there are 5,000,000 people suffering from tuberculosis. In 1935 death claimed 6,598,711 people in India out of which half a million died of tuberculosis. 80% of college and school

students and 85% of villagers are supposed to have given evidence of tuberculous infection sometime or other. For every man that dies of tuberculosis, three women succumb. In the words of Lady Linlithgow:

"Tuberculosis is one of our greatest enemies. It not only attacks our health but prevents us from earning enough money to support our home; it attacks our wives and our children. The cry of tuberculosis sufferers is heard in practically every Indian home—either inside the room or through neighbours' walls or round the next street corner. Not one province, not one caste, not one class is free from this scourge. The largest number of victims are those aged between 15 and 30 years, the time when one can make the best use of his strength, energy and talents."

The statement of deaths from pulmonary tuberculosis in various parts of India shows three definite peaks or age groups:—

1st Peak:—For childhood and adolescence it is between the ages of 10-15 years; the highest mortality being among the girls. During this age period the girls attain puberty. Most important physiological and psychological changes take place in them. Their growth is rapid and resistance is weak. They are more often under-fed, neglected and over-worked and in consequence great many of them fall victims to the disease.

2nd Peak:—It is between 20-30 years, mainly in women. This is a period of frequent child bearing. This terrible strain is enhanced by the common practice of nursing each child for 2 years or more. To add to this she is probably again pregnant before the first child is weaned. She is under-nourished and over-worked. Thus poor and middle class mothers are predisposed to the infection of pulmonary tuberculosis.

3rd Peak:—This is between 30-40 years, and is among men. At this period men are at their best in their productive activities and they are exposed to all kinds of occupational hazards. They are also exposed to monotony, noise, speed, heat and cold, and all these factors predispose to respiratory diseases, the chief and commonest being the pulmonary tuberculosis.

In addition to the occupational risks, the working classes of our country face the menace of ill-health from frequent attacks of malaria, venereal diseases, diabetes and other debilitating maladies. Bad housing, lack of proper sunlight, poor ventilation, dampness, over-crowding, lack of protection from flies and above all lack of education play a great part in predisposition to the disease.

ETIOLOGY

Quod erat demonstrandum—that which had to be proved if efficiently proved does not need frequent reiteration. This is a truth in medicine as much as in geometry. Pasteur,

the great French scientist, had years ago demonstrated that infectious diseases are caused by the interplay of two factors, the micro-organisms and the parasites on one hand and the weakened resistance of the body of an individual on the other. Koch discovered in the year 1882 the mycobacterium tuberculosis. Four main forms of B. Tuberculosis are:—Human, Bovine, Avian and Reptilian. The former two occur in human beings. 97 per cent of pulmonary tuberculosis is caused by human type and it embraces all the abnormal conditions induced by infection of the lungs, pleura and bronchial glands. The organism may gain access to bronchial glands from a alimentary tract, through the lymphatic duct from the tonsils, through cervical or mediastinal glands or from inhalation. Majority of individuals are originally infected in infancy or early childhood, either from infected milk or inhalation of the organism from dried sputum. Pulmonary tuberculosis is a late manifestation, like tertiary syphilis, in adults either by re-infection or activation of a dormant lesion in the lungs.

Predisposing Factors:—Tuberculosis like all other misfortunes is not an isolated phenomenon. It is bound up intimately with our various physical, mental and social conditions. Man's health or lack of it is due to his environmental conditions. The problem of our physical well-being is connected like bread and butter with influence of our personality and condition of the social life. Social and economic factors underlying health and disease need to be brought to the careful notice of the public and the authorities. It must be borne in mind that environmental factors have a profound causal relationship in the development of pulmonary tuberculosis.

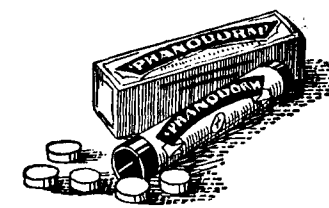
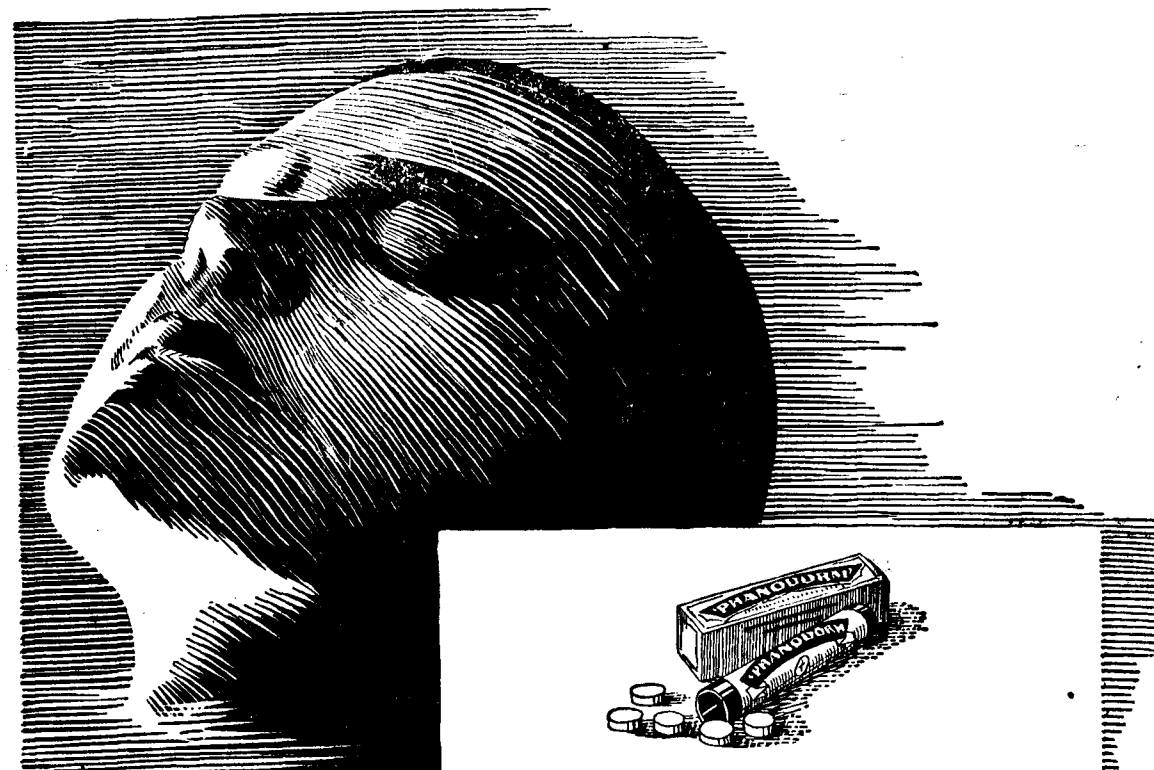
I. Trauma:—It is one of the factors which assumes a responsible element in the activation and progress of the disease. Trauma is evidenced by various types of injuries such as mechanical—produced by force to the body or the chest; chemical—from inhalation of injurious gases and fumes; thermic—exposure to injurious weather conditions. All these markedly lower the physical resistance which predisposes to or precipitates the progression of pulmonary tuberculosis by activating the apparently dormant mycobacterium tuberculosis. It is not uncommon to find the first symptoms of the disease develop after more or less complete recovery from infections as chest colds, bronchitis, sinusitis, influenza, pneumonia, etc. All human beings are susceptible to tuberculosis and it is found where an opportunity for infection is present. Almost

any condition which lowers the resistance of the body may predispose to tuberculosis. It is so widely spread in the country that given the necessary predisposing causes in a community its ravages will become apparent with an all but mathematical exactness. Tuberculosis, as we have already said, depends on two factors. The factor of infection with the organism as the seed, and the factor of predisposing causes as the soil. Excessive fatigue, dissipation, lack of proper nutrition, lack of hygienic living, excessive heat and cold are some of the main factors. Practically all mankind is infected with the seed, but only a small percentage suffer from active disease.

II. Industrialization:—India is a country essentially agricultural. About 90 to 95% of its population live in the villages. Urbanisation has been of recent origin. There is more tuberculosis every year because this disease flourishes in crowded places like towns and factories which are getting numerous and are employing more people every year. Urbanisation is fast advancing *pari passu* with industrialization of the country. Easy communications bring villagers to the towns. The number of factories has increased from 9918 (1935) to 10,226 (1936), and the number of workers rose to 1,654,147 from 1,610,932. Still new factories are springing up. The slum dwellings, inadequate wages, and unemployment have been the sequelæ of industrialization.

III. Lack of Education:—The people in our country are still very conservative. There is mass illiteracy and deplorable lack of right education in matters of health. It is sadly true India needs more education than medicine.

IV. Social Customs:—They occupy quite a place in the list of predisposing factors. Early marriage has been one of the abiding curses of this fair land. It is estimated that there are 185,339 girl widows of 10-15 years of age. This is a staggering figure for any country. The future daughters and sons of India will ever remember Mr. B. Dass for his valiant stand to stiffen the Sarda Act. A Punjabi captain and his wife, if the report is true, have done well in offering Rs. 5,000 to write the names of the supporters of Mr. Dass's bill in letters of gold on a column of glory in the Assembly Chamber at New Delhi. The social aspect of rapidly growing population of India needs a very considerate notice of all concerned. In 1600 A.D. it is said India had a population of 100 millions, in 1850 A.D. it was 150 millions, and it has gone on growing. The last census estimated it to be 370 millions and Public Health Commissioner for India in his report for 1936 has mentioned that it is



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CALCIUM DEFICIENCY
IS THE ROOT CAUSE
OF
ALL PATHOLOGICAL AFFECTIONS

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likely to rise to 400 millions by 1941. The speed at which our population is increasing is phenomenal. Except in the very immediate past epidemics used to take a big toll of humanity; but still the increase goes on. Increase of population has made the distribution of wealth, especially of land, worse. There is multiplication of destitutes creating disorganisation, unemployment and disease. The area under cultivation has not increased in the same proportion. One has to admit that a C₃ population continues to add to the complexities of this country in particular and the world in general. There certainly is an indiscriminate addition to the population in this land.

V. Poor Nutrition :—Due to terrific increase in population without proportionate expansion of food producing area of the country the food is inadequate and insufficient. This has resulted in under-nourishment of the population. Sir John Megaw is reported to have concluded that only 39% of Indian population could afford adequate nourishment, 41% are poorly nourished and 28% are badly nourished. The cow occupied the role of a mother for India. *The country of butter and milk has now become the land of tea, tobacco and aerated waters.* The consumption of milk is reduced to a minimum. 1936-37 report of the Imperial Council of Agricultural Research informs us that in India men drink the most milk, women the less and children the least whereas it should be the otherway round. Thus under-nourishment lowers the resistance against tuberculosis and has contributed to high infant and adult mortality. The infant mortality of our country is 232.6 per thousand and maternity mortality is 24.5 per thousand, six times more than that of England and Wales. Again average life of Indians has declined from 30 years in 1881 to 23 years in 1931. Total death rate in India is 26.8 per thousand as compared with England and Wales where it is 11.7 per thousand. Poverty compels people to go for cheap commodities, one of them being clothes. There are shops all over the country and on hill stations which stock horrible looking bundles of warm coats and over-coats from Europe. These bundles for aught we know are a hot bed of germs of various diseases, mainly of tuberculosis. They look almost new and attractive in design and cut. Liddle's Simla weekly published a story of a certain young girl who once purchased a wrap from a Kabari's shop. It was new to look at and in excellent condition, but when she contracted pulmonary tuberculosis and died, the infection was traced to the wrap which had once been the property of a patient

who had died of consumption in Simla. This story is being repeated in many Indian homes almost every day.

VI. Psychic Factors :—The mind is the most important adaptive mechanism in the human body. It assists the body to adapt itself to its material environment. The entire history of the development of the human mind is to secure more comfort, better living, and greater safety for the human race. Disease is the failure to a greater or less degree of adaptation between the living organism and its environment, which may be natural or man-made. During the period of his existence on earth man has created an entirely new environment for himself. He has become civilised and lives in cities and houses artificially heated or cooled. This artificial and enclosed environment has carried with it inseparably the mycobacterium tuberculosis. It has become a part of man's environment. Mind looks after the interests of the body and keeps it protected against tuberculosis. The process of the mind's looking after the body is delicately balanced and easily upset by factors which civilisation has created for us—the psychic stress of modern life. Physical deterioration follows as soon as mind ceases functioning at its best. When the mind ceases to care, body suffers. Part of a normal mental equipment consists in that interest in life that maintains vitality, that poise and peace required for proper nutrition, the impulsive desire for food, relaxation and exercise. To form and maintain these habits properly requires a thoroughly wholesome bringing up, and a well-balanced life. Maladjustment in work, social and emotional life easily produce upsets which undermine the resistance of the body. Thus there are any number of cases where psychic disturbances such as long continued mental conflict, excessive fatigue or emotional situations from which there is no escape have produced pulmonary tuberculosis. Tuberculosis met with in better classes of people, who are otherwise protected from other predisposing factors, are those whose minds and bodies have parted from the ways of co-operation and co-ordination.

Organo-therapy by ingestion is useless owing to Katabolism. Thyroid extract is an exception dependent on thyro-glossal duct. Absorption of pituitrin from under the tongue may also be regarded as a developmental exception, otherwise the administration of glandular products by the mouth is futile. *The Prescriber*, May 1939.

TUBERCULOSIS NOTES

Opening of Perundurur Sanatorium

[Perundurur is a small village in Coimbatore District, Madras, situated under ideal surroundings and suitable for a tuberculosis Sanatorium. The Sanatorium opened by the Hon. Dr. T. S. S. Rajan on April 16, is due entirely to the beneficent activities of the public under the auspices of the Coimbatore District Association, and as he had pointed out it is the first indigenous effort on behalf of the people by the people themselves. Dr. Frimodt Moller who spoke after the Minister, pointed that Madras Province was leading in the Anti-tuberculosis Campaign and that it was due to the present Government of Madras. Press extracts from their speeches made on the occasion are given below. Ed., I.M.J.]

FIRST INDIGENOUS EFFORT

Dr. Rajan, in the course of his speech, said that this was the first indigenous effort on behalf of the people of this country, an effort which was meant to relieve suffering and which had had very good response from the people of this district and outside. The land where the institution was located was, in his opinion, very eminently suited for the purpose for which these buildings were put up. These buildings, though costly in a way, had been designed to allow plenty of light and fresh air, which perhaps more than anything else played a very important part in the cure of the disease of tuberculosis. One would wish in a poor country like ours that such costly buildings should as far as possible be minimised and the amount invested spent in actual relief as such. But in every undertaking buildings had got to be built and such initial expenditure had to be incurred.

Dr. Rajan said he was glad to hear that the Government had come to their help and more was expected of them. While he was prepared to give what Government could save and afford to give, he was getting nervous over the proposal. (Laughter.) For this was the first tuberculosis institution started by a district association—and there were 24 districts—and if every district would start a Sanatorium and approach the Government for half grant he was naturally nervous not of the figure, nor of the money but of approaching the Finance Minister for funds. (Laughter.) Those who had watched the financial condition of this province would not have failed to notice the straits to which the Government had been driven as a result of very many causes, most of which they were aware of. They also knew that the Government was obliged to do very many unpleasant things by way of increased taxation to enhance their resources. The Government had to pool their resources as much as possible. They had no other resources apart from the revenue which the people gave them. And if every institution

would demand half grant, well, they could imagine how much the Government would have to earn before they were in a position to satisfy the demands on them.

NEED FOR TACKLING THE DISEASE

Due to the accelerated pace of tuberculosis relief inaugurated by that noble lady, the Vicereine, continued Dr. Rajan, the Government would have to meet in a large and wide measure the demand for relief and if Government found it difficult to meet the demand of one institution like this, their fate indeed would be hard. Therefore, with the advent of more help, with the advent of more institutions, the disease which till now had not such amount of public attention naturally loomed large, in the eyes of the public. Perhaps one would think that the institutions themselves had increased tuberculosis, but that was not true. Increased avenues of service, better methods of spotting the disease early, and better equipped medical service and also, unfortunately, the deteriorating economic conditions had contributed both to the incidence of the disease as well as to the early diagnosis of it. Therefore if in the past, people had not known that there was so much tuberculosis in this country, it was due to their ignorance of its existence. The term tuberculosis had been mentioned in the earliest of their books and it had been considered as perhaps the king of diseases, thereby meaning a disease which took perhaps the largest toll of human life. The tragedy of the disease was that in its slow onset, it took man more or less unawares and it carried its work till perhaps the man reached a stage when help was almost next to useless. If tuberculosis was to be tackled and that effectively, it was really a field for his friend, Col. Ganapathi, who belonged to the preventive side of medicine. Tuberculosis relief was good in its own way, but the greater good would be to see that tuberculosis did not prevail. Those of them who had knowledge of medical relief in this country, would know that the provision for tuberculosis relief was still meagre compared with the prevalence of the disease itself. Therefore an institution started under such good auspices not only required the support and sympathy of the people and the Government, but would also serve as an object lesson to many other similar institutions that were sure to crop up in this country as knowledge about the prevention and cure of the disease spread. He was glad it had been possible for the Prime Minister to be here if not for anything else at least to show that this Government

[JUNE, 1939]

TUBERCULOSIS NOTES

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was fully conscious of the exacting nature of the disease and that on their part they were willing to show and to give that amount of sympathy which a people's Government could give to the relief of the suffering people of the land. His sympathy as an individual and as a professional man was with the institution and his sympathy as Minister for Public Health had been more than once mentioned both in private and in public. And with regard to the demand that had been made, he would, along with their Governing Body, pray for greater resources to the Government, so that they might be in a position to answer the demand and the calls that had been made upon them.

PIONEER WORK AT MADANAPALLE

In this connection, Dr. Rajan observed, he could not forget to make mention of the splendid pioneer work that had been done in this country for the first time by the tuberculosis mission working at Madanapalle. Dr. Frimodt-Moller's life-work with regard to that institution was a symbol of effort and service for their people. The speaker was glad that Dr. Moller had shown his sympathy by being present here. He was equally glad that his friend, Dr. Jayaram, who, in his own way, had devoted his time and life to tuberculosis relief in the neighbouring State of Mysore had found it possible to be here in their midst now. As a practitioner, the speaker had sent his patients to both Madanapalle and Mysore. But unfortunately he was not in a position to send his many patients to this Sanatorium at Perundurur. But he was now in a position to send all tuberculosis patients of the province to this Sanatorium. Even while he was getting into the car near the railway station that morning, an old friend of his caught hold of him and asked him to get a patient admitted into this Sanatorium. It simply showed how much need there was for such institutions, not one or two but many more. He would rather wish that while they worked for the cure of tuberculosis they should also work, equally, perhaps even better for its prevention to the extent possible. And with a climate like that of Coimbatore, which was considered very dry and healthy it was certainly possible to eradicate tuberculosis provided the many causes that gave rise to tuberculosis were sufficiently tackled. They were partly educational but mostly economic. He would put in the forefront of all efforts financial relief. Next he would put education of the people with regard to correct standards of dietary, which, if properly observed and

judiciously conducted, would prevent tuberculosis finally.

AFTER-CARE CLINICS

The Madanapalle Sanatorium, the Minister continuing said, had led the way in all things relating to tuberculosis, had also developed the idea of tuberculosis clinics and they were now running a small clinic in their midst, which was fairly self-supporting wherein these decrepits—economically they were, for a man who had once gone through the fire of tuberculosis was not exactly the same old individual—were taken care of and the recurrence of the disease prevented. Therein came the field for after-care of tuberculosis disease. In England there were what were known as Public Health Settlements, with which the Vicerene had been so interested. They would see that as many as three to four thousand people were settled in these colonies for post-tubercular treatment. That was a development which had to take place in India, though it was started on a small scale at a Sanatorium. He did not think the date was far distant when Mr. Ramalingam Chettiar would again stand up and ask for more funds not only for tuberculosis institutions, but also for clinics. Therefore, it was not a question of funds. The more they earned the more they would have to pay and Coimbatore developed at a much faster rate than any other town. He hoped the millionaires of Coimbatore would grow into multi-millionaires and this institution would become a huge one, perhaps competing with the institution at Madanapalle, which was the parent institution for all anti-tuberculosis work developed in this country.

SOUTH INDIA LEADING IN THE CAMPAIGN

Dr. Frimodt-Moller, Superintendent of the Madanapalle Sanatorium, next addressed the gathering. He said that the opening of this Sanatorium came at an opportune moment just when the question of tuberculosis was going to be solved all over India. He was very glad to see what could be done and what had been done. Nowhere in the world could people expect the Government to tackle the question of tuberculosis. No Government in the world had done or could or would do it. Government could help but it was the people who had to tackle it and protect themselves against the spread of the disease. Therefore, it was a very great thing that this institution had come up and that with district effort. He also commended the way the people of this district had responded. It was unusually encouraging, he said, and it ought to be copied all over India. (applause.) Indians were a charitable people.

He hoped Government would give at least what it had been giving to Madanapalle. Dr. Moller then congratulated Dr. B. S. Viswanathan, medical officer in charge of the Sanatorium, who was trained at Madanapalle for the splendid work he would do.

The speaker asked why rich patients should not come to the help of poor patients. In Western countries, including the United States, where the death rate from tuberculosis had fallen, most of those countries started their campaign with institutions and then went for propaganda and education through which they were able to show that it was possible to do something with the disease. He hoped this institution would be able to make a lot of survey of tuberculosis in this and neighbouring districts to find out where clinics ought to be located, in order to be of the greatest benefit to as many sick people as possible and so help to prevent the spread of the disease. There ought to be special examination of schools and hostels where people came together. That could be done only by institutions, both clinics and sanatoria. He hoped this Sanatorium would be leading in the campaign against tuberculosis in South India. The Madanapalle Sanatorium owed its reputation very much to his Indian colleagues and staff, but for whose noble co-operation they could not have achieved much.

NEED FOR AFTER-CARE COMMITTEES

One of the greatest things in the prevention of the disease, continued Dr. Frimodt-Moller, was what they called After-Care Committees, which helped poor people in their homes with food or money. They also found work suitable for the men returning from an institution, so that those men could continue to be well. Colonies which had been mentioned were a link with these After-Care Committees. He hoped Coimbatore District, which was so much in the front in so many things, would start the first After-Care Committee and run it as a model for the rest of India. The Madras Presidency was leading in the anti-tuberculosis campaign. It was due to the Government of Madras. The present Government had shown their sympathy and willingness to do all that they could in this matter. The people of South India had more understanding of the problem of tuberculosis than he had met anywhere else. Therefore, he hoped that the Madras Presidency would always lead in the campaign against tuberculosis. With these good wishes for the campaign in South India and particularly for this institution he expressed his joy at being able to be present here on the occasion.

Nature is the best healer

He is the best doctor who treats his patient by helping nature. The painstaking research in medical science mostly aim to unearth the underlying changes under varying conditions of disease.

When we know how nature is working to cure a malady we know a great deal, nay in fact we know all, and in all ages the doctors' ambition has been to assist Nature.

In all inflammations nature tries to reduce pain and swelling etc., by greater vascularity of the part leading to redness and increased production of heat, thus bringing forth near the inflamed and ulcerated tissues the maximum amount of defensive curative substances already flowing in the blood. It is the composite action of all these defensive curative substances brought in a comparatively greater amount to the inflamed or ulcerated or septic part that assists healing.

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Biphlogiston is issued in non-corrosive metallic containers of different sizes. Except in cases of burns it is generally applied over the affected part as hot as the patient can bear, covered immediately with a liberal supply of absorbent cotton and bandage. It can be allowed to remain as long as it does not easily peel off (usually 12-24 hours).

ADVT.

FOREIGN MEDICAL NEWS

Our London Letter

(From Our Own Correspondent)

MEDICAL SERVICE IN NATIONAL EMERGENCY

Hope-Well-Ash and others write in the *British Medical Journal*, April 15, 1939, that in order to meet a possible national emergency, a rapid and efficient organisation of the medical profession is of paramount importance. They urge the creation of a Civilian Medical Service based on the entire medical personnel of the country to be organised and put in training on a salaried basis. They point out the following advantages of such a scheme:

- (1) "It will give the population of the country as a whole a good and efficient service.
- (2) It safeguards the interests of all medical practitioners
- (3) It is efficient from an administrative point of view.
- (4) In peace-time it will cost the Government the minimum amount of expense, and in war the cost should compare favourably with any other form of organisation for supplying medical and surgical aid to the community.
- (5) All construction work and building will have a peace-time use which will benefit the community in any event."

It is not known how far the Ministry of Health would be agreeable to such a scheme, but there is no doubt that unless such a one is adopted medical services during war time would be very difficult of quick mobilisation.

NEUROGENIC ORIGIN OF PEPTIC ULCERATION

Dr. Ronald Edwards, speaking at the Liverpool Medical Institution on March 16th, maintained that the increasing incidence of duodenal ulcer is due to the increase of strain inseparable with modern life. This, he said, would bring into prominence the important role which psychic factor plays in the aetiology of peptic ulcer. Hyperchlorhydria is constant in duodenal ulcer and produces duodenitis followed by ulceration. This is due to excessive secretion of gastric juice and such hypersecretion can be produced experimentally either by direct action of histamine on gastric glands or by stimulating the vagus. The lecturer said that he had studied the effects of the action of vagus on cutting it at various levels. Though in the normal healthy animal the diminution of the flow of acid from the stomach after the section of vagus was slight, he believed that section of vagus on human beings with hypersthenic gastric diathesis might remove the higher cerebral control to the secreting area of the stomach, reduce the excessive acidity, and so allow the ulcer to heal. According to him, the anterior branch of the vagus before the origin of its pyloro-hepatic branch and the posterior branch below the branch to the coeliac ganglion should be divided. The operation, he concluded, had proved perfectly satisfactory in a series of animals, but its clinical value could only be tested by performing it on patients.

Our German Letter

(From Our Own Correspondent)

FATE OF DIABETIC PATIENTS

Dr. Kestermann and Dr. Schuwicht have examined the fate of the diabetic patients who had been treated in the Medical Clinic of the University of Marburg (Lahn). The results of their investigation follow here. The majority of the diabetic patients were men. They amounted to 56.9% of the total. Men were prevalent among diabetics up to 50 years of age, while the number of men and women was about equal among older patients. Clinical mortality was 7%, mortality in coma diabeticum was 2.8%. All patients who died in coma, were admitted to the clinic very late, in no case earlier than 8 hours after the coma had started. The average duration of diabetes among those diabetic patients who died in the clinic, was 3.9 years, this is about the same duration as in the pre-insulin period. The average age at death was 53.2 years as against 44 years in the pre-insulin period, diabetic patients grow older today.

The authors made a check-up of the diabetic patients some years after they had left the clinic. 29.5% of these patients had died. The most frequent cause of death was decompensation of the circulation, the most frequent but one was coma diabeticum. Of the surviving diabetics 30% keep a strict diet, 58% a moderate diet, 12% no diet at all. Of the diabetic patients who left the clinic with continued insulin treatment, 64% injected insulin permanently, 9% temporarily and 10% had no insulin medication at all. 21% of the patients who had left the clinic with insulin medication, had died. Of the surviving diabetics, 70% are entirely free of complaints and capable of work, 20% do not have their full capacity to work, and 10% cannot work. The average age of diabetics who died at their home, was 50 years. The average duration of the illness of those patients who died at their home, was 5.6 years: 4.5 years in the case of patients who had no insulin, and 6.5 years for patients who received regular insulin treatment.

TRANSURETHRAL PROSTATIC RESECTION

A survey of the use and usefulness of transurethral prostatic resection was given by Th. Hryntschak to the Vienna Medical College of Physicians. The fundamental difference between prostatic resection and prostatectomy is that the whole hypertrophy is enucleated and removed by prostatectomy, while prostatic resection does remove only those parts of the hypertrophy which cause the prostatic symptoms. Both methods are supposed to effect micturition without any retention of urine. The advantage of electric prostatic resection is that no external incision is needed, the patient can get up after 24 to 48 hours and consequently there is much less danger of dysfunction of lungs, circulation and intestine. There is still the danger of thrombosis but it seems to the author to be less frequent than in cases of prostatectomy.

Every prostatic patient who has a retention more than 100 to 150 cc urine, must be treated with one of those two methods. The younger the patient, the better his general condition, the more is he suited for prostatectomy. All other cases are suited for electric resection. In doubtful cases the size of the hypertrophy will decide the issue. The smaller the obstructing parts of the hypertrophy, the more suited is the case for resection, because certainly one single treatment may produce here the necessary success. But larger hypertrophies need frequently several treatments with the method of resection, and this is one of the disadvantages of this method. Mortality of resection is rather lower than that of prostatectomy and a large part of the patients is not able to endure a prostatectomy.

Our American Letter

(From Our New York Correspondent)

INCOMES OF DOCTORS AND DENTISTS

Of 41 million gainfully employed persons in 1936, approximately one-third of a million, or 0.8 per cent, were independent practitioners in the medical, dental, legal and accounting professions. The total net income of these four groups was about 1.5 billion dollars, which constituted 2.4 per cent of the total national income paid out.

The estimated average net income of these practitioners was \$ 4,468, as compared with an average estimated income of \$ 2,333 for salaried employees in manufacturing, mining construction, and selected transportation industries, and a per capita income of \$ 1,244 for employees in all industries. Surveys by the United States Bureau of Foreign and Domestic Commerce in 1937 (except for dentists in 1935) show that the average net incomes of independent professional practitioners were as follows.

Profession	Average net Income							
	1929	1930	1931	1932	1933	1934	1935	1936
Medical (all practitioners)	5,298	4,687	4,065	3,148	2,909	3,310	3,629	4,143
Medical (general practitioners)	4,701	4,084	3,603	2,790	2,615	2,964	3,231	3,673
Medical (specialists)	8,314	7,734	6,402	4,964	4,397	5,112	5,636	6,521
Dentistry	...	...	...	2,778	2,495	2,780	...	...

A continuous and precipitate decline in the average net income from 1929 to 1932 with a second but less acute reduction from 1932 to 1933 was obvious in each sample of the professions under review. In 1936 the average net income of reporting independent practitioners in the medical profession ranged from \$ 925 after 1 year of experience to \$ 3,693 after 7 years of experience.

The average net income of doctors was

after 1 to 2 years of experience	\$ 1,614
" 3 to 7 "	3,229
" 8 to 17 "	4,930
" 18 to 27 "	4,983

after 28 to 37 "	3,717
" 38 to 47 "	2,525
" 48 to 52 "	1,600
Over 52 years	678

TRICHINOSIS

Trichinosis has infested 17,000,000 persons in the country and resulted in several thousand deaths annually, according to Dr. Thurlow C. Nelson, Professor of Zoology at Rutgers University. Particularly disturbing, Dr. Nelson told at a conference of the Metropolitan Health Officers Association, New York, that it is a fact that the medical profession as a whole does not recognize this parasitic infestation but writes down a diagnosis of typhoid, intestinal flu, pelurisy, or may even operate for appendicitis. In all, some sixty diseases have been confused with trichinosis.

Dr. Nelson explained, however, that little blame could attach to the medical profession because the temperature curve of trichinosis closely paralleled that of typhoid fever and that muscular pains were similar to those of rheumatism. Findings of the United States Public Health Service combined with results of studies by independent scientists, Dr. Nelson said, form a mass of evidence which cannot longer be ignored. Of the pork consumed in this country 30 per cent receives no Federal inspection whatever. Of the 70 per cent which comes under Federal supervision only the pork which is intended to be eaten without cooking is submitted to special processing such as refrigeration at 5 degrees Fahrenheit for twenty days.

PROBLEM OF THE REFUGEE PHYSICIAN

According to material obtained through Government agencies, alien immigrants describing themselves as physicians have entered the United States during each year since June 1930 as shown in the following table.

Fiscal Year Ended June 30	From All Countries	From Germany—Austria		Physicians Listed as Jewish
1931	329	16		38
1932	259	23		34
1933	187	8		41
1934	353	166		168
1935	304	104		137
1936	462	253		273
1937	533	286		310
1938	738	365		475

During the four months July to October 1938, 482 alien immigrants who described themselves as physicians entered the United States. Of these 390 were Jewish physicians. Immigrant physicians from Asia increased from 13 in 1937 to 33 in 1938, the number arriving in the latter year coming from China, 10, India, 1, Palestine, 20 and Syria, 2.

In the Journal of the American Medical Association six distinguished leaders of American medicine (Edsall, Boston; Hartwell, New York; Longcope, Baltimore; Minot, Boston; Naffziger, San Francisco; Phemister, Chicago) urged the medical profession to co-operate with the special committees that have been set up in New York and

(Continued at foot of next page)

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INDIAN MEDICAL NEWS

(From Our Own Correspondent)

DIGITALIS PREPARATIONS

That a large proportion of digitalis preparations sold in India is below par in quality, is a recent finding of the Biochemical Standardization Laboratory, Calcutta, which since its inception nearly two years ago, has been making an all-India survey of the quality of medicinal preparations for which definite and recognised standards of comparison are available. The laboratory strongly urges that some form of State control over drugs like digitalis should be established without undue delay. It also further appeals that, since on the quality of the drug depends the difference between life and death, strict precaution should be enjoined regarding its storage, preparation and distribution. It suggests that digitalis tinctures more than a year old should be re-tested for their potency, and if found below par, immediately withdrawn from clinical use. Of the 100 samples of digitalis preparations analysed by the Laboratory, as many as 87 were found below 80% in strength compared to the International standard digitalis tincture, and 57 were below 50% potency. It is now generally recognised that the glucosides of digitalis, on which its clinical activity depends, deteriorates at a fairly rapid rate when stored in high temperature, and not unnaturally, therefore, the hot and humid climate of India may bring about a rapid deterioration of all digitalis preparations, both local and foreign. The physicians should hence be careful in selecting digitalis preparations.

ANTI-TUBERCULOSIS ORGANISATION

In a statement on the Anti-T. B. Fund, Her Excellency, the Marchioness of Linlithgow, expresses her grateful thanks for the generous response

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Boston for helping in the refugee physician situation. Various suggestions have come to the American Medical Association urging the establishment of a special committee to handle this problem. Thus far the only action taken by the House of Delegates has been a recommendation to the state boards of medical registration that, in the case of foreigners, graduates of foreign institutions, citizenship be required for license to practise. The right to regulate the practice of medicine rests with the individual states. The letter of the six leaders of American medicine pointed out, that in the field of general practice and in the specialties also numerous openings exist for which it is difficult to find qualified American physicians; for example, poorly paid full-time positions and practices in rural communities. As the Journal points out in an editorial: if any of the committees can undertake to make a survey to locate such openings, a certain number of the refugees can be absorbed with a minimum amount of disturbance of the rights of American physicians.

to her appeal for funds, indicates that the appeal has secured the cordial support of all Provincial Governments and many States, and outlines the arrangements so far made for establishing anti-tuberculosis associations throughout India on a Central, Provincial and State basis. The final list of subscription reveals a grand total of Rs. 76.27 lakhs.

IRON LUNGS FOR INDIA

Privately managed hospitals and other institutions not under the control of Government which wish to take advantage of Lord Nuffield's offer to hospitals in the British Empire of "iron lungs", or respirators, should communicate without delay with the Government of the Province in which the hospitals or institution is situated.

The respirators are delivered free at Cowley Oxford, and transport and other charges have to be borne by the recipient. They are worked by electricity but in emergency can be operated by hand. Hand operation, however, is laborious and they are not recommended for use where an electricity supply is not available. Full details of the electric supply, whether A. C. or D. C. and, if A. C., the periodicity, are required.

It should be understood that the apparatus has to be maintained in perfect working condition and requires skilful handling.

Lord Nuffield's offer is not applicable to institutions managed by profit-making concerns.

STRIKE AT ORISSA MEDICAL SCHOOL

This serious strike of the students of the Orissa Medical School which has been going on for the last two months seems to have received no attention from the organised medical profession. That even the lady students participated in the strike and courted arrest and imprisonment shows the gravity of the situation. That a Congress Government should have taken such severe measures as closing down the school and prosecuting some of the student-strikers is a matter over which it is impossible to congratulate the Government. It must be noted that some of those who were imprisoned were the sons and daughters of the Congress M. L. As themselves. The Congress leaders have taken the question on hand, and we hope that all the arrested students will be released and that justice, will be meted out to them. The exact cause of the trouble is not known. Whether the students are right or wrong, it is necessary that the elderly statesmen of the Orissa Cabinet should temper justice with mercy, for, after all, boys are boys and their pranks should not be taken too seriously. And as I am writing (11th May) news is to hand that the Editor of the *Observer* was asked to pay a fine of Rs. 350/- for printing and publishing the organ of the Medical students during their strike.

INTERESTING VIEWS

Writing in the Health Number of the *Calcutta Municipal Gazette* (Ap. 15, 1939) Col. Chopra maintains that instinct has not such a prominent place in scientific nutrition and the cry of "back to nature" may do more harm than good. He

points out that evidences of malnutrition are not uncommon among wild animals and primitive people. It is therefore wrong to think that all will be well with us if we go back to nature and free ourselves from the sophistication due to so-called civilisation..... The human body of about 150 pounds weight contains roughly seven pounds of mineral matter..... The vegetarians can derive comfort from the thought that if hens are kept away from cock they can lay eggs which cannot develop into a chick. Such eggs are as good as vegetable as probably they feel as much pain as a vegetable plant throbbing with life would feel when cut.

Writing in the same Number, Col. Chatterji strongly argues that the working hours in India should be between 7 and 11 a.m. and 3 and 5 p.m. "Stretches of continued labour in the daytime between 10 in the morning and 5 in the evening (italics mine) are unsatisfactory hygienically specially in a country like ours where best work can be put, both as to quality and quantity, in the morning." He cites the example of the peasants and of the army where morning work is reputed to be satisfactory. He also quotes the change of office hours to morning in the Travancore State in South India.

Col. MacGilchrist, writing in the same Number on Tuberculosis, draws attention to the difference between "tubercular" and "tuberculous", "sanitarium" and "sanatorium". The proper word to use in connection with tuberculosis is "tuberculous"; "tubercular" does not signify any connection with tuberculous bacillus or tuberculous infection. "A sanitarium means a health resort, derived from the latin word *Sanitas* which means health. Sanatorium on the other hand is derived from the latin word *Sanare*, meaning to heal." A sanitarium therefore means a health resort, while sanatorium means a place or a house used for the purpose of healing the sick.

Drs. Choudhury and Basu, writing on *Copper contents of food in the Ind. Jour. Med. Res.*, April, 1939, concludes that the copper contents of nuts, cereals, pulses and fishes are found to have the highest amounts whereas cow's milk is low in copper. It is improbable, they write, that there is any serious copper deficiency in any adult mixed diet, but that low % of copper in cow's milk raises the question whether a trace of copper salt should be added in order to enrich the infant dietary.

Drs. Bagchi, Ganguly and others writing on *Lead in human tissues* in the same journal, say that lead is present in almost all human tissues in various quantities except in the ovaries. Testis, however, contain quite an appreciable amount.

Discussing the action of leucopoietic drugs in the same Journal. Dr. C. R. Das Gupta points out that leucocytosis may be due to (i) redistribution of circulating leucocytes, (ii) mobilisation of preformed reserves in the bone marrow, and (iii) maturation of granulocytes. Only transient leucocytosis, due mainly to redistribution and partly to mobilisation of leucocytes, was observed after single injection of pentnucleotide, sodium nucleinate, liver extract, histamine, adrenaline, acetyl-choline and related

substances. There was no evidence that liver extract or pentnucleotide can accelerate the formation of white cells in health, even though injections were frequently repeated. Colchine, however, stimulates the proliferation of cells in the marrow but the toxic effects of this drug outweigh its stimulant properties.

MISCELLANEOUS NEWS

In view of the St. George's Hospital, Bombay, being closed down by the Government for reasons of economy, the European community is organising a hospital contributing scheme in order that the community may have their own hospital facility. This hospital was the one hospital in Bombay used largely by the Europeans.

The recorded attacks and deaths from cholera in British India during 1938 are 3'23 lakhs and 1'58 lakhs respectively. The worst affected province was the U. P. with 94 thousand attacks and 43 thousand deaths.

Col. Jolly, I. G. C. H., Burma takes the place of Major General Bradfield as the D. G., I. M. S. The latter is appointed as Medical Adviser to the Secretary of State for India.

Under the auspices of the Rajahmundry Medical Association a meeting was held on May 10, with Dr. B. Ramachandra Rao, M. B., B. S., in the chair. Dr. D. V. Venkappa, President, A. I. M. L. A. spoke on current medical topics.

Dr. Venkappa dwelt on the importance of medical associations and congratulated Dr. T. S. S. Rajan, Minister for Public Health, on abolishing the L. M. P. course.

Referring to the honorary scheme, he stated that top-heavy services like the Indian Medical and Provincial Services should be abolished immediately. He urged that these services should be replaced by a State Medical Service recruited on a pay of Rs. 50 to Rs. 100 with annual increments. A few persons on a salary of not more than Rs. 500 per month should be appointed to supervise the work of the men in the State Medical Service. He observed that such a scheme would solve the bread problem of the 3,000 medical practitioners in the province and help the Government to increase the number of dispensaries in the province.

Dr. Venkappa criticised the Indian Medical Council Act. He observed that the Act was unfair and arbitrary as the bulk of the members of the profession were excluded from it.

Dealing with the Public Health Act, he said that it was a blessing both to the profession and the public.

There was a lively discussion on the subjects dealt with by the lecturer. Drs. P. Gurumurti, K. V. Swami, S. V. Rama Rao and others took part in it.

The President, in his closing remarks, related his experience of the honorary scheme.

In the presence of a large gathering of officials and non-officials. His Excellency Sir George Cunningham, Governor of the N. W. Frontier Province, performed on May 11, the opening ceremony of the Daddar Sanatorium in Hazara District.

REVIEWS AND REPORTS

Rheumatism by H. WARREN CROWE. John Bale Medical Publication Ltd., London, Price 12/6 net. Edition 1939.

This book deals with the treatment of chronic rheumatism and is based on the experiences of the author at the Charter House Rheumatic Clinic and with private patients. The author confesses that the treatment evolved by him is empirical since the aetiology remains yet uncertain. "We are in fact", writes the author, "free to adopt any treatment which fulfils two essential conditions: firstly, it must be of value; secondly, it must be safe." He is convinced that "in every case of rheumatism and arthritis there is an infective factor". In some of the more active forms of arthritis, the infective factor almost fills the picture; whilst in the most chronic forms, its presence is difficult to establish. Therefore, he advises vaccine therapy as a necessary adjunct to other methods of treatment, and in this he claims a fair degree of success. The book is essentially practical in outlook, details the technique of organisation of rheumatic clinics and gives a clear resume of his own methods. We heartily recommend the book to our readers.

Annual Report of the Union Mission Tuberculous Sanatorium, Arogyavaram, South India, for 1937-38.

The report records another period of successful working of the sanatorium. As a model institution of the kind it has no rival in India. And it is no wonder that it is so, ably guided as it is by Dr. Frimodt-Moller, Benjamin and others. It attracts patients from all parts of India. It is well equipped, and of course, efficiently manned. One of the recently developed features of the Sanatorium is its use as an educational institution for the training of doctors and medical students in all the aspects of tuberculosis work. This postgraduate training is bound to have fruitful results in future, as some of those, so trained, would be able to start sanatorium in other parts of India. Indeed, a few have already done so. We wish the Sanatorium every success it so richly deserves, and as time passes it will be gratefully remembered by those who have been saved, at this institution, from the clutches of a consuming disease. They would say with Shakespeare:

"O Lord, who lends me life, lend me a heart replete with thankfulness."

Daddar is a beauty spot in the Bhogarmang Valley and is at a distance of about thirty-five miles from Abbottabad.

Dr. Khan Sahib, the Premier, the hon. Bhanju Ram Gandhi, Finance Minister, the hon. Mohammad Abbas Khan, Minister for Industries, the Inspector-General of Civil Hospitals, Civil Surgeons of various districts attended the ceremony.

And the medical officers of the Institute may like-wise say, in the words of Pusey:
"By doing our duty, we learn to do it."

74th Annual Report of public Health of Bombay 1937

This is an exhaustive report covering about 200 pages and dealing with the manifold activities of the Public Health Department. The very comprehensiveness of the report, together with numerous statistics make it difficult for review, and certainly a lay reader—say a Bombay citizen—who want to understand the record of work done by the Public Health Department, will be entirely lost in the mazes of intricate statistics, and unable to make head or tail of the report. We would therefore suggest to the authorities to add, in future, a chapter at the beginning or the end giving a summary of the progress, plans and achievements of the Department, in an easily intelligible manner. This would make the Department popular among the people.

EXTRACTS

The Treatment of Urinary Infections in the puerperium.—J. C. CUTHBERT (*The Lancet*, September, 24 1938, page 720) writes: In 1933 Fuller and Colebrook reported on 54 cases of puerperal infection of the urinary tract treated in Queen Charlotte's Hospital by a ketogenic diet. In 24 the urine became sterile within seventeen days. During 1934-36 this method gradually gave place to the less troublesome and less unpleasant treatment with mandelic acid (Rosenheim 1935), and the results of this were in general similar or perhaps rather better. Since 1937, following the lead of Kenny, Johnston, and Von Haebler (1937), sulphanilamide has been used in a number of cases. The present paper sets out the impressions so far gained of these two latter forms of treatment; it does not attempt a final comparison of them.

Of the 353 patients admitted to Queen Charlotte's Isolation Hospital during 1937 with a diagnosis of puerperal fever or puerperal pyrexia, 199—i. e., 56 per cent of the total—were found to have a urinary tract infection either on admission or at some time during their stay in hospital. A most striking feature of this series was the infrequency of symptoms or signs pointing to involvement of the urinary tract. Apart from pyrexia, rapid pulse-rate, and occasionally rigors, urinary symptoms were absent in 78 of these patients (66 per cent). In the remaining 41, the most common complaints were as follows:—

Dysuria or scalding	...	...	18
Retention of urine	...	...	13
Delay in starting act of micturition	...	...	11
Frequency	...	...	9
Renal pain and tenderness	...	...	7

Often these symptoms were combined—dysuria with frequency being the commonest association. Particular emphasis should, I think, be laid on the significance of retention. Patients are often admitted to hospital. Sometimes even from nursing-homes and other hospitals, with distended bladders. On interrogation a clear history of partial retention of urine due to incomplete emptying of the bladder is obtained. Here are two extreme examples.

The first woman, admitted from private practice on the fifth day of the puerperium, had a history of "gradual enlargement of the uterus since delivery, possibly due to concealed hæmorrhage; micturition normal." On catheterisation 7½ pints of urine were withdrawn, and the abdominal swelling disappeared.

The other, admitted from a nursing-home on the tenth day after delivery with extreme mental confusion, was found to have distension below the level of the umbilicus. The distension had been recognised, and a flatus tube passed on several occasions in order to relieve it. In this instance 4 pints of urine were obtained by catheterisation. The possibility of distended bladder was indignantly repudiated by the nursing-home authorities, as "the patient had passed urine immediately prior to transfer."

No attempt was made to localise the exact site of the urinary tract infection in the 1937 cases, but there is little doubt that they resembled closely a series of 14 cases investigated in this hospital during 1933-'34. Mr. C. Frankau and Mr. M. F. Nicholls, who performed cystoscopy and ureteric catheterisation on these 14 patients (and to whom I am indebted for permission to refer to them), found that the infection was often associated with a congestive condition of the trigone, the remainder of the mucosa being of normal appearance. The conclusion drawn was that a proportion of puerperal bladder infections were due to trauma, in the form of local bruising of the bladder wall during parturition. In other cases definite evidence of involvement of one or both renal pelves was found. The results showed that in 5 out of the 14 cases, although the urine contained large numbers of bacteria, there was no pus and therefore presumably no true infection of tissues.

In the present series of 119 cases, pus cells were recognised microscopically in 89, and in the remainder bacteria without pus were present.

These findings show the necessity for caution in assessing the results of treatment in such a group of patients as are here under consideration. In about a quarter of the total a diagnosis of bacteriuria was made on bacteriological finding and the success or failure of treatment was judged on similar criteria. It may however be added that in every case where there had been clinical signs or symptoms referable to the urinary infection, these subsided as soon as the number of bacteria in the urine was substantially reduced.

The predominant causative organisms were found in the following frequency:—

Bacillus coli	...	...	64
Staphylococci (aureus and albus)	...	...	17
Streptococcus faecalis	...	...	15
Streptococcus haemolyticus	...	...	15
Others	...	...	8

In the majority of the cases culture yielded a pure growth of one or other of these organisms; in the remainder the infection was mixed.

Genital tract infection was commonly present, as evidenced by such signs as purulent discharge, uterine tenderness, and abundant growth of pathogenic organisms from high vaginal swabs. In only 10 instances was the genital tract considered to be free of infection and the urinary tract the sole source of morbidity. Organisms were isolated from the vagina as follows:—

S. haemolyticus	...	...	44
B. coli	...	...	37
Staphylococci	...	...	32
S. faecalis	...	...	14
Anaerobic streptococci	...	...	14
Others	...	...	37

A direct correspondence between the predominant organisms found in genital and urinary tracts was noted

in 57 cases; in the remaining 42 no such correspondence was noted. The genital tract infections showed a wide variation in severity, ranging from mild local infections to fulminating puerperal fever. The most constant finding was trauma of the birth canal in the form of perineal and vaginal lacerations. The treatment of the urinary tract infection in many of these patients received scant consideration as the genital tract infection was considered of primary importance.

Treatment.—Of these patients 79 were treated with sulphanilamide in the form of Streptocide (Evans), 21 with ammonium mandelate in the form of Mandelix (B.D.H.), and 6 with both drugs in separate courses. Another 18 cases were considered unsuitable for either form of treatment, by reason of concurrent anaemia or evidence of impaired hepatic or renal function.

During the early part of the year mandelic acid was the treatment of selection for uncomplicated B. coli urinary infections. Latterly it has been used particularly for infections by Streptococcus faecalis, for B. coli infections (when apyrexial) where anaemia suggested caution in the use of sulphanilamide, and for mixed infections by these or other organisms. It was administered in a dosage of 3 g. four times daily, with careful restriction of fluids to two pints daily. The pH was estimated every day and the aim was quickly to reach a level of 5.2 as being essential to successful treatment. When the drug was given in the form of mandelix this degree of acidity was usually attained within 48 hours without further measures, and the administration of ammonium chloride was seldom necessary.

During the latter part of the year the general outline of treatment employed was as follows:—

(a) Patients with urinary tract infections by B. coli, unaccompanied by genital tract infection by S. haemolyticus, were given sulphanilamide 3 g. daily (in three doses) for the first two days, then 2.25 g. daily. If after a week the urine had become sterile, the drug was discontinued; if it had not done so and there was no evidence of toxic effects, it was given for a further three or four days.

(b) Patients with a genital tract infection by S. haemolyticus plus urinary tract infection were given sulphanilamide, the dosage varying from 4.5 to 6 g. daily (in three or four doses) according to the severity of the infection, and being reduced gradually, as there was clinical improvement, to 3 g. daily, which was continued for a few days after the temperature reached normal.

With a view to the avoidance of cyanosis due to sulphæmoglobinaemia steps were taken to prevent any accumulation of intestinal gases during the period of treatment—e.g., by the use of vegetable laxatives or liquid paraffin (not sulphate aperients) and for the same purpose an enema was usually given before treatment was begun. The diet was light and did not include tiems rich in sulphur, such as eggs and onions. There was no restriction of fluids.

The results did not show any striking correlation between the pH value of the urine and the efficacy of this form of medication.

By both these forms of therapy colon bacilli were eliminated from the urine in an average of 6.5 days from the beginning of treatment. The cost of successful treatment averaged 3s. per patient with sulphanilamide, and 12s. with mandelic acid.

The follow-up investigation of these patients has unfortunately been very unsatisfactory. Many of them were referred, for their own convenience, to private practitioners and post-natal clinics. No particulars are available of their subsequent progress. About 40, who have reported either in person or by letter, are in good health without symptoms and have been discharged from

medical supervision. The urinary findings in 31 patients who did report here on one or several occasions 4–12 weeks after discharge were as follows. Of the 20 whose urine was sterile on discharge, in 17 it was still sterile on subsequent examination and 3 showed a recurrence of bacteriuria. Of the 11 who showed bacteriuria on discharge, in 6 the urine was sterile on subsequent examination, in 2 the bacterial count was reduced and in 3 it was unchanged.

Conclusions.—1. This paper reports on the treatment of 106 cases of puerperal urinary infection, most of which were complicated by a genital tract infection, and many by injuries.

2. Sulphanilamide was given to 79 of these patients, the dosage depending on whether a genital infection co-existed and whether it was streptococcal. In 25 out of 37 pure B. coli infections the urine became sterile within a week and in a further 6 it was sterile within a fortnight. Of 9 haemolytic streptococcal urinary infections 6 were sterile in a week and 2 more within fourteen days.

3. Mandelic acid was given in 21 cases. Of 12 pure B. coli infections 8 were sterile within a week and a further 3 within a fortnight; of S. streptococcus faecalis infections 6 were rendered sterile within a week and 1 within a fortnight.

4. In mixed urinary infections mandelic acid was sometimes employed to attack a residual bacteriuria after initial treatment by sulphanilamide. In 13 cases neither drug was given, by reason of concurrent anaemia or impaired function of liver or kidneys.

5. Sulphanilamide and mandelic acid have both proved effective in the treatment of puerperal B. coli infections of the urinary tract. Sulphanilamide was useful in haemolytic streptococcal urinary infection and mandelic acid overcame streptococcus infections that appeared to resist sulphanilamide.

Male Sex Hormones. KOCH (*Bulletin of the New York Academy of Medicine*, November 1938) after describing his various experiments to isolate the male sex hormones concludes as follows: (1) That at least six androgens have been obtained in pure form from human urine and animal tissues. (2) It is generally assumed that testosterone is the true male hormone elaborated by testis-tissue, although it is possible that different species may elaborate other forms of androgens. (3) The normal urinary forms of androgens in men are androsterone and dehydroandrosterone. (4) It is generally assumed that these may be derived from testosterone. (5) These are not excreted in the free and physiologically active form but probably as glucuronides. (6) These inactive forms are easily converted into free androsterone and dehydroandrosterone by acid hydrolysis. (7) Pure androgens have not been separated from normal women's urine, hence the exact nature is not known. (8) Androgens other than testosterone androsterone and dehydroandrosterone have been found in urine in cases of hirsutism. (9) Some of these new forms of androgens may be formed in the adrenals at abnormal rates, at times. (10) It is probable that the quantitative differentiation between various forms of androgens will help to explain some of the apparent discrepancies we now observe in diagnosis and urinary assays respectively.

Differential Diagnosis and Treatment of Pernicious Anaemia. JAMES ALEXANDER MILLER (*Bulletin of the New York Academy of Medicine*, December 1938) analyses 1000 cases of pernicious anaemia from the point of view of diagnosis and treatment. He writes that accurate diagnosis is easy because there are so many diagnostic features which are present with a great degree of constancy. These are: (1) Achlorhydria;

(2) Macrocytosis; (3) High colour index; (4) The response to potent anti-pernicious anaemia therapy; (5) Parasthesia; (6) Glossitis; (7) Leucopenia. He however, believes that macrocytosis is not diagnostic of P.A., since it may occur in other conditions such as chronic diarrhoea, anaemias due to helminthic infections, pregnancy, hæmorrhage, nephritis, etc. As regards splenomegaly, he writes that grossly enlarged spleen is strongly suggestive that the patient has some other cause than pernicious anaemia for the anaemia. The mortality in his series is 10% and he divides the fatal cases into two main groups: those who died of complications incidental to extensive involvement of the nervous system; and those who died of incidental and unrelated diseases. The first group, the author writes, still remains a challenge to the methods of treatment of P.A., and calls for an improvement especially in the management of the spinal cord lesions. The best results in the management of the nervous manifestations lie in the prevention of degenerative changes, rather than anticipating that they can be improved or eradicated after they have been once established. It may be that in the near future a specific deficiency will be found which accounts for the changes in the nervous system. Yet it may now reasonably be said that we can prevent the development or progression of spinal cord changes, if the red blood cells can be brought to a high normal level and maintained there constantly.

The general treatment of pernicious anaemia consists in the intramuscular administration of liver extract, and the results checked by frequent determinations of the R. B. C. count. There is a possible but unproven danger, the author concludes, that in using the highly refined products, some substances may be eliminated which are beneficial to the patient. Crude liver extract is known to contain the entire vitamin B complex and it is considered that this substance is related to the pathogenic changes in the spinal cord. There are, however, no data which indicate that the addition of vitamin B influences favourably either the blood or changes in the nervous system.

Recent Advances in the Common Diseases of Childhood. LEVIN (*Bulletin of the New York Academy of Medicine*, December 1938) confines himself to some of the newer pediatric procedures and describes them without going into details.

Infections of the Urinary Tract: A series of recent discoveries have continuously modified the treatment of acute pyuria in children. The high fat, low carbohydrate diets accelerate recovery by leading to the excretion of an acid urine with a high concentration of beta-hydroxybutyric acid which was bactericidal. This treatment was never popular because of the difficulty of persuading children to take these unpalatable diets. Helmholz was the first to demonstrate the value of such diets in urinary infection. Shortly after, Resenheim found that the results obtained with the ketogenic diet could be duplicated more easily by the administration of mandelic acid and its combinations, particularly elixir of ammonium mandelate, 1 to 3 doses four times daily after meals. This therapy should not be employed in the presence of impaired renal function or during fever. When the pyuria is due to urea-splitting organisms such as B. Pyocyaneus, the ammonium salts of mandelate should be replaced by sodium salts. The advent and increasing popularity of sulphanilamide led inevitably to its use in the treatment of pyuria in children and it has proved a potent therapeutic agent in all forms of acute urinary tract infections. Despite the proved efficacy of these newer forms of therapy, it must be recognised that persistent pyuria in a vast majority of young patients is associated with a congenital anomaly of the urinary

tract with consequent urinary stasis and secondary infections. Since many of those anomalies are amenable to surgical intervention a complete urologic study is obviously desirable, including intravenous urography, cystoscopy, and retrograde pyelography. Diastrophic crippling of renal function and atrophy of kidney parenchyma due to neglect of this condition are still all too common.

Pertussis: Sauer's special contributions are the method of preparation of vaccine by using haemolytic strains from freshly isolated cultures grown on a solid media containing human blood and advocacy of higher dosage. A number of other vaccines have also been proposed. The position of prophylactic vaccine is still debated, though professional opinion favours its extended use. "It is my belief" the author writes "that convalescent human serum injected in doses of 10 to 20 c.c. intramuscularly in infants and older sick children during the incubation period of pertussis may reduce the severity of ensuing symptoms."

Vitamins: *Vitamin A:* Identification of visual purple of the retina as a chemical sterol closely resembling vitamin A in chemical structure underlies the biophotometer for detecting night blindness, a manifestation of vitamin A deficiency. Wolbach has shown that lack of vitamin A is associated with wide-spread cornification and keratinization of mucosal epithelium and predisposes to infection. *Vitamin B:* This has been divided into at least six component fractions and the chemical structures of three have already been identified: B₁ as thiamin; B₂ as ribo or lactoflavin; and the P.P. or pellagra-preventing factor as nicotonic acid. Criteria of early obvious deficiency states are still largely guesswork and accurate information regarding levels of optional intake is still lacking. *Vitamin C:* The identification of vitamin C as cervitamic acid (a glycuronic acid), its storage in the adrenal cortex and other tissues, the use of calorimetric tests of the blood and urine for estimating the body reserves are well established. That sub-clinical deficiency states occur, without the definite manifestations of scurvy, has been demonstrated by the use of tolerance tests in which the cervitamic acid content of the urine is determined following the ingestion of a test dose of the vitamin. Although deficiency of this vitamin has been implicated in a variety of diseases including acute rheumatic fever, poliomyelitis, diphtheria, upper respiratory infections, pertussis, and symptomatic purpura, the causal relationship of lack of vitamin C has been generally accepted only in scurvy and dental caries. It should be mentioned that two other factors, designated "K" and "P", have recently been isolated from citrus fruits. These factors are apparently concerned with the coagulation of blood and with capillary permeability and appear to be separate and distinct from cervitamic acid itself. *Vitamin D:* Recent investigations of the fat soluble, anti-rachitic vitamin D have advanced our methods for insuring its universal consumption by growing infants and children. During the past decade Windhaus and Alfred Hess discovered the identity of vitamin D and irradiated ergosterol and Steenbock and Hess demonstrated that ultraviolet irradiation rendered a large variety of food-stuffs antirachitogenic. Coincidentally it was discovered that the liver oils of fish other than the traditional and time-honoured cod contained in many instances higher concentrations of both vitamins A and D, and a variety of such concentrates became available for distribution. Finally, the synthesis of crystalline vitamin D, calciferol in England and drisdol in this country, provided another product for human consumption.

Cryptorchidism: It is now recognised that lack of descent of testes may be due to mechanical interference with downward movement or inadequate stimulation by the gonadotropic hormone of the anterior pituitary. Since there are no conclusive means, at present, of differentiating between the two types, a clinical trial with hormone therapy is indicated prior to surgical intervention.

Vaginitis. The popularity of hormone therapy for gonorrhoeal vulvovaginitis with oestrogenic substance is ample evidence of the generally unsatisfactory results obtained with other forms of treatment. Treatment with the follicular hormone of the ovary, either from pregnancy urine or ovarian extracts, was introduced by Lewis for infantile vaginitis on the assumption that cornification of the vaginal mucosa by oestrogenic hormone would render it less susceptible to gonococcus. Since then, many observers have demonstrated its general, although not universal efficacy. The present aim of hormone therapy is to administer a dosage adequate to produce cystological changes in the vaginal mucosa and a lowering of the vaginal pH to 5.5 or less changes—which were not obtained constantly with earlier smaller dosage used. The recent experience of Lewis suggests that local application of this hormone by daily vaginal instillation of suppositories is probably more effective than parenteral administration.

Drugs in the Treatment of Bronchiectasis. LISLEY PUNCH (*Post-graduate Medical Journal*, March 1939) writes that a large number of drugs have been employed at one time or other with the object of modifying the morbid state of the bronchial mucous membrane and of preventing or arresting the decomposition of the secretion. Of these creosote is the most popular. Although there is no very conclusive evidence that it has any direct effect in the mucous membrane of the bronchi or its secretion it certainly is of great value in deodorising the breath. It can be administered in a variety of ways: (1) In gelatin capsules, dose 2 ms. three times a day. (2) One ounce of the B. P. mixture. (3) R/ Creosote — m. 2
Tr. chloroformi compositae — dr. ½
Glycerinum — oz. 1
Fiat mistura three times a day. dr. 1 in milk. (4) In cod liver oil: 2 ms. of creosote in 2 drs. of the oil, three times a day.

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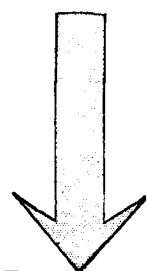
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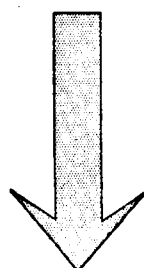
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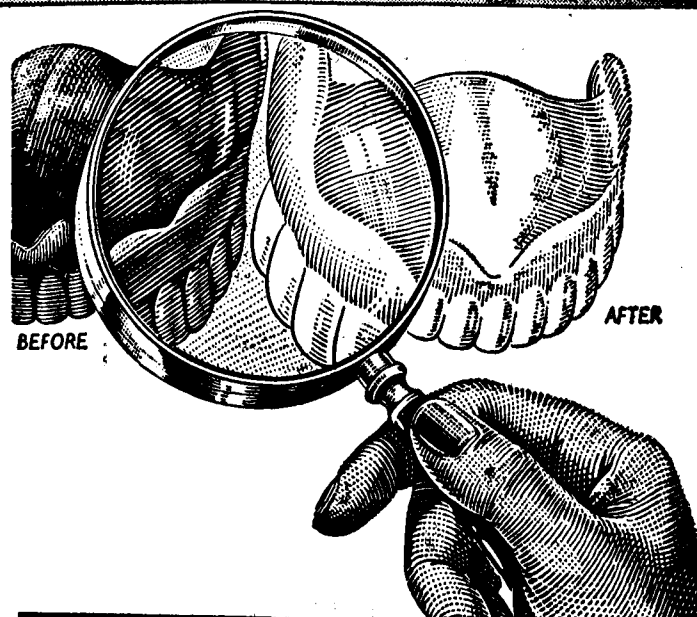
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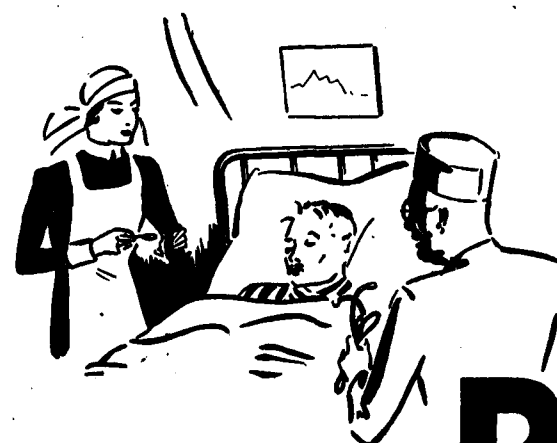
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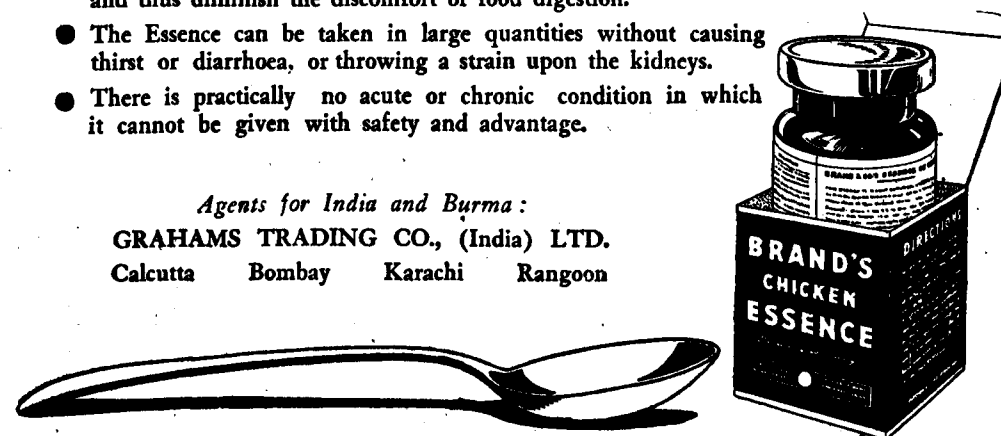
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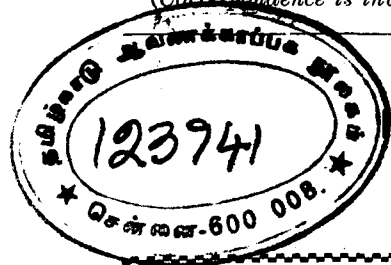
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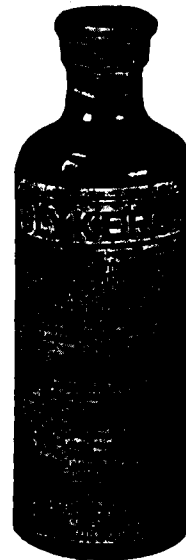
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