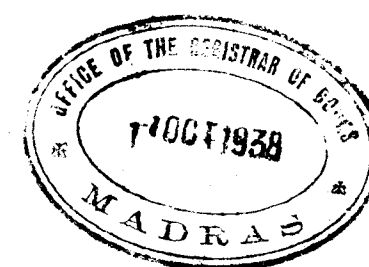


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SEPTEMBER, 1938

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VOLUME V

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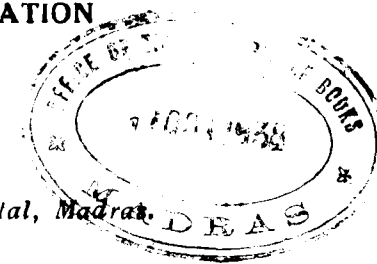
No. 6

**SOME OBSERVATIONS ON CHRONIC ULCERATION
OF THE STOMACH AND DUODENUM.**

BY

P. GOVINDA RAO, M.B.B.S.,

Honorary Assistant Surgeon, Government General Hospital, Madras.



Chronic peptic ulcers are a very common condition. On an average three cases of peptic ulcers are admitted on the surgical side of the General Hospital every day.

Most of these cases who come for operation belong to the agricultural classes. It does not mean that these ulcers are uncommon in the others. We meet this condition in students, in doctors too, but many of these prefer to remain with their ulcers rather than submit to operation and get relieved. Going through a consecutive series of cases, we find that the disease seems to be about twenty-five times commoner in men than in women. Probably the disease is much more prevalent in women than our statistics show, as they seek hospital admission much less commonly for these conditions than men. All parts of the Presidency seems to be equally afflicted by this disease. The only exception I could mention is the District of South Kanara from where I do not remember to have had even one case of chronic peptic ulcer. This is probably because of the fact that the dietary in this particular district is much richer in the necessary vitamins, and milk is an invariable accompaniment of the daily diet.

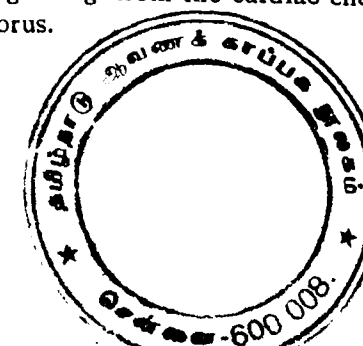
Pathology.—Discussing the pathology one could mention three types of ulcers:—

(1) The ulcers on the lesser curvature beginning from the cardiac end to within an inch or an inch and half of the pylorus.

(2) The Pyloric ulcer and

(3) The Duodenal ulcer.

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The ulcers on the lesser curvature are distinctly rare. Only four per cent of all ulcer cases operated belonged to this class; half of these cases again showed an additional pyloric lesion (2 per cent). The largest incidence for the unquestioned ulcer of the stomach is between the ages of 40 and 50 and above, although cases have been met with in young people, and two cases, aged 26 and 22, showed lesser curvature ulcers in addition to a pyloric lesion.

(2) *Pyloric ulcers*.—In the first half of my series of cases there were described as operation findings 57 Pyloric ulcers and 49 Duodenal ulcers. In the second half there were 34 Pyloric ulcers and 79 Duodenal ulcers. Recently I operated on about 15 consecutive patients who all had Duodenal ulcers. This inconsistency in the figures between the frequencies of Duodenal and Pyloric ulcers, I think, is due to the following reasons:—

(a) that not enough care has been taken in the earlier series in exactly noting the point of origin of the ulcer in relation to the veins of Mayo which mark the region of the junction of the stomach and duodenum.

(b) that many of these pyloric ulcers are ulcers in which the original site of occurrence is in the duodenum and the scar tissue spreading to the left involves the pyloric region. This is borne out by the figures of the age incidence of the pyloric and duodenal ulcers. No case of pyloric ulcer has been found in our figures before the age of 20 and the maximum incidence is found between the ages of 30 and 40 whereas for duodenal ulcers the frequency in the age groups 20 and 30, and 30 and 40 is about the same. One could infer from this age incidence that duodenal ulcers progressing for a long time before being recognised or giving rise to severe symptoms cause so much cicatrization that the pylorus is involved and this ulcer when exposed at operation is termed pyloric ulcer. Pyloric ulcers which could be definitely classified as such do occur, but if we agree with Joll, who writes that out of 914 cases operated he found only four pyloric ulcers, we should properly consider the so-called pyloric ulcers we have been discussing, in the category of duodenal ulcers.

Duodenal Ulcers.—If we accept to include pyloric ulcers as duodenal, 95 per cent of chronic peptic ulcers belong to this group. These ulcers occur in the first part of the duodenum from one to one and half inches to within 1/4 of an inch of the pylorus. Very frequently we find in these cases large cicatrized masses of scar tissue with associated stenosis of the duodenum and a consequent dilated and hypertrophied stomach. This condition occurs in over 40 per cent of all ulcer cases seen in South India (Somerville and Orr).

As I have mentioned before, only about 2 per cent of these cases of duodenal ulcer have an associated gastric lesion.

At operation a chronic ulcer of the duodenum shows a serosal surface which is thickened and whitish and if this surface is gently rubbed with a finger numerous fine red points appear; this stippling is due to the rupture of several thin-walled vessels which are present in the adhesions. This 'cayenne pepper' appearance as it has been called is useful in diagnosing a chronic ulcer from a healed one which does not show the stippling on rubbing. Chronic duodenal ulcers apart from their tendencies to cause adhesions to the gall bladder in front and the pancreas behind, in a certain number of cases heal spontaneously. These healed ulcers in the duodenum cause stenosis and hypertrophy and dilatation of the stomach. In the operated cases four per cent showed the healed ulcer.

Ætiology.—For all practical purposes since uncomplicated gastric ulcers are so rare we need only concern ourselves in this part of the country with the ætiology of duodenal ulcer. Duodenal ulcers occur most commonly (41 per cent) in the age periods of 30 to 40, less commonly, (about 25 per cent) in the age periods of 40-50 and 20-30. In about 3 per cent of the number, the ulcer is found before 20 and after 50. There were two patients in our group aged only 16. In the pathogenesis of chronic duodenal ulcer I would refer to only three factors (1) the infective (2) the dietetic and (3) the nervous factor.

The Infective Factor.—Septic teeth are an almost invariable accompaniment in cases of duodenal ulcer. In younger patients with no signs of obvious sepsis, carious teeth with associated root abscesses are present and these are the septic foci in such cases. Chronic appendicitis is another common septic focus, as, only too commonly, a patient giving a history of attacks of pain in the right iliac fossa later on complains of pain in the epigastric region with associated tenderness and rigidity showing the development of a duodenal ulcer.

The Dietetic Factor.—Duodenal ulcer is almost unknown in the Punjab where the average diet is said to be very well balanced, but in Madras districts where pepper water and rice are the mainstay amongst the agricultural classes the condition is rife. Again, researches by Somerville and Orr seem to show that chronic peptic ulcers are uncommon along the sea-coast towns in Travancore while very common in the inland towns, and they attribute this difference to the inclusion of fish in the dietary of the sea-coast

people. According to them, vitamin deficiency, especially of vitamin A is the cause of chronic peptic ulcers.

The Nervous Factor.—Inspired by the loss of three patients after operations on the base of the brain, who died from perforative lesions of the stomach and duodenum, Cushing drew attention to the relationship between peptic ulcers and stimulation of the Inter-brain. According to him, stimulating impulses from the parasympathetic centre in the Inter-brain go along the vagus (a parasympathetic nerve) and cause hyperchlorhydria, hypermotility and spasm of the muscles which might cause erosions leading to chronic ulceration, and if the stimulation is excessive to perforations. The parasympathetic centre is under normal conditions strongly affected by cortical or psychic influences, which might in some cases lead to hyperchlorhydria and later ulceration (Pavlov). In the agricultural classes who generally lead a placid existence, although this neurogenic theory may not be correct, the duodenal ulcer occurring in the doctor or in the thin active professional man may be due to this factor. Again, in the educated classes smoking might be a cause, as nicotine by paralysing the sympathetic synapses effects a vagus release acting in the same way as vagal stimulation.

EXAMINATION OF PATIENTS.

The history and duration of symptoms.—About half the cases in our series give a history of 1 to 3 years of symptoms; in a quarter of the number the period is between 4 and 10 years. A short history of less than one year is given in a few cases in a series of 200 cases in as many as 4 the duration of symptoms was only four months. In a small number the duration of the disease has been for more than 10 years and in one case of duodenal ulcer, aged 48, the pain had been present for about thirty years.

The progress of the symptoms.—Characteristically, the symptoms in chronic peptic ulcer are intermittent and later, when pyloric stenosis, or adhesion to the pancreas occur, the symptoms become continuous.

SYMPTOMATOLOGY.

(a) *Stomach Pain.*—is the symptom for which chronic peptic ulcers seek admission. The site of this pain in most cases is the epigastric region, although occasionally the pain may be referred to a spot either at the level of or below the umbilicus. Burning in the lower part of the chest is an occasional accompaniment and in cases of ulcers of long duration pain at the back is associated.

(b) This pain may be described as burning, boring or continuous dull pain. Although duodenal ulcer pain occurs typically two to three hours after food and shows the rhythm, "pain-food-comfort-pain", a great majority of these ulcers do not give any such typical time interval nor show the rhythm.

The only constant features are the onset of pain a variable time after food and, in cases where vomiting is present, the relief of pain after the vomiting. Induced vomiting which gives rise to relief and, is frequently resorted to, to relieve the pain, is characteristic. It becomes more common when the ulcer has been long enough to cause obstruction.

(c) *Appetite and nutrition* are good in the early stages, but later when pyloric stenosis occurs a loss of weight ensues as the result of vomiting and a distaste for food.

(d) Constipation is present and is aggravated in cases of pyloric stenosis.

Physical examination.—

(a) Examination of the teeth and the gums for signs of pyorrhoea is necessary.

(b) General form of the abdomen. In early cases of chronic peptic ulcer no particular changes are present. But in late cases with pyloric stenosis the abdomen may be scaphoid with fullness of the epigastric region and visible peristalsis.

(c) *Muscular rigidity and tenderness.* This is a very important sign and great care must be taken in eliciting and observing its presence. Invariably in cases of duodenal ulcer this rigidity and tenderness is present in the right side of the epigastric region, although at times it might be present in the middle line. Tenderness in the right iliac fossa must always be looked for; according to Somerville and Orr 73 per cent of cases show this tenderness.

Before going on to describe the further investigations it is necessary to mention that almost all of the cases in our series have been diagnosed as peptic ulcer only on their history, symptomatology, and physical signs, and out of the 250 cases, in only five cases there were no definite evidence of an organic lesion of the stomach on operation, a percentage error in diagnosis of only 2 per cent.

Two investigations, X-ray examinations and fractional testmeal, I would consider worth while in the young people, in the age period 20—30 and below 20. When testmeal results and Barium meal pictures show a rapid emptying and an associated duodenal ulcer, the treatment of the condition ought to be different.

Differential Diagnosis :

(1) *Functional conditions*.—In functional dyspepsia there is a history of abdominal discomfort rather than pain.

(2) *Appendix dyspepsia*.—There is a history of pain with no definite relation to food as also of attacks of pain in the right iliac fossa associated with vomiting.

(3) *Gall-bladder conditions*.—Cholecystitis and cholelithiasis by themselves may be differentiated easily from chronic peptic ulcers, but when associated with peptic ulcers, as occasionally happens, differential diagnosis might be difficult.

(4) *Chronic colitis*.—Reflex epigastric pain is a common feature of chronic dysenteric conditions, but a careful examination reveals a history of periodic attacks of diarrhoea or dysentery.

(5) *Epigastric hernia*.—A small hernia of this region might give rise to symptoms of a chronic peptic ulcer.

(6) *Ileocaecal Tuberculosis*.—In early cases this gives rise to reflex symptoms similar to that of duodenal ulcer, but can be diagnosed on careful palpation of the right iliac fossa when a tender mass can be definitely palpated.

(7) *Syphilis of the stomach*.—A rare condition.

(8) *Cancer of the stomach*.—A very short history and symptoms of rapid onset of pyloric obstruction with the vomiting of foul-smelling material all suggest cancer. Fractional testmeal and X-ray will help in diagnosis. In our series, only three cases out of 250 diagnosed as chronic peptic ulcers turned out to be cancer of stomach.

Complications of chronic peptic ulcer.—Acute complications are haemorrhage and perforation. Haemorrhage from a peptic ulcer is of interest from the point of view of its treatment, Meulengracht has treated 273 cases with 3 deaths with his new line of treatment whereas the usual rate of

mortality varies from 7 to 10 per cent. The main features of his treatment are :—

(1) a full puree diet consisting of 5 meals a day of non-irritating and easily digested foods.

(2) The noon meal consisting of soups, meats, vegetables and fruits and the others of bread, butter, gruel and milk.

(3) alkalies and iron three times a day.

Perforation.—In contrast with the previous complication, early diagnosis is important here; the earlier the diagnosis, the better the prognosis. Majority of our perforations come to us for treatment too late. A previous history of pain in relation to food, agonising pain in the epigastric region, obliteration of the liver dullness when the abdomen is not distended, and rigidity and tenderness of the abdomen are all helpful points in early diagnosis. It must be remembered that during the most acute phases of an exacerbation of a chronic peptic ulcer the signs and symptoms of perforation may be mimicked.

Treatment is suture of the perforation. Among the chronic complications, the most common and the most important is pyloric stenosis, which is treated by Gastrojejunostomy.

Treatment of Chronic peptic ulcers.—A few years ago when I read a paper on peptic ulcer I spoke about the superiority of medical treatment and about there being no necessity for surgery except in very rare cases. Experience has however shown that medical treatment is, on the average, very unsatisfying and a patient sooner or later comes to seek relief at the hands of the surgeon. Again, most of our peptic ulcers go on to pyloric obstruction and for this condition operation alone offers the best chance of relief. Needless to say, both medical and surgical methods of treatment must have as accessories the avoidance of smoking, alcohol, condiments and pickles and the removal of septic foci.

Surgical Treatment.—For gastric ulcers, that is ulcers on the lesser curvatures, the correct treatment is partial gastrectomy. For ulcers along the curvature very near the cardiac end where a partial gastrectomy is a very hazardous procedure gastrojejunostomy is the only possible operation.

For ulcers in the duodenum in which are included the pyloric ulcers, the treatment depends on whether the condition is associated with stenosis

or not. Fractional testmeal curves and Barium meal pictures help us in differentiating the two types. In the first type with stenosis Posterior gastrojejunostomy gives the best results. This is the common operation performed for the relief of chronic duodenal ulcer and although it is recommended that the ulcer be infolded or excised, in view of the fact that the ulcers in this part of the country are not so commonly liable to haemorrhage or perforation, probably the latter step could be avoided. The death rate for this simple operation is negligible (1 per cent or less). The chronic ulcers of the duodenum associated with rapid emptying of the stomach and a hurry curve as shown in a fractional testmeal are however not so simple a problem. A simple gastrojejunostomy in these cases give rise to a large percentage of recurrent gastrojejunal ulcers, and there is only one sure method by which the secretion of the acid gastric juice can be permanently reduced to a lower level than that at which peptic ulceration can occur and that is by partial gastrectomy entailing the removal of at least three quarters of the stomach. The main objection however to this procedure is the high mortality, "but if the operation is necessary it must be made safe, and I am perfectly certain that the surgeon who can produce a mortality of 1 per cent in gastrojejunostomy can show as low a figure for physiological gastrectomy" (Ogilvie, Lancet 1935).

Finsterer's method is the one generally employed where direct interference with the ulcer in the duodenum is avoided, the portion of stomach removed being that corresponding to 2" from the pylorus to 2" from the cardiac end along the lesser curvature. Somerville and Orr have adopted this method for their duodenal ulcer cases associated with high acidity and rapid emptying and their mortality rate has been as low as 1:3 per cent.

Anaesthesia for these gastric operations has been of three types. Of 200 cases, 6 cases were done under local anaesthesia as the condition of the patient did not permit either general or spinal anaesthesia. 34 cases were operated under general anaesthesia as their systolic blood pressure was below 90. All the rest were operated upon under spinal anaesthesia. For spinal anaesthesia we were using formerly 16 c.c. of a 1 per cent Novocaine, but in these cases if the operation was prolonged for more than 45 minutes the anaesthesia had to be supplemented with a general anaesthetic. I am now using 12 c.c. of a 1--1500 percaïne and the anaesthesia is perfect for one to one and half hours.

Of the post-operative complications in peptic ulcer cases, anastomotic or recurrent ulcer holds a very important place. It is very difficult to assess

the incidence, as many of our cases probably fall into other surgeons' hands when they get a recurrence of their symptoms. This complication is commonest after a simple gastrojejunostomy for cases of duodenal ulcers without stenosis, and Maingot's figures are from 6 to 8 per cent in such cases. The age period for our recurrent ulcers is lower than the European figures, and the younger the patient on whom a simple gastrojejunostomy is performed the more likely are his chances of an early anastomotic ulcer. The site of ulceration in most of the cases we have examined has been the line of anastomosis and the ulcer extends into both the stomach and the jejunum. One of the features noticed about these recurrent ulcers is the tendency they show towards adhesions to the colon, and during operations for separations of the anastomosis between stomach and jejunum the large intestine gets opened in many cases.

Pathogenesis of recurrent ulcer.—The infective and the dietetic factors continue to operate in many of our cases of peptic ulcers when they go back to their homes, and needless to say secondary peptic ulceration occurs. Technical errors in the performance of the operation, although it is said, may slightly increase the frequency of the lesion, are not the primary cause. The most important of these I would consider is the use of clamps. Although clamps are recommended in most operative surgery text books, one cannot be too careful with them, and the method used throughout in General Hospital of operating without the aid of clamps is to be highly recommended.

Pain, very intense and persistent and less influenced by the intake of food is the most prominent symptom of recurrent ulcer. Vomiting, often selfinduced, constipation and wasting are other symptoms.

The ideal treatment for recurrent ulcer is partial gastrectomy and that should be the object before opening any abdomen for a gastrojejunal ulcer. In cases where this is not possible on account of the weak condition of the patient or on account of wide adhesions a new gastrojejunostomy may be performed or the normal alimentary passage may be reconstructed where either the primary operation was needlessly undertaken or the ulcer is completely healed without any secondary stenosis.

Gentlemen, this is a very incomplete exposition of the vast subject of chronic peptic ulcer. I have only attempted to record some of my observations made during the course of some five years.

HONORARY MEDICAL SERVICE.

BY

P. GOVINDA RAO, M.B.B.S.,

Honorary Assistant Surgeon, Government General Hospital, Madras.

Honorary Medical Service consists of officers who volunteer their services in institutions (private or public) in return for the opportunities given to acquire skill and proficiency which they can utilize to treat private patients. This is not a new system. In Great Britain hospitals are largely run by Honorary Medical Officers and these are the pick of the profession and the authorities in their particular specialities.

In Madras, it was the Rajah of Panagal who started this scheme. The first move in this direction was, when the private practitioners agitated for the curbing of uncontrolled practice of the paid services they were told that if the Government prevented them practising, the public would lose the benefit of their hospital experience. It was to set right this state of affairs, where only the paid services had the opportunity of hospital experience, that the private practitioners were allowed as Honorary Medical Officers in the hospitals. These men, in spite of the limited beds, the paucity of assistance and various other pin pricks, worked and slowly but surely came to hold a place in the scheme of things. In Budget speeches, year after year, the Ministers talked well about the work of the honorary men. Too quickly it should seem, because the services had started getting alarmed and any time the question was raised why the honorary system should not be applied on a large scale, the reply came that the time was not yet ripe. The present Congress regime has completely changed this state of affairs. A widespread plan of honorary appointments supplanting in many cases the present stipendiary services is on foot, and the honorary service is at last coming to hold its place.

What are the advantages of this Honorary Medical Service to the individual who is giving the service, to the individual who receives it and to the State?

To the Honorary man himself service in a hospital gives the opportunity of skill and proficiency in a particular domain of surgery or medicine,

which he can practise outside to his financial benefit. Formerly the large majority of the independent medical profession had only one opening, the keeping of dispensaries and the doing of general practice. Gentlemen, because of the opportunities of Honorary Service, we have now amongst us, dermatologists, anaesthetists, E. N. T. men, venereologists, and surgeons and physicians, some of them of great repute. This opportunity is available in England and America and is now available here also. In this connection, it is refreshing to quote a speech in 1933 at an annual conference of the Trichinopoly Medical Association by the present Minister of Public Health who was a private practitioner.

"It is no sin if a young practitioner by his stirring merit in honorary service aspires to establish his reputation with the public and makes it pay. In fact, honorary service is meant for it." Again, in the same speech referring to Bombay where the rich commercial magnates have established a number of free institutions, he said, "the growth of an intelligent, strong and independent medical profession in that city is no doubt due to that fact. These endowed private hospitals have unhesitatingly utilised the free services of the practitioner and in turn he has made himself reliant, resourceful and reputed."

To the individual who receives the service the advantages are the availability of a man who has had a large experience in a particular line. The ladder-like ascent of the honorary man, first two years as a house surgeon, then at least five years as an honorary assistant surgeon, then only, a surgeon after all the experience and a higher degree indicative of special skill and the necessary amount of study, prevents any danger of a patient falling into the hands of a raw medical man. The needs of the paid services necessitate the transfer of men in service from place to place and from speciality, a danger to which honorary men are not subject to, as from the day they join in a particular speciality they stick to that particular branch, a factor which makes them safe for the individual who gets under their care.

Apart from the better professional work they might expect from the honorary medical men, the patients by an extension of the honorary scheme gain in another way also. Under the present state of affairs, more than half the money spent on hospitals is utilized for the pay of the Medical Officers concerned, an amount which will be saved if the Honorary System is introduced on a larger scale and legitimately and more usefully to the public diverted to better hospital equipment, more beds, the crying need of the day, more radium for the treatment of the enormous number of cancer cases, better diet for the patient and above all, on more hospitals.

To the State :—In this connection I can only quote again another part of the speech by the Hon. Dr. T. S. S. Rajan, the Minister of Public Health, which I have mentioned before, "There are not enough hospitals in the landand though nature finds her way by an enormously high death rate such a process neither redounds to the credit of the Government nor to the skill of the Medical profession. Till compulsory universal state relief is provided for, the only remedy lies in multiplying hospitals rapidly all over the land. The Government may provide more hospitals by reducing the expenditure in the present ones. This can be done by replacing all the paid staff with honorary men. That there are difficulties in the initial stages should not deter them in adopting this plan in its entirety at the earliest possible moment. In our Presidency the state has got an added responsibility in that there are not many philanthropic institutions, (the few institutions present are Missionary institutions) like in Bombay, in England and America, to come to its aid in relieving sickness and suffering".

What are the common fears regarding the introduction of the honorary system? That the hospitals will be used by these officers for their private patients. Private patients in hospitals, however, have been a feature not now only, but from the time hospitals were started in Madras. The chit system (a chit was given for admission into the hospital and to a particular ward in return for a consultation fee) was in vogue, long before the appointment of honorary medical officers to hospitals, and this procedure was the subject of questions more than once on the floor of the Legislative Council. The present Government wants to put an end to this abuse of hospital practice, and if they can concert measures to put it down in the public institutions, nobody will be happier than the honorary men themselves because the patients who can well afford to be treated outside will help the practitioners to get their legitimate living.

There is just one another point I want to touch upon before I close: That is the subject of honorary medical service as an opening for a newly qualified medical man. There is a feeling gaining ground that because paid services are closed, the only other course to adopt is to apply for an honorary appointment. Honorary service is not a substitute for unemployment. It should be meant only for those who could look after themselves until such a speciality is able to pay them, and they should have the urge in them to advance themselves academically. The Government, before appointing honorary medical officers, should also take this aspect into consideration. In rural areas, however, conditions may be different.

For the others, general practice will give a much speedier income and probably, in some cases, a better one. Private medical practice, except in a few instances has been very unremunerative because of the rivalry of service men allowed to practise, allowed to do insurance work, allowed to be referees for insurance companies (a part-time paid work for men who are salaried employees of the Government, a privilege which no other class of public servant can enjoy). On the other hand, engagement in any other trade or occupation is specifically debarred to men in the other services. The Minister of Public Health, the Hon. Dr. T. S. S. Rajan, however, has come to realise this state of affairs and replying to a deputation recently he stressed the fact that he had to consider the interest of the large majority of the medical profession outside the pale of the services (4/5 of them) and as such he had to stop the unrestricted practice of the salaried men. When these rules are passed, gentlemen, we hope the independent medical man will get a better and more prosperous future.

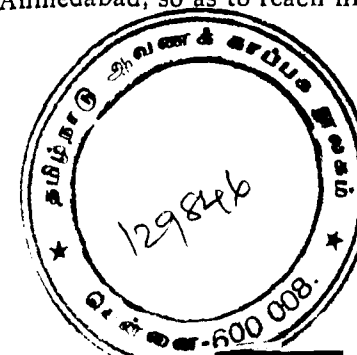
NOTICE.

NOTICE is hereby given that the subject for the Dr. Joseph Benjamin's prize of the value of Rs. 35/- (Rupees Thirty-five only,) for the year 1938, is ENTERIC FEVER and for the Dr. P. S. Ramachandraier's prize of the value of Rs. 25/- (Rupees Twenty-five only,) for the year 1938, is "INFANT MORTALITY—ITS CAUSES AND PREVENTION."

"The All India Medical Licentiates' Association's Gujrat Branch, Ahmedabad, invites a Thesis on PUERPERAL SEPSIS, its causes, symptoms, treatment and prevention. The best paper will carry a prize of Rs. 35/- (Rupees thirtyfive only).

All bonafide members of the Association can compete. Intending competitors are requested to write papers from practical point and lecture style, and the same should not exceed 1,000 typed lines or their equivalent. That the thesis papers be despatched to Dr. Jamiatram B. Desai, No. 52, Pritamnagar, Ahmedabad, so as to reach him on or before the 31st December 1938.

(Sd.) K. J. BHATT,
Secretary, Gujrat Branch,
Ahmedabad.



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NOTES ON PUBLIC HEALTH.

Issued by the Principal Information Officer, Government of India.

IMPROVING INDIA'S PUBLIC HEALTH.

PURE WATER : PURE FOOD : HOUSING : CONSERVANCY.

" AN AFFAIR OF MAINS AND DRAINS".

The total municipal public health expenditure in India during 1935-36 was over Rs. 4½ crores in an income of about Rs. 18½ crores, and, for individual municipalities, ranged from 16 per cent. to 41 per cent. of their total incomes, whilst in the case of district boards the figure was about 2 to 7 per cent. with a total expenditure of over Rs. 1 crore in an income of Rs. 19 crores. Expenditure on the three items of conservancy, water supply and drainage formed the bulk of public health expenditure, in urban areas the percentage of the total varying from 53 per cent. to nearly 93 per cent. In rural areas, the corresponding figures varied between 26 and 76 per cent. of the total.

This information is given by the Public Health Commissioner in his latest annual report.

The provision of a sanitary environment, says the Public Health Commissioner, forms the foundation on which alone the superstructure of public health can safely be built. The supply of wholesome water, efficient removal and disposal of refuse and nightsoil, the suppression of nuisances, public cleansing, improved housing and the inspection of food supplies—these are some of the basic requirements of a community if it is to maintain a reasonable standard of health.

PROTECTED WATER SUPPLY.

In India, too, the beneficial effects of introducing protected water-supplies are visible in a number of towns in Bombay Presidency where the death rates from cholera, dysentery and diarrhoea fell to about a third or even less in many areas.

There can be little doubt, says the Public Health Commissioner, that, if local bodies devoted the necessary funds towards the provision and maintenance of protected water-supplies, they would obtain more than an adequate return in terms of better health for the populations under their care.

At present, in this country, piped water-supplies are almost exclusively confined to urban areas. Out of 1,298 towns, only 250 or about 19 per cent. have been so far equipped with this primary public health necessity. It must be added, however, that nearly 52 per cent. of the total urban populations of India now enjoy the amenity of a piped water-supply.

WATER SUPPLIES FOR VILLAGE.

The question of village water-supplies has been the subject of recent investigations. From the information provided by Provincial Governments, at the instance of the Government of India, it appears that in at least 30,000 villages the water-supply is either situated at such a distance as to cause considerable inconvenience to the inhabitants, or the supply is totally inadequate to meet their needs, particularly in the hot weather. In one province alone the number of villages so situated with regard to water-supply, numbered over 13,000.

MARKETS AND SLAUGHTER HOUSES.

The provision of markets and slaughter houses and their sanitary supervision form an important function of local authorities, both urban and rural.

But a great deal, still remains to be done before it can be said that satisfactory progress has been made. Even where markets of a reasonably sanitary standard are in existence, the local authorities concerned frequently fail to prohibit the sale of food in unauthorised places and take no steps to prevent food contamination.

With 89 per cent. of the population of the country living in villages, rural health, says the Public Health Commissioner, is a matter of vital importance. But the rural health problem is one which admits of no easy solution and in consequence it has been found useful to try out experimental schemes in limited areas. So far, most of these schemes have been assisted by generous grants from the Rockefeller Foundation and "Health Units", as they are called, have been working for some time past in Madras Presidency, the United Provinces and in Delhi, whilst further "Units" will, in all probability, be shortly started in the provinces of Bombay and Bengal.

RURAL HEALTH PROBLEMS.

These centres serve the purpose of testing out methods of rural health administration and of arriving at probable estimates of cost, while they also afford excellent opportunities for the field training of public health workers and students.

But rural health problems cannot be solved by public health measures alone and no scheme for rural development can be considered adequate unless it provides for a many-sided attack on the physical, social, economic and educational aspects of village life. The suggestion is, therefore, made that a Rural Development Council should be formed at the headquarters of each province, with a district Council for each district. On these Councils there should be representatives of the Public Health, Medical, Education, Industries, Agricultural, Co-operative and other departments of Government, so that co-ordinated action can be taken.

A percentage of provincial revenues, says the Public Health Commissioner, should be specially set apart for rural improvement and made available to each district in the form of grants-in-aid on the condition that the latter contributes a share from its own funds.

Stress is laid on the necessity for planning these rural ameliorative schemes over a period of years, since short-term efforts are bound to fail. Improvement of individual and communal health involves, in most cases, radical changes in methods of living, the growth of new and better community habits can often be observed only when a new generation has grown up in an environment of new ideas and new practices.

GOVERNMENT OF INDIA GRANTS.

In order to help Provincial Governments in financing schemes for rural development, the Government of India sanctioned, during the past three years, two grants of Rs. 92½ lakhs and Rs. 103 lakhs respectively. The programmes of expenditure showed some variation from province to province, but everywhere public health measures claimed a large share of the money, including rural water supplies, rural sanitation and anti-malarial operations.

SCHOOL MEDICAL SERVICE.

A school medical service is one of the most important parts of public health administration. Experience all over the world has shown that the provision made for the health of the school child, by periodical examination and the correction of defects, has proved to be a sound investment in respect of betterment of the national health. In England the school medical service was developed in 1908, and since then the benefits conferred on the rising generations have contributed in no small degree to a general raising of the nation's standard of health.

In India, unfortunately, the school medical service is one of the least developed of the public health services. In some provinces nothing at all is being done and, even in the provinces where a scheme exists, its operations are restricted and are not carried out on any uniform basis.

Enlarged tonsils and adenoids, defects of vision and dental caries are all of common occurrence. Provision for the treatment of defects discovered during medical inspections varied greatly from province to province, and in no instance could existing schemes be considered adequate.

FREE MILK SUPPLY.

In some provinces attempts have been made to supplement the diet of poorly nourished school children by the free supply of milk or of midday meals, but these have been tried in very limited areas only.

In order that mal-nutritional defects,—now known to be common—should be corrected and that systematic medical care of school children should be taken, rapid development of school medical services on an adequate scale is urgently required all over the country.

CENTRAL HEALTH BOARD.

Experience has, however, indicated the necessity for continued co-ordination of effort, not only for the exchange of ideas, but also for the formulation of reasonably uniform lines of development. To serve these purposes a central consultative body, the Central Advisory Board of Health, was formed last year, on which are represented the Health Ministers of all the provinces assisted by their principal health and medical advisers. The machinery for co-ordinating public health work in India has thus been established and it may perhaps be anticipated that the coming years will witness increasing progress in every phase of public health activity.

But the development of health personnel in the provinces has been by no means uniform. Nearly half the districts and three quarters of the municipalities are still unprovided with qualified health officers. The Central Board of Health recognised the great importance of employing qualified health staffs in every urban and rural area, and one of its resolutions recommended that, wherever necessary, provincial Governments should take legislative sanction for enforcing the employment of health officers by local bodies and for securing control over the recruitment and conditions of service of the health officers employed by local authorities.

STEADY GROWTH IN POPULATION

RURAL HEALTH NEEDS.

The population of India, as a whole, is likely to reach by 1941 a figure approximating to 400,000,000. So far as the existing trends indicate, there is little reason to doubt that this figure will be reached.

This is what the Public Health Commissioner says in his latest annual Report for the year 1936.

Since 1931, when the last census was taken, India has comparatively remained free from violent outbreaks of epidemic diseases and, during the same period, the annual balance of births over deaths has been consistently favourable to progressive increase of population. During 1936 the number of births was nearly 280,000 higher than that for 1935. On the other hand, the number of deaths was less by about 200,000, so that the estimated population for 1936 shows an increase of about 3,600,000, as compared with that of the previous year, and stood at about 282,000,000.

Between the census of 1931 and June 1936, the actual increase has been 6·1 per cent. Assuming the same rate of growth during the next five years, the increase in population during the decennium 1931-41 is, therefore, likely to be something over 11 per cent or the total population nearly 400,000,000.

In trying to estimate the possible trend of events in India, consideration must be given to a number of factors all of which are of importance. These include the low standard of life of the majority of the people, the large additions to numbers amounting at present to about 35 to 40 millions per decade, the high toll of life and suffering taken annually by epidemic and other preventable diseases and lastly the question of food production.

MORE AND BETTER FOOD.

Available statistics show that, during the year 1936-37 of the area cultivated in British India, net area actually sown was about 232 million acres, while the current fallows were over 49 million acres. Of the area uncultivated 154 million acres was culturable waste other than fallow, and 155 million acres was not available for cultivation. The total area under food crops was about 217 million acres, of which a little more than 204 million acres was under food grains and the balance under other food crops. A comparison of these figures with those for 1935 shows that increases were recorded in every province.

The resources of India are immense, but they will become available for the betterment of the people only by a well-planned organization of economic development.

Agricultural, irrigation and veterinary research and the application of their results to the problems of the country are gradually being extended both at the Centre and in the provinces, and these efforts are already bearing fruit. Agricultural research, for example has within recent years covered a wide field, such as protection of crops from pests and diseases, irrigation and fertilizers, soil examination and what is even more important, the question of co-ordination of agricultural and nutritional studies for the improvement of human nutrition, is now being actively pursued.

NUTRITION STUDIES.

The nutritional studies, which had been carried out during the past two or three years, have been mainly concerned with (i) dietetic surveys in order to ascertain the actual state of nutrition of the people; (ii) analyses of common Indian food-stuffs for the purpose of determining nutritional value; (iii) experimental work in controlled institutions in India for the discovery of suitable cheap methods of improving nutrition; and (iv) training of medical and public health personnel in general nutrition work and in the carrying out of propaganda on the same subject.

A study has recently been made at the Nutrition Research Laboratories, Coonoor, of the food supply and the nutritional requirements of the population of the province of Madras, and the conclusion reached that the food available is just sufficient to cover the energy needs of the people, provided it is evenly distributed and that the average diet, which consists mostly of cereals is lacking in animal protein, mineral salts and vitamins, which are so essential for the proper physical functioning of the body. Milk, eggs, fish and meat would supply the required animal protein, whilst green vegetables and food provide essential vitamin and mineral salts. These articles, which have been termed "protective foods" are, however, relatively more expensive than cereals and ordinarily they are eaten in very small quantities or entirely absent from the diet.

These investigations are of particular value, because of the attempt made to assess the actual position in regard to the nutritional requirements of the population, which include the

provision of adequate quantity of food and of a desirable level of quality, and the remarks apply equally to most parts of India. The investigations have also demonstrated a widespread prevalence of conditions associated with the state of sub-normal nutrition. In the circumstances, the urgent need at present appears to be the formulation of methods by which the production of "protective foods" can be greatly increased and their consumption encouraged.

HOW RESEARCH IS HELPING.

The general poverty of the Indian masses makes it essential to explore every available method, which will help to improve the present state of mal-nutrition. Recent researches in the Nutrition Research Laboratories in Coonoor have shown that, in regard to such an essential article of diet as milk, substitutes such as calcium lactate, may be employed, which from the point of view of cost may be well within the means of a very large section of the community, the amount sufficient for a child costing only half an anna per month.

Experiments have also shown that a good supply of vitamin A, the deficiency of which in the Indian diet is responsible for much of the prevalent ill health and mal-nutrition, can be had in red palm oil, derived from the fruit of a west African palm, at a third of the cost for which it is purchaseable in the form of cod liver oil.

A small, but successful, experiment in the cultivation of the red palm has been carried out in Negapatam in South India. The climatic conditions of certain parts of South India approximate closely to those of Malaya, where the palm is grown extensively and if it can be successfully cultivated in these areas, the supply of cheaper vitamin A so obtained would be of the greatest advantage to India.

Interesting details are also given in the Report of Vital Statistics for the year.

BIRTHS AND DEATHS.

The total number of live births recorded in British India during the year was nearly 10 million, the rate per mille working out at 35.4. Male births were a little over 5,000,000, the number of males born per hundred females being 103. Male births outnumbered female births not only in British India as a whole, but in every province. This phenomenon is common to most countries, but in other parts of the world, the ratio is usually about 106 males to 100 females.

The birth rate per mille based on married female population between the ages of 15 and 40 in British India is 212.5. This figure is almost double of that in England and Wales, where it is only 111.9. The high fertility rate in this country has, therefore, a close bearing on the growth of population in spite of the fact that mortality rates remain at a high level.

Deaths during the year were nearly 6½ million. It may be said that throughout India during 1936, conditions were relatively healthy. The death rate works out at 23 per mille; or 1.2 per mille less than for 1935, the male and female death rates were 23.0 and 22.2 respectively.

INFANTILE MORTALITY.

The infantile mortality rate for the year for British India was 162 per mille.

Male infantile deaths were 170.9 per mille and female infantile deaths 153.1, and the still births recorded were 21.2 per mille of live births.

Of 46 countries of the world for which the infantile mortality is available, 40 recorded in 1935 rates lower than that of India, the remaining five being the Strait Settlements, Rumania,

Chile, Ceylon and Malta. The range of variation in the infantile mortality rates lay between 32 p.m. for New Zealand and 286 per mille for Malta, whilst nearly half of the forty countries recorded rates over 50 per cent lower than that of India. This comparison indicates how far behind India is in regard to measures for the protection of infant lives.

Statistics reveal that about 47 per cent of the total infantile mortality in British India takes place within the first month of life. The subsequent periods 1 to 6 months and 6 to 12 months are relatively less fatal. Infant mortality during the first month of life is largely dependent on factors influencing ante-natal life, particularly so in the case of deaths within the first week. During 1936, the deaths under one week formed 28 per cent of the total infantile mortality and 60 per cent of the deaths within one month.

INDIA AND THE REST OF THE WORLD.

A study of the mortality figures for British India shows that about 49 per cent of the total mortality in a year is among those people who are ten years of age, whilst the corresponding figure for England is only 12 per cent. During the first year of life India's proportional mortality is about 3½ times that of England. At the next period, between 1 and 5 years, it is five times greater and between 5 and 10 years, it is three times as high. About 25 per cent of the total deaths were among infants under one year, the English figure being about 7 per cent. Another significant fact is that whilst, in England, women have lower mortality rates than men at all ages, in India the female death rate exceeds that of the male during the reproduction years, 15-40.

The following is a comparative table, giving the birth, death and infantile death rate per mille for several countries of the world:—

	Birth rate per mille.	Death rate per mille.	Natural increase per mille.	Infantile death rate per 1,000 births.
British India	35.4	22.6	12.8	162
England and Wales	14.8	12.1	2.7	59
Federated Malay States	38.7	19.2	19.5	143
Japan	29.9	17.5	12.4	117
Palestine	44.9	16.1	28.8	122
Egypt	41.8	27.3	14.5	164
Scotland	17.9	13.4	4.5	82
Australia	17.1	9.4	7.7	41
Canada	20.0	9.7	10.3	66
New Zealand	16.6	8.7	7.9	31
Union of South Africa (White)	24.2	9.6	14.6	59

BLINDNESS.

A reference is made in the Report to the prevalence of blindness. The number of the blind in India, according to the 1931 census, was about 600,000, but probably this figure is a gross

under-estimate. The main causes of blindness in this country, according to the Professor of Ophthalmology in Madras Medical College, are (a) in children, keratomalacia, ophthalmia neonatorum, congenital syphilis and hereditary blinding diseases, (b) in adults, cataract, various optic nerve diseases (mainly syphilitic), ulcers of the cornea, glaucoma and trachoma and (c) in children and adults, irritant remedies and smallpox.

As regards keratomalacia, the Director of Nutritional Research has shown conclusively that this disease is due to certain deficiencies in the diet of the people. During recent years a great deal of investigation has been done in respect of diet deficiencies, and if only these results could be applied in practice, much blindness could easily be prevented. For smallpox, another important cause of blindness, there is an excellent preventive weapon in vaccination but, says the Public Health Commissioner, only too frequently does one still find smallpox among children ending in complete or partial blindness because of the ignorance and carelessness of the parents.

HOW TO PREVENT IT.

Essential preventive needs include (a) a considerable expansion of the rural medical services whereby the expert instruction received at the Ophthalmic teaching centres in the Medical Colleges and Schools can be rendered readily available; and (b) extension of the maternity and child welfare work in the rural areas.

NOTES ON PREPARATION.

Sirop 'Thio-Calcin' prepared by Thio-Calcin Co., Madras is a pleasing preparation which has been found to be useful in the treatment of chronic bronchitis and pulmonary tuberculosis, especially in children. Good results are obtained in cases with foetid expectoration. It is also found useful in cases of intestinal tuberculosis.

JOURNAL OF SOUTH INDIAN MEDICINE.

SEPTEMBER, 1938.

ANTI-TUBERCULOSIS CAMPAIGN.

The public are being educated to realize that Tuberculosis is increasing and spreading fast. They are also getting familiar with the idea that successful efforts could be made to stem the disaster. But the problem of tackling Tuberculosis is manifold and vast. The immensity of the problem might frighten people into helpless inactivity. We cannot therefore be sufficiently beholden to Her Excellency Lady Linlithgow for her courage in facing this problem and the great thought and energy that she is devoting to anti-tuberculosis measures. Two things are urgently needed, first and foremost, large funds commensurate with the vastness of the problem and secondly, an organization to combat the spread of the havoc.

Thanks to the energy and enthusiasm of the various Committees that have been formed, the response to the appeal for funds has been gratifying. We understand that about four lakhs of rupees have been collected in this Presidency. But it can never be large enough to tackle fully the problem. If we wish to treat those who are already suffering from the disease, we want scores of sanatoria, hundreds of clinics and many thousands of beds, besides doctors and nurses and other staff to look after these patients. Taking the present financial condition of this country, we cannot hope in the near future to find sufficient funds for these. We have therefore to see that we start with such schemes

as will naturally and automatically lead to expansion in all directions. It is difficult to cure, and expensive to look after people who are already seriously afflicted with the disease. But it is easy to arrest the disease in its very early stages and much more easy to prevent people from getting infected. Our aim should therefore be to have a rapidly increasing number of well trained doctors who can fully utilize all the modern methods of diagnosis to spot cases in their very early *i.e.*, the curable stages and who can properly guide those in contact with tuberculous patients in measures of self-protection.

We are therefore pleased to know that the Surgeon-General of this province is very keen on the training of specialists in this disease. We feel that we should voice a warning against a very common impression. It is a very mistaken impression. But it is nevertheless common. It is easy to diagnose a developed case of tuberculosis. It is also known that a few surgical measures like Artificial Pneumothorax are efficient in the treatment. It is therefore presumed that if a recently qualified doctor is trained in a tuberculosis institution to learn the technique of these measures he then becomes a specialist in the disease.

If we wish to succeed largely in stamping out this disease, we have to catch these patients very early. It is easy to diagnose the case when the patient goes to the doctor with a little cough and slight fever. But if we begin treatment at that stage, failures will be many. We have to catch the patient when he has no cough, no fever. Probably his only complaint may be that he is not feeling up to the mark. But every person who does not feel up to the mark occasionally is not necessarily a subject of tuberculosis. It therefore requires a certain amount of experience as a physician before one could be usefully trained as a specialist.

But however skilled a specialist might be in the technique, if he has any ambitions of being of use to the public he should have the co-operation of the general practitioner and family physician. And if he seeks the practitioner's help, he should also have his regard. But no general practitioner or family physician will have any regard for a person who is merely a technician. The practitioner will willingly seek the help and advice of the specialist only if he is convinced that the specialist's knowledge of medicine is sound and his knowledge of his special subject profound. It is therefore highly essential that the first step in the anti-tuberculosis campaign should be to select well qualified medical men with a fair amount of experience as general practitioners and to give them an intensive and efficient training in the study of all aspects of this disease. Next, these men should be available to the public, not merely for the treatment of the tuberculous subject. But they should by their earnestness, zeal and no less, their efficiency educate the public to take advantage of the increasing facilities in the treatment of these cases. When the public realize the benefit, we have every hope they will come forward of their own accord to find the money for further work in this field.

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While Chaulmoogradine tablets may not adequately replace injection treatment of Leprosy, they are nevertheless very useful for reinforcing injection of chaulmoogra preparations, as a maintenance treatment between courses of injections and as a precautionary treatment against relapse following the cessation of injections.

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The tablets are composed of salts of the total unsaturated fatty acids present in chaulmoogra oil; they are convenient to take and remarkably free from any deleterious action on the stomach.

COMPOSITION: Gluten coated tablets each containing $\frac{1}{2}$ gram of the sodium salts of Chaulmoogric and Hydnocarpic acids.

ADVANTAGE: The gluten coating prevents gastric disturbances.

DOSE: One tablet three times a day, which may be increased to six tablets per day in some cases.

PACKING: Bottles of 100 tablets.

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COMPOSITION: A colloidal preparation of Chaulmoogra oil.

Strengths	Ampoules	Vials.
0.1 per cent.	2 cc and 5 cc	25 cc
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2.5 " "		25 cc

DOSAGE: Begin with $\frac{1}{2}$ to 2 cc of 0.1 per cent every 2nd day. Gradually increase the dose and interval till 5 cc or more of 1.0 per cent or 2.5 per cent is given once a week.

METHODS: Intramuscular or intravenous as convenient.

ADVANTAGES: No venous occlusions.

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ASSOCIATION NOTES.

South Indian Medical Union, Madras.

Minutes of the Meeting of the Council of the Union held on Thursday the 25th August 1938 at 6.15 p.m. at 32, Broadway, Madras.

Members present :—

Dr. E. V. Srinivasan.
„ T. Satakopan.
„ M. Krishnamoorthy.
„ P. Natesan.
„ P. Govinda Rao.
„ U. Venkata Rao.

Dr. U. Venkata Rao was in the chair.

1. The minutes of the last Meeting were read and confirmed.
2. The Financial Statements for the months of June and July 1938 were presented and approved.
3. The following practitioners were enrolled as members of the Union.
 1. Dr. S. K. Menon, M.B., F.R.C.S., Madras.
 2. „ T. N. Lakshmipathy, L.M.P., Madras.
4. It was proposed and unanimously agreed that a Committee consisting of Drs. G. Zachariah, P. Natesan and U. Venkata Rao, with power to co-opt, be appointed to consider and draft a Memorandum on the question of the new honorary rules and the five years tenure. Dr. G. Zachariah is to be the Convenor.
5. The contents of the communication from Dr. A. Perisastri of Amalapuram about his representation to the Government as regards his being allowed to be in charge of the hospital while the Government Medical Officer was on leave were presented before the Council. The members were of the opinion that no action was called for at the present time.

The Tinnevely District Medical Association, Palamcottah.

The President's Function of the Tinnevely District Medical Association was held at its monthly meeting held at the Subramanya Karayalar Public Library, Palamcottah, on Sunday the 21st of August 1938. Members numbering 67, including three women doctors gathered from all parts of the District. Lieut.-Col. T. S. Shastry, I.M.S., was "AT HOME" to the members.

After tea party and music, the meeting began under the presidency of Lieut.-Col. T. S. Shastry, I.M.S., at 5-30 p.m. The Secretary read out the minutes of the Joint Meeting of the Pandya and Chera Medical Associations held at Courtallam on Saturday the 23rd July 1938.

Dr. T. N. Govinda Ayyar, M.B. & C.M., proposed that Rao Bahadur Dr. C. B. Rama Rau, M.D., Retired District Medical Officer, be elected as an Honorary member of the Tinnevely District Medical Association and seconded by Dr. K. Rama Ayyar, M.B. B.S., (Andhra), Rao Bahadur Dr. C. B. Rama Rau, M.D., was unanimously elected as an Honorary member of the Association.

On the invitation of the Secretary of the Indian Medical Association the following were elected as President and Vice-President of the Indian Medical Association for the ensuing year:—

- I. *President*:—Colonel K. V. Kukday, I.M.S., Retd. (Nagpur).
- II. *Vice-Presidents*:—1. Lieut.-Col. T. S. Shastry, I.M.S., Palamcottah.
2. Dr. Miss B. Thungamma, Benares
3. Dr. A. Vishwanathan, L.M.P., Madras.

Consideration of the membership of the Indian Medical Association when persons are transferred to places where there is no branch of the Indian Medical Association was discussed and a decision was postponed.

The following cases which were operated and treated at the Government Headquarters Hospital, Palamcottah, were read out:—

1. A case of Fracture ribs—complicated with surgical Emphysema.
2. A case of retro-peritoneal Hydatid cyst in the pelvis.
3. A case of accidental fall, causing fracture of the left collar bone and left ribs.
4. A case of multiple injuries attended with fracture of skull with escape of brain matter.

The above cases were exhibited to the members and the cases were fully discussed by the members.

Dr. A. L. Ananthanarayana Iyer, M.B.B.S., demonstrated a case of Hemiplegia and explained to the members how to examine systematically a case affecting the nervous system.

Dr. K. Ramachandra Naidu, L.M. & S., showed a case of temporary fits of unconsciousness, and read out notes of the case.

Thereafter, Colonel Shastry summed up the salient and important features of all the cases and their differential diagnosis in detail. He offered his thanks to Sri C. V. Gopalan, B.A., B.L., the Secretary of the Public Library, for placing the Hall at the disposal of the Association for holding our meeting. He thanked the members for electing him as the Vice-President of the Indian Medical Association. He requested all the members to do Health propaganda along with their professional work. He also thanked the members for responding to his invitation. Dr. K. Rama Iyer, M.B., B.S., (Andhra), thanked the President for this most enjoyable function and for his entertaining the Association.

An excellent dinner brought the happy gathering to a close at 11 p.m.

HEALTH EXHIBITION.

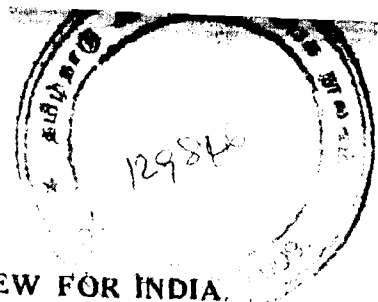
Under the auspices of the Tinnevely District Medical Association in connection with the monthly meeting, a Health Exhibition was arranged at the Municipal Office, Palamcottah, on Sunday the 21st of August 1938 at 10 a.m.

Lt. Col.-T. S. Shastry, I.M.S., the President of the Association welcomed the guests and requested Dr. P. R. Venkatarama Iyer, M.B. & C.M., retired District Medical Officer, to open the Exhibition.

Dr. P. R. Venkatarama Iyer, M.B. & C.M., in declaring the Exhibition open said that such Exhibitions are very useful, instructive, and beneficial to the public. He delivered his speech in Tamil on topics like Nutrition and preventive diseases like Tuberculosis, Cholera, etc., which was very instructive.

Dr. Rajarathnam, L.M. & S., B.S.Sc., delivered an interesting lecture in Tamil for the benefit of about 300 boys and girls.

The Exhibition was kept open till late in the evening. The exhibits consisted of posters on Tuberculosis, Small-pox, Flies, Mosquitoes and Cholera, Vitamins, etc. The exhibits supplied by Messrs. Burroughs Welcome on Tropical Diseases were also exhibited. The Local Sanitary Inspector took the boys and girls in batches and explained to them the posters that were exhibited.



MEDICAL REVIEW FOR INDIA.

An Indian Medical Review, the first attempt of its kind in the history of modern medicine in India, containing information on all matters of interest to the medical, nursing, pharmaceutical and allied professions, will shortly be published by the Director-General, Indian Medical Service.

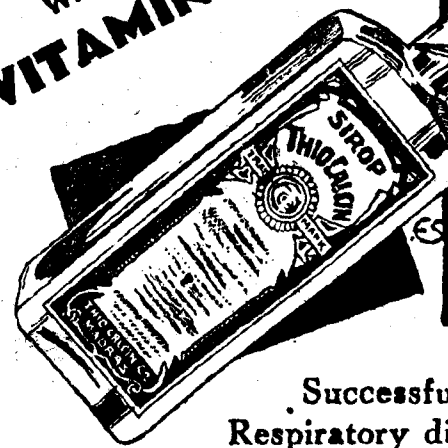
Hitherto the various provinces and the Indian States have been publishing annual records of the activities of their respective Medical and Public Health Departments. The Public Health Commissioner with the Government of India has also been publishing Annual Reports dealing with the incidence of diseases, and vital and health statistics, but a Review of the type now to be published is a new departure, and hopes are entertained that the publication will fulfil a great need.

The subjects, which it is proposed to include, cover a wide field from administrative organisations in the provinces and at the Centre to statistics relating to medical colleges, hospitals and dispensaries in British India and to those under the control of the Political and External Affairs Departments of the Government of India and Mission Medical Institutions.

ALL ABOUT THE MEDICAL WORLD.

Detailed information, it is understood, will be given in the publication about the Medical profession and Medical Services of India, hospitals, dispensaries and Nursing Homes, with special reference to facilities for rural medical relief, a subject of vital interest; medical inspection of School children, post-graduate training of medical officers; X-ray and Radium facilities available in India; mental hospitals and psychiatric clinics; scales of fees charged from patients at the various Government hospitals; legislation for the control of practitioners of the Indian systems of medicine; Provincial and Central legislation regarding the registration and control of practitioners of the modern western system of medicine and surgery; Medical education of men and women in India; history and activities of the various medical colleges and schools; the system of training of nurses, their examination, registration and conditions of service; facilities available for maternity cases and training of the midwife and the *dai*; history and activities of the important research institutions and of the Imperial Serological Department; control of pharmacy and drugs, and the work, methods and organisation of the numerous medical and cognate societies.

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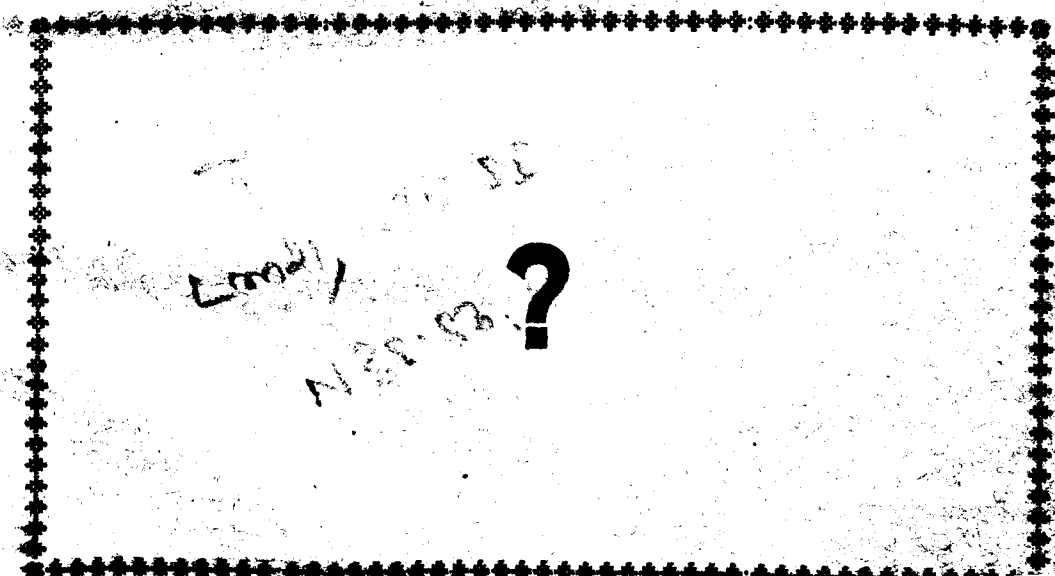


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