

it is switched off, but of course the rescuer must take the greatest care not to become electrocuted himself. The patient must be treated for collapse, and the small burn with tannic acid, but very little else can be done. Pain will be intense through all the nerves. A certain amount of relief can be achieved from veronal tablets, but morphia must on no account be given.

Mustard Gas Burns

In the case of burns from mustard gas the nurse must protect herself by using rubber gloves, and, of course, by wearing an overall and respirator. The first thing to do is to neutralise the gas with two per cent. bicarbonate of soda. Then wash the area with plenty of water, and put on a tannic acid compress. In the Italo-Abyssinian war tannic acid treatment was proved to be the best, provided always the mustard gas had been neutralised first.

For lime burns in the eyes, irrigate the eyes first with a neutral fluid such as weak acetic acid, and then instil sterile castor oil.

Sunburn

Lastly I will just mention sunburn, which, after all, is a burn and often requires specific treatment. The popular idea for getting sunburnt is to put on grease and lie out in the sunshine. Of course as a result the patient is very nicely fried, and suffers all the pain of a fire burn. Here is a prescription I have found very beneficial when camping :—

Calamine	...	...	400 grains
Zinc oxide	...	...	400 "
Tannic acid	...	...	100 "
Glycerin	...	...	1 ounce
Water	...	...	1 pint.

This should be applied at hourly intervals until the irritation is relieved. Incidentally the lotion has itself a pleasantly tanning effect on the skin.

(From *The Nursing Times*, 2nd January, 1937.)



THE HEALTH VISITORS' LEAGUE SECTION

The Honorary Secretary of the League, Miss M. E. Rawson, Lady Reading Health School, Bara Hindu Rao, Delhi, will gladly receive reports and articles for insertion in this section.

TOLL OF DISEASES IN INDIA—(concluded)

Dysentery and Diarrhoea. Of the total number of deaths, about 285,000, from dysentery and diarrhoea, 148,000 occurred among males and 137,000 among females.

Conditions of urban life seem to favour the spread of these diseases and amongst these mention may be made of defective conservancy arrangements, bad water supplies, and overcrowding of the city life. Except in Delhi Province, the urban death-rate was higher than the rural in every Province, the urban rate for the whole of British India being 2.1 and the rural 0.9. In the Punjab most of the municipalities which were content to entrust their conservancy arrangements to contractors, record a comparatively higher dysentery death-rate than those which carried out the work themselves.

Enteric fever. Deaths from enteric fever numbered about 86,000. The disease is said to be endemic in the urban areas, where it is ascribed to infected water supplies, contaminated food and flies. The generally unsatisfactory condition of water supplies, conservancy and drainage are all important factors in this connection.

Respiratory diseases. The death-rate per mille from respiratory diseases in British India was 1.8. In Bengal the increased mortality from this disease is attributed to the greater prevalence of influenza, which alone was responsible for about 48 per cent of the deaths classified as respiratory diseases.

Tuberculosis. The wide distribution of tuberculosis of recent years must in a considerable measure be due to increase of urbanization and the environmental factors associated therewith, producing overcrowding and other conditions which predispose to this disease. The present position would appear to be that, whereas the towns are heavily infected, and their residents tuberculised to some extent, the rural population for the most part have not yet experienced the full force of the disease. A much greater spread of tuberculosis among the rural population, facilitated by the rapidly increasing means of communication, is therefore a very likely thing to happen.

Generally speaking, the population of India are highly susceptible to tuberculosis, and amongst most of them the disease takes a virulent form and runs a rapid course. Environmental sanitation in India is definitely backward, and in particular the housing problem is exceedingly difficult. Many urban areas have bad or indifferent building bye-laws, and there is a tendency to enforce these, such as they are, very inadequately. Year by year, housing conditions are created in many towns favourable to the rapid spread of tuberculosis. The problem ultimately is one of improving housing in urban areas with all that this connotes in the way of space, sunlight and fresh air. To tackle the problem from any other aspect than this is to begin at the wrong end. It is beyond the financial resources of the country to build hospitals and sanatoria to house our countless cases of tuberculosis, unless we can reduce markedly the number of fresh cases infected each year, by improvement of environmental conditions. The importance of good nutrition too cannot be over-stressed, but there is evidence of increased attention being paid to this vitally important subject.

In the previous year, Sir John Megaw, Director-General of the Indian Medical Service, estimated that there were probably two million cases of tuberculosis in India. His conclusions are that tuberculosis is very widespread throughout the villages of India, but is specially serious in Bengal, Madras, the Punjab and Bihar and Orissa. Pulmonary tuberculosis seems to be much more common than extra-pulmonary except in the United Provinces and Bombay. The low incidence in the Central Provinces is remarkable, and is perhaps associated with the sparse distribution of the population and with defective means of communication. Tuberculosis is well known to be exceedingly prevalent in the cities and large towns, but little is known as to its incidence in rural areas. It seems likely that the disease is increasing steadily and rather rapidly, and the estimate of just over 2 million cases as a whole is probably much too low. The proportion of tuberculosis cases to total cases treated in hospital, which is 0.3, is probably the best indication of the relative incidence of tuberculosis.

The scanty statistics of deaths from tuberculosis as are available, show that there were nearly 51,000 deaths from tubercle of the lungs, of which 31,000 were rural and 20,000 urban. The largest number of deaths, namely about 23,000, being from Bombay, Bengal coming next with nearly 15,000. In Delhi, 8.3 per cent of the total deaths were from tuberculosis. In Bombay city, where 74 per cent of the population lived in single rooms at the time of the 1931 census, 1.6 per cent per mille of deaths were due to tuberculosis. Madras city records a death-rate of 1.4 per mille from tuberculosis of the lungs, while in part of Lahore, where a tuberculosis survey has

recently been carried out, 311 cases were detected in a population of 8,269, which works out at 3.75 per cent.

Although mortality figures, differentiated according to sex, are not available, the fact that females are more severely infected than males is evident from the high female death-rates from respiratory diseases.

The King George's Thanksgiving (anti-tuberculosis) Fund is the only all-India organization dealing with tuberculosis. The fund has a Central Committee and branches in the Provinces, and concerns itself both with prevention and treatment, and, in addition to carrying out propaganda, provides training for medical men in tuberculosis work. The local voluntary organizations doing anti-tuberculosis work number 24, and the institutions which provide for the treatment of tuberculosis number 29.

Hookworm. Of the number of cases suffering from hookworm treated in British India, much the highest number, as usual, was recorded in the Madras Presidency. In a total of 211,000, nearly 166,000 come from Madras, 22,000 from Bihar and Orissa and 6,000 from Bengal.

The rural sanitation campaign in Madras continued its anti-hookworm activities. Cinema shows, lantern lectures and talks were given to huge audiences; over 193,000 treatments for hookworm were given by rural sanitation dispensaries and other staffs, while 2,500 new latrines were built mainly in Madura district. A survey in some of the districts revealed a very high incidence rate, hookworm being found in 90 per cent of the stools specimens examined.

Leprosy. Although leprosy has been known in India for over 3,000 years, census enumerations have been the sole index of the extent of its prevalence since 1872, when the first census was taken. But the census figures are not always reliable, only the most advanced and obvious cases being registered by lay enumerators. In 1925, the India Council of the British Empire Leprosy Relief Association, otherwise known as the BELRA, was formed, with an endowment yielding an annual income of nearly Rs. 1½ lakhs. In early years, this organization, through its provincial branches, confined its activities to research, propaganda, and the training of doctors. But in 1927, it began experimental surveys of selected areas to find out the relative incidence of leprosy in different parts of India, the class of people among whom it was most rife and the causes of high incidence. The areas surveyed included 4,560 villages in 30 districts and 66 municipal towns. Amongst the main conclusions arrived at were the following, (1) that leprosy was much more prevalent in India than was formerly supposed; probably a million cases would not be an over-estimate; (2) that leprosy was most common in semi-aboriginals or aboriginals who left their tribal seclusion and hired themselves out to agriculturists or to industrial concerns. As a sequel to those surveys, a network of clinics has sprung up in endemic areas, of which 34 are in the Punjab, 118 in the United Provinces, 15 in Bihar and Orissa, 164 in Bengal, 28 in the Central Provinces, 36 in Bombay, 405 in Madras, and 171 in Assam.

The Mission to Lepers founded by Mr. Wellesley Bailey, 60 years ago, is another important private organization which is devoting itself to the care and treatment of lepers. The Mission has now 36 homes throughout India. Through the generosity of the India Council of the BELRA and the authorities of the Calcutta School of Tropical Medicine, training in modern methods of treatment has for some years been provided in Calcutta, and during the five years ending 1934, 436 doctors have been so trained.

As a result of the detailed research and survey work carried out in India during the past ten years, the leprosy problem has been defined and its dimensions gauged. Treatment has been substantially improved. Early

cases now come forward far more readily than formerly. But we still lack a sure, satisfactory cure for the disease and a solution of the segregation problem.

—Public Health Commissioner with the Government of India.

STUDENT NURSES' ASSOCIATION SECTION

Reports and Articles for this Section will be welcomed by the Hon. Organising Secretary, Miss Pitman, Women's Medical College Hospital, Vellore.

Dear Student Nurses,

You will be glad to hear that a new unit has been formed at the R. M. Government Hospital, Tanjore. We welcome these student nurses into our Association and hope that they will get a great deal of good from their membership.

To those of you who will be having holidays during the hot weather, I send all good wishes, and to those of you who will be working and find it hard to be energetic through the hot months, I also send my sympathy and good wishes.

I remain,
Yours sincerely,
V. K. PITMAN,
Secretary.

An Adventure

By STUDENT NURSE K. HUNT, *Government General Hospital, Madras*

Indeed, how thrilled was Robinson Crusoe when he was left all alone to explore the island, and so were 'Micky' and I when we made an excursion of the Barnard Institute of Radiology. We were first invited into the Demonstration Hall, here Capt. Barnard explained the origin of radium and X-rays, and showed us several photographs of the process through which radium goes.

Radium and its Allies.

Radium is the most active of these bodies. Radium falls to half its value in 2,000 years, and it gradually deteriorates into less active metals as it gives off particles and radiations.

In the adjoining room were specimens of X-ray photographs, these were intensely interesting. There was one of a chicken in an egg, another of a spray of rose leaves with a naughty little spider trying to hide himself and several others.

We then went into the Radium Room. Captain Barnard showed us all the different kinds of radium needles and explained the process of radium emanation.

Radium emanation is a gas which is given off slowly from a solution of radium salts. If a little bromide or chloride of radium be placed in a closed flask, this in a few days time becomes filled with radio-active gas, which can be drawn off by an air pump, and filled into glass tubes. Perhaps you have heard of radon?

This gas or emanation possesses power to give off rays like radium itself, but it very quickly wastes and in 4 days has only half its original strength.

As the radium requires about the same time to produce a fresh quantity of emanation, and as the supply is inexhaustible, a few minims of radium can be used to produce a constant supply of emanation, which is removed by the air pump every few days.