EDITORIAL

LEPROSY AS A Communicable Disease

This subject has been much in the public mind lately, and referred to in the press. The following discussion does not aim at being in any way complete; it merely reflects certain past experience and recent thought, all perhaps rather disconnected, but it does attempt to look at the problem against the background of modern thought on leprosy and of communicable disease in general.

While accepting the general view that in most circumstances the infectiousness of leprosy is of a low order (or perhaps its pathogenicity, for many must get infected without developing the disease) the writer does not subscribe to the view that close contact for long periods is always necessary for transmission; nor does he accept the view advanced by some workers that serious infection is nearly always acquired early in life. Findings in these matters differ widely in different countries, peoples, climates and social conditions. Regional variations in these and in other matters, for example in the incidence, forms and severity of leprosy, are believed to be of importance. It is most unwise to dogmatise about leprosy and anti-leprosy work in one country on the basis of experience in quite different countries.

THE ATTITUDE OF THE LEPROSY WORKER TO LEPROSY

All leprosy workers are faced with the difficulty of attaining and maintaining a rational but human attitude to the disease. A great fear of leprosy seems to be part of the heritage of the human race over most of the world. We all realise that this great fear is largely irrational. We have to try to build up and maintain an attitude to leprosy which is reasonable. To do this is not easy; and even when we think we have done it, we find how easy it is for our thoughts and actions to be influenced by factors operating quite outside the realm of reason.

There have been a few leprosy workers who have reacted so violently against the traditional view of leprosy as highly communicable, that they have ostentatiously discarded most if not all of the ordinary precautionary measures in dealing with patients; but even such people sometimes betray the fact that the deep-rooted fear has only been suppressed and not eradicated. At the other extreme there have been and are still some leprosy workers who have adopted extremely rigid precautions in dealing with

leprosy patients, with rigid segregation, and the use of gowns, masks, gloves, boots and antiseptics, and the avoidance of all direct and also indirect contact. The writer could relate experiences indicating how precautions can be carried to ridiculous extremes.

Most of us have adopted a position somewhere between these two extremes; it would appear most unwise to try to lay down just what precautions are necessary. Each worker must decide for himself, and he will be guided by the experience of others, by his own experience, and also by the circumstances in which he is working; and when he has determined his own policy he must not be surprised if other workers do not share it entirely.

Even so, another matter sometimes operates. Most leprosy workers have taken up their work partly or largely from humanitarian motives; they strive to help those with leprosy in every way, physically, mentally and spiritually. While realising that measures of personal prophylaxis are justified, they nevertheless may sincerely feel that the adoption of certain measures erects a barrier between themselves and their patients, which will make it difficult or impossible to do the work they want to do. Such an attitude commands respect.

The writer will never forget visiting the house of a European patient in a tropical leprosarium and, unprotected, shaking hands with him. The patient was quite overcome, and explained that previous visitors for several years had avoided all contact with him. The untouchability of the patient with leprosy can be a terrible thing; some leprosy workers feel it their duty to mitigate this burden, even at some very slight personal risk.

LEPROSY AND THE PUBLIC AT LARGE

Here again we face the difficulties caused by ignorance and irrational fear. It should be worth while to examine the modern trends in dealing with communicable diseases in general.

A recent book, "Modern Concepts of Communicable Disease," by Greenberg and Matz, of the New York City Department of Health, is reviewed in a recent number of the American Journal of Tropical Medicine.(1) The following paragraphs from this review appear worth quoting in a journal devoted to the study of leprosy, one of the communicable diseases.

"The authors have attempted to illustrate the tendency toward integration and synthesis of modern preventive medicine, curative medicine, social medicine, and public health in the narrow but appropriate field of communicable disease.

" The approach is through a rapid historical summary of concepts: the rise of development of bacteriology and immunology, the accompanying science of sanitary engineering, the discovery of antibiotics and the results of this current emphasis on the last of the epidemiologic triad (host, environment, agent) to receive frontal attack. Changes in control measures to keep pace with newer knowledge are succintly outlined. For example, with reference to the almost obsolete practice of ' placarding ' (of the occurrence of infectious disease) the authors say, ' We have not observed the placard to do more than scare away delivery boys. The discarding of placards by the New York City Department of Health has not arrested the downward trend of communicable disease in the city.' Or this, on nursing: ' Furthermore, the elaborate nursing procedures adopted in former years, the mystic rite of the basin of smelly disinfectant into which the nurse carefully dipped his fingers before leaving the room, the sprinkling of disinfectant solutions on walls and floors, the hanging up of sheets which had been soaked in dilute carbolic solution have all been shown to be elaborate mumbo jumbo. Nursing in communicable diseases is essentially the same as nursing in other diseases.' The movement toward disbanding special hospitals for communicable diseases and opening up general hospitals for their care under certain safeguards is emphasized by devoting a well-written chapter to ' Hospital Management of Communicable Diseases,' in addition to a discussion of home care which brings out the ultimate responsibility of the family for nursing care, and the role of the professional nurse as guide and assistant.' "

What a lot of this " mumbo jumbo," which the authors condemn, has been seen in the past, and is still seen in the handling of patients with leprosy, even occasionally in leprosy institutions which lay claim to a scientific outlook.

On the other hand, it is a great mistake to propagate the idea that the danger of leprosy being communicated is in all circumstances negligible. One point which calls for special emphasis is the infection of children in families.

THE INFECTION OF CHILDREN IN FAMILIES

Workers engaged in attempting to control leprosy in primitive peoples in undeveloped countries often find that people are unable or unwilling to take steps to prevent the infection of even their own children in their own homes. It is often thought that this problem is found only in such peoples and countries. A study of the facts shows, however, that this is not so.

There has recently been published a study of what happened in the first year of life to all the 1,142 infants born in Newcastle during May and June, 1947.[2] There were 44 deaths, 15 of which were considered avoidable. 80 per cent developed an illness during the first year, and of the illnesses 86 per cent was due to infection—general, respiratory, gastro-intestinal, or skin infections.

But the striking report is that on tuberculosis. Between 1 and 2 per cent of children developed tuberculosis infection in the first year; the source was usually a member of the household; the risk of infants exposed to infection in the home contracting the disease in the first year was 1 in 4. The source was usually an infected adult. Two-thirds of the parents of the infected children showed no concern, and had done little or nothing to prevent the spread of infection. No special steps had been taken to make parents aware of the danger to children from cases of tuberculosis in the home. When such things can happen in 1948 in an English city with reasonable prosperity and little unemployment, we must not be surprised if similar things happen with leprosy in people in other countries much less favourably situated.

On the other hand, we should remember that in countries where children are being infected with tuberculosis, as described above, by open cases in families, with little public concern, the mere presence of a single, possibly closed, case of leprosy can cause great public agitation.

LEPROSY IN HOUSES

The leprosy worker's opinion is sometimes asked about the danger of leprous infection in buidings. The *British Medical Journal* in its column " Any Questions? " recently published the following question and answer which may be of some guidance to those of us who have to deal with these matters; for tuberculous infection is perhaps the closest parallel we have to leprous infection:—

T.B. IN HOUSE DUST

Q.—I have heard of several instances of tuberculosis occurring in families occupying houses previously lived in by tuberculous patients. Is the explanation of this that the bacilli persist in the dust and infect the new arrivals? If so, what disinfection should be carried out to make a house safe after a case of open tuberculosis?

A.—Dried tubercle bacilli can survive in the dark up to four or five months, but in unfiltered north room light only for a matter of days. [3] Dust from room surfaces has been said to be an important source of infection [4], but Cruickshank[5] has been

unsuccessful in isolating tubercle bacilli from the dust in two sanatoria and from tuberculosis wards in a general hospital. He estimates that under conditions of desiccation only 1 to 5 per cent of bacilli remain alive after one to three days. It seems improbable that, with ordinary household standards of cleanliness and hygiene, the occupation of a house previously lived in by tuberculosis patients would carry any important risk of contracting the disease. Between 60 and 75 per cent of the population have been infected with tubercle bacillus by the age of 20. A daily bus or tube journey in the rush hours is probably more dangerous than the circumstances mentioned; the latter may well be pure coincidence. To make a house safe after occupation by an infectious case, the floors and flat surfaces can be damp dusted with 5 per cent phenol (which kills tubercle bacilli in five minutes), all windows being left widely open to let in as much air and light as possible. This ventilation may be repeated daily for a week and the rooms then cleaned with a vacuum cleaner. Thereafter there should be very little chance of infection of subsequent occupants.

CONCLUSIONS

To conclude this rather rambling discussion, the writer would re-emphasise the following points. Leprosy is not a disease apart; it is a disease showing resemblances with other communicable diseases, and is influenced by similar factors. In considering leprosy as a communicable disease, it should be viewed in the light of modern concepts of communicable diseases and public health in general. Only in this way can be built up a rational attitude to leprosy which is essential to sound planning and carrying out of anti-leprosy measures, which nevertheless will vary widely with marked variations of the leprosy problem.

REFERENCES:

(1) *Amer. Jour. Trop. Med.* Vol. 3, No. 4, July, 1954, p. 777.

(2) SPENCE, J., WALTON, W. S., MILLER, J. W. and COURT, S. D. M. (1954) *A Thousand Families in Newcastle upon Tyne.* Oxford University Press.

(3) SMITH, C. R. (1942) *Amer. Rev. Tuberc.* **45**, 334; **46**, 549.

(4) AUGUSTINE, A.E. (1929) *J. Prev. Med.* **3**, 121.

(5) CRUICKSHANK, R. (1948) *N.A.P.T. Bull.* 11, 136.

DAPSONE IN DERMATITIS HERPETIFORMIS

In a recent editorial note we discussed the place of diaminodiphenylsulphone (dapsone) in medicine. Since then our attention has been drawn in the fact that it has been widely used for the control of dermatitis herpetiformis following reports on the matter by Esteves and Brandao in 1950 (Trab. Soc. Port. Derm. Vener. 1950, **8**, 209), and Cornbleet in 1951 (Arch. Derm. Syph. 1951, **64**, 684). This information is given in a letter to the *British Medical Journal* by Dr. R. G. Howell (Br. Med. Jour. 1955, **1**, 542).