

Cases of Leprosy seen in the Federated Malay States.

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(Reprinted from "Leprosy in India," January, 1934).

TWO things, I think, justify the presentation of this collection of oddments from the Federated Malay States to readers in India. One is, that there are definite variations in the type of leprosy—and to some extent in the treatment—in different countries, so that the platitudes of one leper hospital may be the surprises of the next. The other is that the study of leprosy in Malaya demands not merely an observation of its effects on Malays, but also on Southern Indians and Chinese. Fourteen per cent. of the population of Malaya are Indians, nearly forty per cent. are Chinese. One is thus able to form an inter-racial picture of leprosy that is in some ways unique.

This immigrant Chinese and Indian population supply a good deal of Malaya's leprosy problem. The normal prosperity of the country, its high standard of public health work, and the lack of anything but very mild seasonal variation, ensure much more stable health and economic standards than exist in many parts of India or China. One can study the incidence and course of leprosy therefore under steady conditions as well as see it inter-racially—see leprosy steadily and see it whole, so to speak.

An observation of groups of Southern Indian and Chinese lepers reveals at once the fact that there is a striking racial difference in their types of leprosy. Out of a hundred and fifty Southern Indians (mainly Tamils and Telegus) examined this year, forty per cent. were almost wholly nerve cases. A similar examination of Chinese patients for comparison showed that less than twenty-five per cent. were predominantly nerve type. To this we must add two further observations. One is that the incidence of lepra-reaction is very much lower in the Indian section of Sungei Buloh and that the severity of advancing or acute phases of the disease seems generally much greater among the Chinese. The other is that the death-rate (not from leprosy) among Indians in Sungei Buloh is roughly about forty per mille; that of Chinese is nearly eighty per mille. These figures are roughly calculated from the percentage death-rate in the last eighteen months.

On the other hand, it must be remembered that these figures and observations are made from cases under institutional control, under the same type of treatment and in receipt of an adequate diet.

We cannot, of course, assess the effect, if any, of comparative racial immunity in accounting for these striking differences. The Southern Indian labourer outside the Leper Settlement sticks to his traditional diet—a diet deficient in vitamins, fats, proteins, and mineral salts. If the exacerbation of leprosy had any close connection with faulty diet, he would certainly be worse off than the Chinese labourer, who is singularly broad-minded about what he can eat.

There are, however, three other differences in racial habits which may to some extent throw light on this question.

1. The Southern Indian takes care of his skin. He has a medicated oil massage to the body every week. And the Indian—who oils and massages his skin—is relatively free from skin leprosy.

2. Diseases of the teeth and gums are less common among Southern Indians: At least seventy per cent. of Chinese patients in Sungei Buloh have pyorrhœa. My attention was drawn to the possible importance of this during the examination of arrested cases. No single person discharged this year (about 150 cases) has shown marked signs of pyorrhœa although other septic conditions were occasionally present. The suggestion is that pyorrhœa definitely exacerbates leprosy.

3. Southern Indians have a regular morning system of bowel hygiene, reinforced with all the religious and physiological weight of custom.

These characteristics of the Southern Indian, his poor diet and his more effective mouth, bowel, and skin hygiene (if we suppose that they are connected with the comparative mildness of his leprosy) seem to indicate that freedom from toxæmia is of more importance to a leper than the correction of faulty nutrition—that in the leper's metabolism cleanliness is more important than adequacy.

One or two interesting points arise from a consideration of the concomitant diseases of lepers observed in Sungei Buloh. It is difficult to avoid two conclusions. One is that in Sungei Buloh some diseases do not seem to be concomitant with leprosy; the other is that leprosy does not seem to be a concomitant of certain other diseases.

For instance, although the examination of the urine is a frequent routine procedure here, we have no record of glycosuria occurring in an active leper. In general hospitals in Malaya diabetes is not infrequent, especially among the carbohydrate-eating Southern Indians. It would be interesting to know the experience of other workers with regard to the absence or comparative rarity of diabetes among lepers.

Arterio-sclerosis is comparatively rarely found here, although not uncommonly observed among Chinese patients in general hospitals. Chronic nephritis is, of course, frequent in Sungei Buloh, as in leper hospitals elsewhere.

Manifestations of leprosy, as has been often observed, frequently disappear in the course of acute tuberculous toxæmia. This is almost invariably the case here, and similar retrogression of leprotic lesions is often observed with coincident grave toxæmia from disease of the liver or kidneys. I have noticed on four or five occasions a rapid resolution of leprosy in cases of severe jaundice.

These observations on the tendency of leprosy to disappear in the presence of certain systemic poisons are of

passing interest in the case of Father Damien. Father Damien, as is well known, contracted leprosy in Molokai. It was observed after his death that all signs of leprosy had disappeared from his face. This was considered to be a result of the sanctity of Father Damien's life. I have not observed sanctity as a concomitant factor in cases in the Federated Malay States showing a similar recession of lesions, and I suggest that Father Damien's death was due to chronic uræmia, in the presence of which the lesions disappeared.

This interaction of other diseases with leprosy seems full of interest, if we may conclude that certain poisons in the circulation can, and do, cause the disappearance of leprotic lesions.

A further point of interest rises from survey work in the Federated Malay States. The examination of over five hundred non-leper Chinese housed in the Federated Malay States Decrepit Settlement, and a further examination of some thousands of Indian labourers in rubber estates, revealed the fact that about ten per cent. of the total had palpable auricular nerves. There were no other clinical signs of leprosy. If the fact that an auricular nerve is definitely visible on stretching the skin, be taken as evidence of present or past leprosy,* the suggestion is that minimal infections are very much more common than is sometimes realised. Further work on this is being done as autopsies become available. It seems feasible, however, that, just as in tuberculosis, slight infections are not uncommon and that the disease may often become self-limited at a very immature stage. Among the poorer classes both leprosy infections and families tend to multiply: in both there may be a high infantile mortality.

The treatment of nerve pains and trophic ulcers deserves comment for two reasons. One is that these subsidiary scourges of leprosy form constant problems everywhere, and practical experience in their treatment is seldom inter-changed or pooled. In this connection the recent symposium of views on ulcer treatment in this journal is of particular value. The other reason is that prolonged and unnecessary misery can be and is caused by unskilled treatment. In nerve pains I have observed physical and mental damage caused by prolonged and uncontrolled administration of aspirin, ephedrine, and narcotics. In trophic ulcers one has observed with distress the effect of daily applications of external antiseptics based on the fetish of "keeping the wound clean" while extensive caries of bone within

*We think that such evidence is not conclusive—Ed.

remains untreated. With equal distress one has seen daily plugging of ulcers, blocking drainage, and driving infection up the interfascial sheaths, resulting in inevitable amputation or septicæmia. In the treatment of trophic ulcers the main reliance in Sungei Buloh is placed on strapping. If on palpation the exudation from a trophic ulcer contains tiny bubbles of gas this is held to be indicative of caries of bone. The bone is then thoroughly scraped, the wound cleaned and the cavity syringed with a solution of acriflavine in spirit. The limb is then strapped. Ulcers involving soft tissues are similarly cleansed with an alcoholic solution of acriflavine and strapping applied. Grossly contaminated putrefying ulcers are cleansed with 1 per cent. Chloramine which we have found especially effective as a deodorant and disinfectant. It is not necessary to buy expensive strapping. Any hospital can make up a cheap composition of wax, resin, zinc, and spirit, which can be smeared on bandages, applied, and left untouched for a week. The saving in daily dressings, and the results, more than justify a trial of this treatment.

In nerve pains we have found that a 10 per cent. solution of menthol in spirit rubbed along the line of the nerve sometimes produces effective relief. We have given up the administration of ephedrine or any other sedative by the mouth : ephedrine is used here only as an injection round the nerve. Injections of Cylophyllum oil 2-6 c.c. intramuscularly are often effective here and are the most popular form of treatment—they appear to have been a failure in some hospitals. We have found the operation of stripping the fibrous capsule from the ulnar nerve (which Dr. Lowe very kindly demonstrated to me in Dichpali) an invaluable procedure in thickened resistant cases.

In lepra reaction the routine administration of alkalis has been given up, as no benefit from alkali was found on comparison with control cases on acids. Potassium Antimony Tartrate, though undoubtedly useful, has been given up in favour of intravenous injections of Fluorescein in doses of 20 c.c. of a 2 per cent. solution bi-weekly. We have given as much as 100 c.c. of a 2 per cent. solution in a few acute cases without apparent ill-effects. (In a non-reaction case I have given as much as 350 c.c. of a 2 per cent. solution in a single dose.)

These reflections are neither scientific nor original. We have, however, so often found the benefit of informal views of visitors from other countries that we feel these random notes may be of some interest to other workers.