

Leprosy in India and Ceylon.

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IN the previous number of the REVIEW, I dealt quite briefly with the results of my tour in India, and in this concluding article I wish to consider the problem in Ceylon.

In view of the fact that Ceylon is an island, and on account of the comparative smallness of the territory, the leprosy problem is most limited, and therefore should be much more easily dealt with, and the possibility of controlling and eliminating the disease from such a country is a far more feasible proposition.

Leprosy has probably been in existence in Ceylon for many centuries. It was no doubt imported by invaders coming in from either India, or as some suggest, from Portuguese or Dutch sources. Owing to its proximity to the mainland, there seems to be no doubt that the disease has probably existed in Ceylon as long as it has in India. As so often occurs, the disease is patchy in its distribution, and the task which was set in attempting to sketch out a leprosy policy for Ceylon was no less than to attempt to find out where leprosy was prevalent and what measures should be taken in such areas. In the limited time at my disposal,

it was impossible to survey the whole of Ceylon, and therefore two areas were chosen, one a rural district and the other a municipality. The work was facilitated considerably by the fact that the Director of Medical and Sanitary Services put at my disposal the help of the two special officers who were appointed some months ago to develop leprosy work in Ceylon, and therefore, in summarising the situation in Ceylon, I wish to make it clear that this work could not have been done without their assistance. The best way, I feel, to clarify the situation for the readers of the REVIEW, is to abstract as briefly as possible the report which was submitted to the Government.

This report deals with the whole situation, under six heads, and concludes with the usual summary and acknowledgments. The first section deals with the review of the present position, and it is pointed out that the anti-leprosy measures to date have been organised on the basis of the "Leper Ordinance" of 1901, which was enacted in accordance with the then known facts. It is shown that at that time the principle of compulsory segregation was very widely accepted, and because the clinical types of leprosy had not been clearly understood, the only possible measure consistent with the available knowledge was to make leprosy not only notifiable, but to enforce segregation of some kind upon every sufferer. It is mentioned that the basic principle of segregation does not necessarily need to be altered, for where the leprosy problem is of comparatively small dimensions, compulsory segregation must play a part in the preventive system. Under the "Leper Ordinance" segregation came under two heads:—(1) home isolation, and (2) institutional segregation. It is pointed out that the system was entirely unsatisfactory for the case in the infective stage of the disease and unnecessary for the case not in such a stage. The general conclusion in the first part of the report was that leprosy does not appear to be a serious menace in the island, but it seems fair to conclude that the measures at present in vogue would not control the disease. The reason for this is given that in the two asylums the admissions have remained at the same level or higher, and will probably continue so unless the system is modified. That is, every infective case existing in Ceylon may pass on the disease to at least one other person.

With regard to the types of cases segregated, the majority of these were of the cutaneous variety, but the survey party found sufficient evidence to justify the conclusions that earlier cases had existed, especially among

school children, and that the majority of late cases have probably passed through the earlier stage before being discovered. It is pointed out that it cannot be too strongly emphasised that unless leprosy is considered as only one of the many endemic diseases of the country needing special methods of control, the money spent on the prevention of this disease will be out of all proportion to its seriousness. On the other hand an apathetic attitude which involves the consideration of the problem as one of minor importance, and not worthy of serious attention leads to unnecessary expenditure on segregation and the formulation of too rigid a system of isolation. Leprosy, like tuberculosis, is probably only infective in the open stage; that is only those individuals discharging bacilli from the skin or mucuous membranes can be considered a danger to the public. It is known that in an endemic area only a percentage of those infected pass on to the advanced stage of the disease; there are as many, if not more, individuals who are never detected because their disease does not appear in a stage which is recognisable to the ordinary physician. No measures need necessarily be taken with regard to these individuals, but they form a very useful indication as to the resistance of the population. It has been suggested by some authorities that leprosy is a disease of childhood and early adolescence, and of those infected only a small percentage pass on to the more serious stages of the disease; in the others the disease becomes arrested by the time adult life is reached. In Ceylon, at present, it is only the more advanced cases that are discovered, the progress of those with early signs of a leprotic infection is neither known or watched; thus, up to now it has been impossible to control the spread of the disease, because many pass into the non-infective stage and remain in that stage, infecting others for months, or even years, before it is discovered. The recognition and observation of these early lesions in leprosy is a matter of utmost importance in any scheme of prevention; some of these will become arrested (the abortive lesion), others will advance, and as soon as activity has been noted in them, the case, usually a young person, can be placed under treatment at once.

This question with regard to the so-called abortive case is being dealt with in an article which will appear elsewhere.

The situation in the Eastern Province is then dealt with, and conclusions were based on surveys of two of the most populous districts, that of Kalmunai and Batticaloa. The method adopted was first the visitation of the contacts of

all known cases and those cases which had been granted home isolation or who had been discharged on parole. In addition to this an inspection was made of all available school children. The importance of this latter step cannot be too strongly emphasised because it is among school children that the index of infection can be estimated, and it is these persons who show the earliest type of lesion. It will be stressed more than once in this report that because a school child has signs of a leprotic infection, it is not a *sine qua non* that it needs immediate treatment. It is pointed out that in any survey, it is not the number of cases that is really important, but it is the age group and type of cases that should be stressed. For instance, an area where the cutaneous type is prevalent is probably much more serious than one where only neural cases are seen. It is further suggested that a high incidence amongst school children is possibly indicative that the disease is spreading and active measures should be undertaken, to endeavour to prevent further spread. Colonel Stewart, in an address at the Calcutta Leprosy Conference likened leprosy to an epidemic disease and suggested that it is important to know whether the epidemic is on the down curve or on the up curve. It is suggested that possibly if the age group is high and the proportion of infective cases not unduly great, then it is possible that the disease is on the down curve of the epidemic, and will in the course of time come under control. On the other hand, if the age group is low and the proportion of infective cases high, it may be legitimately concluded that the disease is spreading in such an area, and unless measures are taken, may infect a considerable number of people over the years. Because it is manifestly impossible to deal with every area, selected districts should be chosen, and if these are chosen along the above lines then it is felt that in all probability, if the disease is controlled in areas where it is spreading, leprosy in the other areas will tend to come under control. Viewing prevention in this light brings the problem within manageable proportions. The general conclusion with regard to the situation in the Eastern Province was that leprosy is probably no longer a serious menace in that area.

The situation at the Mantivu Leprosy Settlement is dealt with, and various recommendations are suggested.

The municipality which was chosen for investigation was that of Colombo, and the plan of campaign was along similar lines to that followed in the Eastern Province. The situation in the municipality of Colombo was extremely

interesting in that a higher proportion of school children were found to be infected. The average rate among the schools which were examined was just under three per thousand. In all 43 cases were discovered, 25 of whom were children. The brief survey of Colombo suggested that the disease may be spreading in certain areas. This is not at all unlikely, for when leprosy is introduced into an overcrowded municipal area, the chances of spread are considerable. It was in such areas that there appeared to be definite foci of leprosy which needed further investigation, and it was suggested that these areas should be surveyed in detail. It was suggested that all schools in Colombo should be examined, and thus it may be possible to discover other areas of spread. While the survey party was in the municipality some 13,700 children were examined.

During the time spent in Colombo, ten mornings were spent at the Hendala Settlement, and clinical demonstrations were conducted. In addition to this, a series of five lectures was given to the medical students at the Colombo Medical College. Recommendations with regard to the Hendala Settlement were also noted. The last part of the report deals with general recommendations regarding the situation in the island which will now be briefly alluded to.

RECOMMENDATION I.

This deals with the necessity for the modification of the present leprosy ordinance, as the system in effect appears to be too rigid. While Leprosy Ordinances are useful they should be looked upon in the same light as any other emergency measure, not to be applied unless it is unavoidable. The result of the enforcement of the Ordinance has been threefold :—

(1) Neural cases have been admitted, or readmitted, who, according to present knowledge, do not need segregation.

(2) The criteria for the discharge of a patient have, generally speaking, not been strict enough.

(3) The granting of home isolation, a provision made to avoid segregation, has resulted in an unsatisfactory state of affairs. In addition to this the formation of a Leprosy Board was suggested, consisting of the Director of Medical Services or his representative, two special leprosy officers, and the medical superintendents of the two settlements. The function of this Board would be to see all cases needing segregation or parole, and to decide with regard to the discharge of patients. It would also decide whether a

given patient needed isolation, treatment alone, or both. Thus every case would be seen by a group of men well versed in the diagnosis of leprosy, and mistakes would be avoided. It was suggested that only in a case where patients refused to go to a settlement, after the advice of the Board, should the Leprosy Ordinance be enforced. It was further stated that probably no closed case needed segregation, the only exception to such a principle would be in the case of children or adolescents who, in spite of treatment, were not improving, for active cases amongst children should always be taken seriously and be put under the best conditions if treatment is to be successful. Further suggestions were made concerning the duties of the medical superintendents of the asylums and concerning the period of treatment and conditions for discharge, and regulations for the following up of cases which were discharged. It was emphasised that in any scheme for the control of leprosy the examination of contacts was most important. When a case is first discovered the contacts should be traced, for it is easier to find them before suspicion is aroused, than after a period of time when the case has been isolated for some years, and all the members of his family live in fear of being isolated. Therefore, as soon as a suspected case has been reported, all possible contacts should at once be traced if the patient has been found to be suffering from leprosy. This applies whether the case is an open or closed one. The necessity for this step was illustrated on more than one occasion, when the source of some very early lesions in school children were traced to an infected member of the household who had never previously been suspected. It was not considered wise to bring pressure to bear on relatives to declare all contacts. Any form of compulsion at this stage defeats its own purpose, and when the public realise it is better for them to be examined, then they will come forward voluntarily for examination. When a previously unknown case is discovered it is better to try and persuade the individual to undergo voluntary isolation than to apply any Ordinance.

The next section of the report deals with the anti-leprosy measures in rural areas and anti-leprosy measures in municipalities. It was suggested that the districts in the Eastern Province, which needed special attention, were those of Kalmunai and Batticaloa, and at the hospitals in both these districts the medical officer in charge should have the necessary drugs available for the treatment of cases outside the settlements. Further, should cases be

found too far away to attend these hospitals, and treatment is needed, this should be made available at the nearest Government dispensary, provided the apothecary (dispenser) had some previous training. Unless large numbers of cases were discovered it was not considered necessary for the Eastern Province to establish a special leprosy centre, as it was thought that it would be better for the general hospitals to treat any cases. Further it was suggested that a complete leprosy prevention unit should be established which would make provision for the following :—

- (1) Periodic examination of early cases, of contacts and parole cases.
- (2) Further surveys.
- (3) Propaganda and training.
- (4) Treatment of early active cases.
- (5) Isolation of infective cases.

Where there is a Medical Officer of Health, his department might be responsible for the first three items ; the hospital would be the natural place for cases to go for treatment, and the settlement for those needing isolation. There should, therefore, be close co-operation between the Health Department, the Medical Department and the Medical Superintendent of the institution.

With regard to anti-leprosy measures in a municipality, conclusions were based on the results of the preliminary survey of Colombo. It was stated that there seemed to be no doubt that a sufficient number of early active cases would be discovered to warrant the organisation of a special leprosy prevention unit. This unit should be in charge of a medical officer with some special training in leprosy. When the Survey Officers have completed a more detailed survey of Colombo, one of their duties will be to organise such a unit, and they should be in charge until it is established. As much of the work of the unit will be connected with school children, it might be thought advisable to place a school medical officer in permanent charge after having special training in leprosy prevention and treatment. At this prevention centre all information concerning leprosy, its prevalence, distribution, etc., etc., will be kept, all contacts, suspicious cases, and paroled cases watched and examined, and early active neural cases will be treated. In addition, instruction courses for nurses, public health workers, school teachers and others, should be instituted, and propaganda measures for the education of the public carefully organised and supervised. There must, however, be a close liaison

between such a centre and the leprosy settlement, so that each is aware of the other's activities. When a case is discharged from Hendala, all details should be forwarded to the leprosy prevention centre.

Until the special leprosy prevention unit was organised, it was suggested that facilities might be made available at the general hospital in Colombo. It was emphasised that with regard to the investigation of cases of leprosy, this as far as possible should be confidential.

RECOMMENDATION II.

This deals with the place of institutions, and shows that ideally, provision should be made for five classes of institutions :—

(a) Early infective cases likely to improve under treatment.

(b) Late infective cases not likely to improve under treatment.

(c) Infective cases among children.

(d) Crippled cases who are a charge on the Government.

(e) Paying patients.

It was pointed out that on account of the expense it was hardly practical to develop these five types of institutions separately, but it should be possible to organise an institution for the first, third and last type of case, and one for the second and fourth. Further suggestions are made concerning the place the two existing institutions in Colombo would play in such a scheme.

RECOMMENDATION III.

This concerns the place of voluntary isolation in anti-leprosy schemes. There is no doubt that the nearer to a voluntary system any anti-leprosy scheme approaches the better it is. Inasmuch as leprosy is a limited problem in Ceylon it is desirable to have a Leprosy Ordinance for those who will not voluntarily put themselves under isolation. Every case, however, should have the option of being a voluntary patient and should be entitled to certain privileges. It was suggested that if a case either declares himself voluntarily or agrees, when discovered, to go into isolation, he should be considered a voluntary patient. Under the new system suggested this would result in a division of those cases isolated without the need of applying the Ordinance, and those cases segregated

under the Ordinance, the former would be considered voluntary inmates.

In addition to the voluntary institution, it was suggested that a dispensary school might be developed as has been done so successfully by the authorities in Dutch Guiana.

RECOMMENDATION IV.

The question of training and propaganda is considered the need for adequate instruction of all medical students in the treatment, diagnosis and prevention of leprosy is emphasised, and the necessity for the education of the general public and all who sway public opinion is stressed. The lines along which such education should be conducted are laid down.

RECOMMENDATION V.

This is concerned with the work of the Survey Officers, and divides the work under two heads:—(1) To ascertain as far as possible the incidence of leprosy in the island, and (2) to organise anti-leprosy measures in those areas where there is evidence of the spread of the disease.

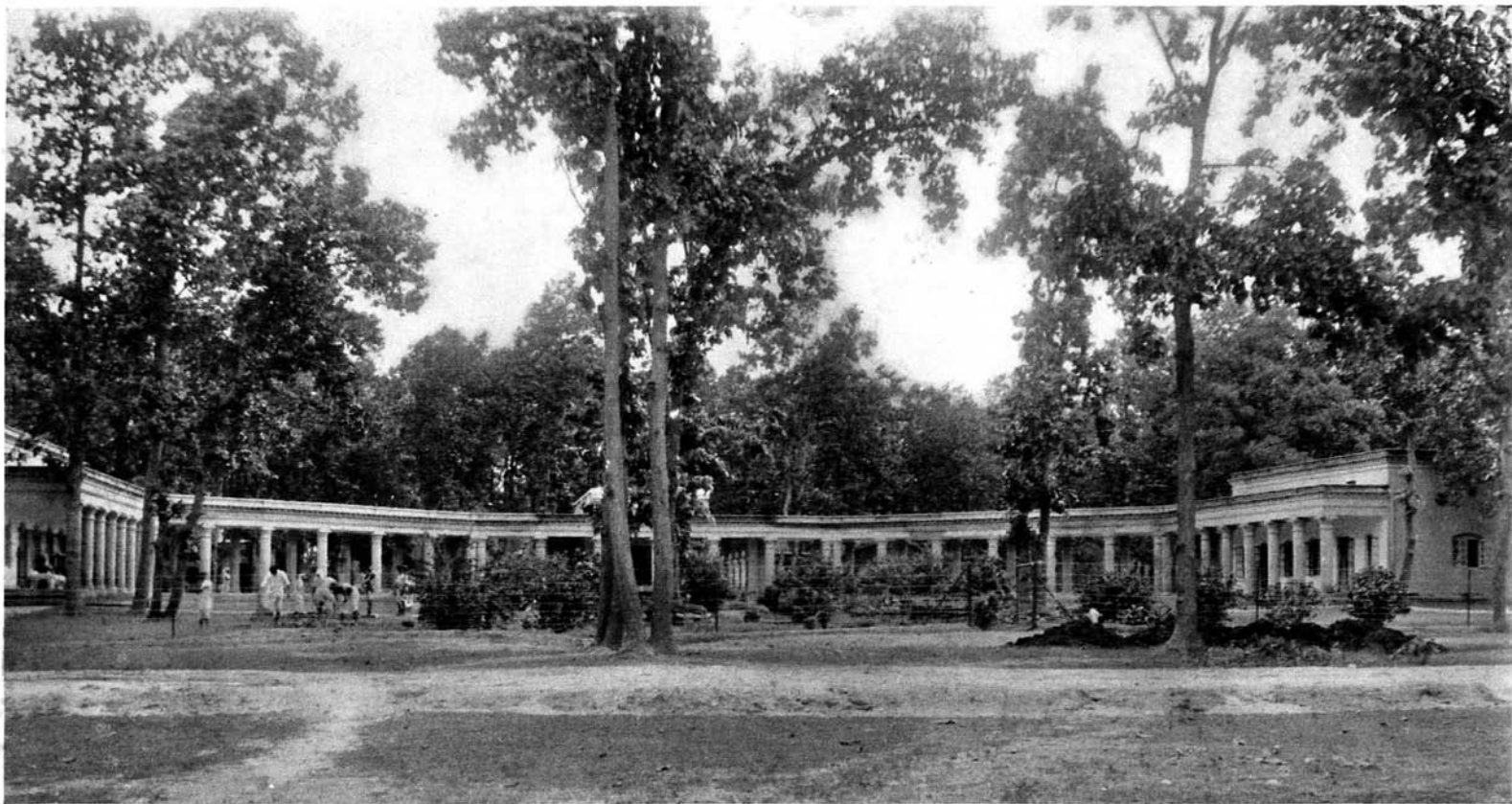
RECOMMENDATION VI.

This deals with the entrance of cases into the country, and notes that there is no doubt that an adequate inspection is made of immigrants from India at the Mandapam Camp. It is, however, stressed that it would be well for medical officers in charge of this camp and others who are dealing with immigrant persons, to have further instruction in the diagnosis of leprosy.

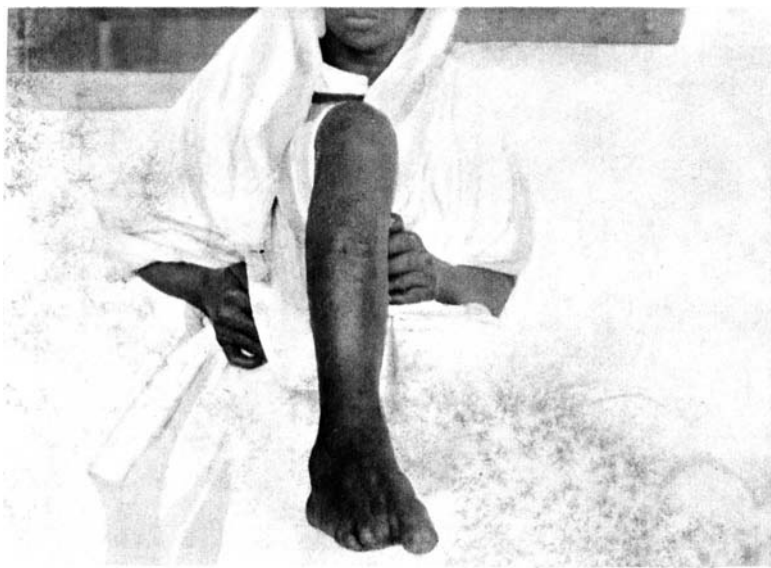
The last section of the report deals with the customary conclusions and acknowledgments, and special thanks are tendered to the Director of Medical and Sanitary Services, whose advice and help was at all times available, and to those officers who assisted in the field and the medical superintendents of the two institutions, without whose help and wholehearted support, the work which was accomplished would have been very difficult.

In concluding these articles on the leprosy situation in India and Ceylon, I should like to make acknowledgment to all those who assisted me while I was in India, and especially would I like to put on record the help that was given to me by Mrs. Miller, Consulting Surgeon to the leprosy hospital at Purulia, for her valuable aid and advice.

PURULIA LEPROSY COLONY



VIEW OF THE THREE HOSPITAL WARDS AND CONNECTING PASSAGES



RESULTING SCAR AFTER REMOVAL OF SECOND AND THIRD
METATARSALS



THE FINE SCAR AFTER REMOVAL OF FIFTH METATARSAL.
(Mrs. Miller's Case).

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