LEPROSY IN THE BRITISH WEST INDIES AND BRITISH GUIANA

By

ERNEST MUIR

Superintendent of Chacachacare Leprosarium
Trinidad, B. W. I.

The writer's experience in the British West Indies is confined chiefly to Trinidad but he has also had opportunities of studying leprosy in British Guiana, Jamaica, Barbados, Antigua, St. Kitts, Nevis and St. Lucia. Leprosy has certain distinctive features in the Caribbean area which it is the object of this paper to describe.

INTRODUCTION OF LEPROSY

There is an almost unanimous opinion that the aboriginal Indians of the Western Hemisphere did not suffer from leprosy before the arrival of Europeans. Even to this day the tribes which hold aloof from close intercourse with immigrants from the Eastern Hemisphere and their descendants remain free from the disease, though it attacks those who mix with leprosy-afflicted races.

Leprosy was wide-spread in Portugal and Spain when the original European discoverers and immigrants crossed the Atlantic, and there are records of its introduction by the Spaniards into South America as early at 1543. An even more important source was the African slave trade. Leprosy is especially frequent in southeastern Nigeria from which slaves were recruited for the West Indies. A third avenue of infection was through indentured labor imported from India between 1837 and 1917. In many of the areas from which this labor was recruited, such as the eastern part of the United Provinces, the incidence of leprosy is high. Some three hundred persons suffering from leprosy were at one time repatriated to India from Trinidad. This last source is more limited in its extent, as indentured labor from India was confined to Trinidad and British Guiana and, to a lesser degree, Jamaica and St. Lucia. In Trinidad one-third and in British Guiana about a half of the population are Indian.

PREVALENCE

Taking into consideration its morbidity and mortality alone, leprosy cannot be considered as of major importance in the British West Indies and British Guiana. But there are two other criteria which enhance its importance. Because of the social handicaps which it creates leprosy is dreaded, especially by the more educated and cultured members of the community, in a far higher degree than the more frequent and fatal diseases. Secondly, leprosy could be controlled and eradicated with comparative ease and speed if

certain simple measures were adopted and persistently carried out.

In the area under review about 1145 cases are given in recent reports as isolated in institutions. They are as follows: Jamaica 165, Leeward Islands 75, Windward Islands 56, Barbados 76, Trinidad 399, British Guiana 374. The number of unisolated cases is difficult to judge accurately, because of concealment and absence of any general systematic survey. Dr. Rose estimates from his wide experience that there are about 1000 in British Guiana; there are approximately the same number in Trinidad; in Barbados the number is probably not less than 200; in St. Kitts and Nevis about 80; in Antigua about 50; in St. Lucia perhaps 50; in Dominica there is said to be a certain amount of leprosy, probably not less than 50 cases; in Grenada and St. Vincent the number is probably not more than 30, and in Montserrat and other small islands the disease is said to be almost unknown. In Jamaica the exact prevalence of leprosy is unknown, but taking it to be, as in British Guiana and Trinidad, about two and a half times the number in segregation, there would be approximately five hundred cases. Thus in the whole of the British West Indies and British Guiana there are probably fewer than 3000 persons with leprosy.

Epidemiological Factors

In the Colony of Trinidad and Tobago a rough leprosy survey has been attempted by the writer. About three-quarters of these islands have been surveyed, but the part not yet completed appears from the number of cases it furnishes to the leprosarium to be the most seriously affected. The distribution of leprosy in the Colony is very unequal. In Tobago and in the northeastern counties of Trinidad, parts not yet industrialized where the people live in small villages and till lately have been stationary, the incidence is very slight. On the other hand, leprosy is most common in the industrialized oil-producing and sugar-manufacturing areas. It is particularly common in and around the principal town, Port of Spain, and along the great eastern road, where housing is congested and the population constantly changing. The reverse seems to be true of yaws which is most common in the rural and inaccessible parts of the Colony, especially northern and eastern Tobago.

Another example of the association between population movement and occurrence of leprosy is found in St. Lucia. Many people in that island have strong family ties with Cayenne (French Guiana) where leprosy is particularly rife. Of the 29 patients in the Leper Home in St. Lucia, six had resided in Cayenne and 12 more showed indirect contact with that country through relatives; only in 11 was there no history of such direct or indirect contact. Likewise in Jamaica 18 of 172 patients examined in the Leper Home had apparently acquired the disease in either Cuba or Panama, while others had been indirectly infected from these sources. Even in Tobago, which is mentioned above as having a stationary population and little leprosy, the seven cases from that island which I

was able to trace in the Trinidad leprosarium had probably acquired the disease outside of Tobago; they had all travelled considerably and had stayed in places where leprosy is common, either in Trinidad or elsewhere.

Though leprosy is on the whole a disease of low infectivity, one of the most important factors in its spread is that the lepromatous type often continues in the infectious stage for a considerable time before it becomes conspicuous either by outward signs or by affecting the health of the individual. Thus prolonged exposure of contacts may take place before the danger is recognized. Patients of this type admitted to the Chacachacare Leprosarium, when asked how long they have been ill, will say "a few weeks," whereas it is obvious to anyone acquainted with leprosy that they have been in an infective state for months or years.

In the West Indies, as in many other places, leprosy is considered both hereditary and contagious. Thus not only is the person known to have leprosy shunned but also his relatives. This unreasonable attitude often results in persecution but in a small, closed community it does tend to limit infection. On the other hand, in an industrialized and shifting population, the chance of infection being spread from unrecognized, masked cases is much greater.

In the inaccessible hamlets in Tobago leprosy would have little chance of entry, or if it did enter it would be likely to become known and be promptly dealt with, as indeed did happen in the seven cases sent to the leprosarium. In contrast to leprosy, yaws seems to be looked upon as are chickenpox and measles in England, a disease of childhood which has to be passed through. It is not even considered repulsive, so much is it taken for granted. It is only when contact with the outside world with its greater cleanliness and better clothing makes the parents ashamed of the condition of their children that they seek treatment.

In Jamaica the focal nature of leprosy is seen particularly in six of the 14 parishes. In the mountainous area where Trelawney, St. Ann's, Manchester and Clarendon parishes meet, leprosy has been common in certain families for several generations. This is supposed by some to have followed the immigration of members of a foreign community about a century ago. It is not remarkable therefore that it is supposed by the rural population to be hereditary. The consequence is that, while they recognize tuberculosis as infectious and are willing to help the public health officers to take measures for its control, they adopt a fatalistic attitude towards leprosy. This shows that the control of leprosy must be preceded by an educative campaign which will enlighten the population as to its real nature.

The effect of such a campaign is illustrated by an occurrence in Trinidad. A village school was examined and three children were found suffering from comparatively early leprous lesions of

the neural type. As they were non-infective, arrangements were made for treatment at an out-patient clinic. A short time afterwards I was asked by the sanitary inspector of that district to visit a certain village where there was a woman whom he suspected of being an open case and who had avoided examination for some time. We found the suspicions to be well founded; the woman was in the advanced stages of open leprosy. Following confirmation of the diagnosis a number of villagers asked to be examined. Eight were suffering from leprosy, all with more or less early neural lesions. One of the three children with leprosy discovered at the school examination belonged to this village. The villagers, comparing this boy's lesions with their own or those of their children, suspected that they also had leprosy. What encouraged them to come forward for examination was that this boy, instead of being sent away to the leprosarium, had been treated as an out-patient and had shown distinct signs of improvement within a few weeks. The villagers, realizing that they had acquired leprosy from this woman, offered their assistance in seeing that she did not abscond before she was removed in an ambulance. All these early cases were immediately enrolled as out-patients at a neighboring treatment center.

This incident illustrates several important factors in the control of leprosy:

1. Ignorance of the general population of the nature of leprosy. The villagers had mixed freely with an open case of leprosy without being aware of their danger.
2. Liability of a single unrecognized open case to spread infection in a village.
3. Importance of training sanitary inspectors and health nurses in the recognition of leprosy.
4. Importance of out-patient treatment centers for suitable "closed" cases.
5. Willingness of villagers, both patients and non-patients, to cooperate in control and treatment once they understand the simplest facts about leprosy and especially that the early neural type will yield to out-patient treatment.

While leprosy in a small village can be controlled in this way, the matter is not so simple in an industrial area with a roving population. The appearance of a health officer or sanitary inspector may frighten the patient away to another area where he will not be known or suspected. In aiming at ultimate control it is therefore necessary to make a systematic attempt (a) to list all cases and, as far as is practicable, all contacts with open cases, especially children; (b) to examine periodically all listed persons, keeping the lists up to date, and (c) to obtain the complete cooperation of the health department. This requires that all physicians, and especially medical officers of health should be able to recognize the dis-

ease in all its forms. It also requires that all sanitary inspectors and health nurses should be familiar with the appearances of leprosy.

In keeping systematic records the following six lists are suggested:

1. Cases segregated in institutions, classified by clinical type.
2. Open cases satisfactorily isolated outside institutions.
3. Closed cases not in institutions but under treatment.
4. Cases not under proper treatment or control, either absconders from institutions or those who are known but have so far eluded the public health authorities.
5. Cases with arrested disease discharged from institutions.
6. Contacts with open cases, especially children.

To ensure coordination and to assist the medical officers of health in maintaining these lists, a special officer should be appointed. He might be a sanitary inspector or a clerk, familiar with the main facts about leprosy and especially its control. In a large colony such as Jamaica, Trinidad or British Guiana this office might be a whole-time post, in smaller colonies like St. Kitts and Antigua the duties might be part-time. Among his duties would be to visit the various health districts, check the lists and ascertain whether they had been corrected for changes in residence or clinical status.

Importation of Leprosy

With the exception of British Guiana, the Colonies under review have the public health advantage of being shut off from other countries by the sea. British Guiana is surrounded on three sides by other countries (Dutch Guiana, Brazil and Venezuela) in all of which the prevalence of leprosy is reported to be fairly high. Because of the nature of the boundaries, chiefly wild, unfrequented country, migration of population is difficult to control. And while in Dutch Guiana systematic measures to control leprosy have been in operation, in French Guiana leprosy is particularly common and accounts state that no sufficient precautions have been taken to prevent its spread.

St. Lucia, the most northerly of the Windward Islands, although far distant from French Guiana, is directly affected by its high leprosy prevalence as has been stated above. The importation of leprosy into Jamaica from Cuba and Panama has also been mentioned.

It is difficult to see how the importation of leprosy can be checked until effective control is instituted in all countries in which it is endemic. It is to be hoped that public health measures for securing this will be undertaken by international agreement after the war.

Leprosy in Each Colony

There are institutions for leprosy in British Guiana, Trinidad, Jamaica, Barbados, St. Kitts, Antigua, Dominica, St. Lucia, Grenada and St. Vincent. Only in British Guiana and Trinidad are there whole-time medical officers in charge.

British Guiana. Until recently, only in British Guiana has a serious and consistently sustained attempt at leprosy control been made. This Colony has had for the last 16 years the benefit of a leprosy expert who, as Medical Superintendent of the Leprosy Hospital, has by his skill and sympathy attracted patients to enter voluntarily. He has established a series of out-patient clinics for treatment of closed cases, has kept in touch with those discharged from the institution and instituted an educative campaign. Although segregation is required by law, compulsion is now seldom required. Patients find suitable employment with remuneration, arrangements for sports, cinema entertainments and concerts. Nursing is undertaken by Roman Catholic Sisters. Medical treatment is given by the Medical Superintendent and the Assistant Physician. Large numbers of patients have recovered and this has been effective in encouraging others to come early for treatment. Also much has been done by the local branch of the British Empire Leprosy Relief Association to supply comforts and means of entertainment, to educate the public and to furnish aftercare. For the latter purpose a fund of two hundred pounds a year is granted by the government and distributed by the Medical Superintendent.

Trinidad. In Trinidad leprous patients were formerly isolated at Cocorite in the suburbs of Port of Spain. This was found unsatisfactory as the movement of patients could not be controlled. A site for a new institution was chosen at Chacachacare, an island in the Bocas or Dragon's Mouths, the channels through which the Gulf of Paria is entered from the Caribbean Sea. Chacachacare is about 20 miles from Port of Spain. In three respects it is ideal for a leprosarium: the climate is dry and comparatively cool; it is free from malaria, and it is far enough from other dwellings to secure segregation. Likewise, it has three disadvantages: the water supply is from the roofs of the buildings and is inadequate, at least in the dry season; there is insufficient agricultural land, making it difficult to obtain fresh vegetables and provide work for the patients, and its isolated position makes it difficult and costly to bring in supplies and imposes a strain on the healthy staff.

In spite of its disadvantages it has been possible to make the institution increasingly attractive and most of the patients are now admitted voluntarily.

Until recently little systematic attempt was made to control leprosy in Trinidad beyond furnishing this place of isolation. Most of the patients with the lepromatous type had been in an infective state for years before entering the institution. During the last few months it has been realized that this alone could not control the

disease. Courses of instruction for doctors, sanitary inspectors and health nurses have been held, schools have been surveyed and much has been done to enlighten the people on the nature of leprosy. Arrangements are made for medical officers of health to spend some months at the leprosarium and it is hoped to establish a system by which all cases will be placed under supervision.

JAMAICA. In Jamaica leprosy is not as prevalent as in British Guiana and Trinidad. The leper Asylum is situated on the outskirts of the old capital, Spanish Town, on a malarious site. The buildings are congested and of the nature of barracks. There are 177 patients in the Asylum and some 80 more outside are known to the Public Health Department. But there are probably not less than 500 on the island. In a recent visit I advised the appointment of a whole-time leprosy expert, three months study by all medical officers of health at the leprosarium, improvements in this institution which would attract patients instead of repelling them and a gradual survey of leprosy, especially in the schools and among contacts. Support in carrying out this program is promised by the Medical Adviser to the Comptroller for Development and Welfare in the West Indies. The chief obstacle is the shortage of available physicians.

Under the present Leper Asylum Law, admission and discharge of patients is in the hands of the Resident Magistrate. Obviously the control of leprosy should be a function of the Health Department.

BARBADOS. In Barbados there are indications that leprosy is on the decrease. In the Lazarette in 1924 there were 174 patients, but in 1941 the number had diminished to only 57. In studying the statistics available from 1924 till 1941 it was noticed that while the number of deaths during the first seven years of this period was 0.77 times that of discharges, during the last ten years the number of deaths was about 3.26 times that of discharges. The place has gradually become one of stagnation and depression in which the majority are in a hopeless condition, a residue which has survived but gone beyond recovery.

In consequence, the institution is avoided as much as possible by patients outside. By law, only those persons with leprosy who are convicted of plying certain trades, using hotels or other public buildings or found begging in the streets are liable to compulsory internment. The 12 patients admitted within the last year were all in the advanced stages of open leprosy and must have been potential spreaders of infection for some years before admission.

There are at present no reliable data for calculating the amount of leprosy in the Colony or for estimating whether or to what extent it is diminishing under the present methods used for its control.

My recommendations were similar to those for Jamaica, and the government is now prepared to appoint a full-time specialist

to study leprosy in the Colony and to introduce measures along the lines indicated. As in Jamaica, the chief difficulty is the shortage of available physicians.

THE LEEWARD ISLANDS. The principal islands in this group are Antigua, St. Kitts, Nevis and Montserrat. In the third of these, leprosy is said to be almost non-existent and the few cases that have been found have been sent for isolation to the Leper Home in St. Kitts.

Antigua. There is a Leper Home with 38 patients. Of these only 18 were found to be open or infectious cases. The site is good but the buildings are badly in need of improvement. Medical attention is given once a week by the district medical officer, who because of other duties is unable to give much supervision or treatment. The caretaker in charge was quite unsuitable for the purpose. A well-educated ex-patient has now been sent to Trinidad for special study and when he returns to Antigua he will be able to do much to ameliorate the condition of the patients by attending to their dressings and minor ailments and by organizing employment and recreation.

The Leper Act provides for compulsory segregation in the Leper Home of those duly certified as suffering from leprosy; but a provision is made that, if the person suffering from leprosy is able to provide himself with effective isolation outside in accordance with certain rules, he is allowed to do so. Excessive use has been made of this provision, a good many open cases are allowed to live outside, and, from what I was able to see, it is clear that the rules were not being carried out satisfactorily.

Several closed cases could be safely discharged from the leprosarium and several open cases at present outside should be sent there for isolation. A clear distinction should be made between these two classes of patients. Open cases remaining outside should be much more strictly supervised.

It is important that the physician in charge of the leprosarium and of leprosy control should study leprosy in some suitable institution such as that in British Guiana or Trinidad.

St. Kitts and Nevis. In St. Kitts leprosy has been apparently a more serious menace than in Antigua. Perhaps on that account, or because leprosy has been taken more seriously, important steps have been made during the last few years to bring about control. The Leper Home is on a good site. I found 48 patients, 27 being open, 19 closed and two without leprosy. The buildings, with separate rooms for each patient, are among the best and cleanest I have seen anywhere. The visiting physician takes a special interest both in the patients in the Home and in those outside. The "Master" or Superintendent of the Home has now been sent for special study at Chacachacare.

At present 21 known patients are allowed to live outside. Six of these are arrested and are resident in a small settlement outside

the Home. I visited 13 others in their homes. Eleven were either arrested or closed and two were of the advanced open type. Though there are doubtless a few other unknown cases, it seems unlikely that there are many. A visit to Nevis, the neighboring island, gave evidence that all active, or at least open, cases had in recent years been removed to the St. Kitts Leper Home.

THE WINDWARD ISLANDS. In St. Vincent there are 18 known cases and in Granada only 12. These include no new cases and no children. In St. Lucia and Dominica leprosy is still of some importance.

St. Lucia. In this island, as is mentioned above, the disease is very much bound up with its connection with French Guiana. Of the 29 patients in the Leper Home 21 are of the open lepromatous type and of these 19 are advanced (L3) cases. The way in which the disease may be spread in this island is shown by the case of one patient. He acquired leprosy in Cayenne and died in the Home ten years ago. Five of his sons and daughters and one grandchild, all L3 cases, are now in the Home. There are still ten other grandchildren alive, but I am unable to say if any of them has as yet shown signs of the disease.

The shortness of my visit to St. Lucia made it impossible for me to follow up contacts, but the fact (a) that there are so many advanced lepromatous cases in the Home, many of whom just have had ample opportunity to transmit the disease before their admission, and (b) that in one family so many have acquired the disease, leads one to suspect that there may be many other unknown cases on the island.

The Senior Medical Officer hopes to proceed to Trinidad to make an intensive study of leprosy. Here again shortness of staff is the main difficulty. A careful survey is necessary and those in contact with French Guiana should be kept particularly in mind.

Dominica. The difficulty of communications with this island have made it impossible to pay it a visit.

A Leper Home was opened four years ago, but the full extent to which leprosy exists is not yet known.

OTHER COLONIES. In British Honduras, the Bahama Islands and Bermuda, according to all information available, leprosy as an endemic disease appears to be of little importance.

A CENTRAL LEPROSARIUM

In Section 8 (c) of the Recommendations of the West Indian Royal Commission it is stated: "There is a special need for the centralization as between Colonies of mental and leper institutions."

As regards the latter, the proposal appears to be an excellent one for at least two kinds of patients: (a) the lepromatous, who have a chance of recovery when placed at an early stage under intensive treatment, and (b) the neural with little or no deformity,

but in whom there are fairly extensive leprides making constant and careful treatment necessary for recovery.

There are three kinds of patients who would be unsuitable for sending to a distant center: (a) the early neural, who are likely to recover under a short course of treatment either at home or at a clinic; (b) the advanced lepromatous, and (c) those in whom there are already serious deformities and in whom the disease is tending gradually to exhaust itself.

There are three obstacles in the way of sending suitable patients to such a center as that at Mahaica in British Guiana or Chacachacare in Trinidad: (a) Transportation; an almost insurmountable obstacle in time of war but one which should be possible to overcome when peace is restored. (b) Long and often permanent separation from friends and relatives. Patients desiring to be sent would be required first to understand and accept this hardship. (c) Existing exclusive leprosy laws would have to be modified.

It is hoped that after the war, with the financial assistance of Colonial Development and Welfare Fund, suitable patients may be sent to Mahaica or Chacachacare. From the climatic point of view probably the latter would be the more suitable and it would be nearer to the islands concerned.

Summary and Conclusions

1. Neither in the British West Indies nor in British Guiana can leprosy be considered from its morbidity or mortality to be a major disease. But the mental distress which is causes, both to the patient and to his relatives, makes it a disease which it is important to control and eradicate.

2. The fact that in certain areas, as for example in British Guiana and St. Kitts, a consistent policy has brought leprosy to a position at least approaching control within a comparatively short period, emphasizes the importance of maintaining consistent efforts in other areas. The comparative smallness of the problem should give it precedence, rather than cause it to be laid aside till other larger problems are solved.

3. Leprosy is seen to be a disease associated with a low level of sanitation and standard of living; it is aggravated by industrialism, especially when this involves living in congested dwellings, migration from one place to another and especially visiting other countries where leprosy is common.

4. The familial distribution of leprosy is favored by its concealment, a result of the attitude of the people toward the disease.

5. For the control of leprosy the primary essential is better knowledge on the part of the medical profession. In each unit (colony or island) where leprosy is still active there should be at least one physician who has made an intensive study of the disease. Leprosy is no less difficult to understand than tuberculosis and an

adequate knowledge is difficult or impossible to acquire without study at a suitable center.

6. The second essential step is the survey, special attention being paid to the examination of school children and of contacts with open cases.

7. It is important also to make all institutions for segregation as attractive as possible, by giving the best treatment and nursing available, and by arranging for suitable and beneficial occupation.

8. Facilities should be provided for suitable patients who so desire to be transferred to a central leprosarium which might serve all of the British West Indies and British Guiana.