The Bankura Leprosy Investigation Centre.

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INTRODUCTORY.

THERE are many problems connected with leprosy which cannot be thoroughly investigated in an urban centre such as that at the Calcutta School of Tropical Medicine. Leprosy is primarily a village disease and it is in rural conditions that its epidemiology and its control can be most conveniently studied. The truth of this statement will, it is thought, be borne out by this paper.

LOCATION.

Bankura was chosen for several reasons. It is one of the most highly endemic areas in India. It is within six hours run by train from Calcutta. There is already a leper home under the Mission to Lepers with some 150 beds, and there are several special leprosy clinics under the District Board. There is also a medical school in the town of Bankura.

The Bankura District is divided into two sub-divisions, Sadar and Bishnupur. The former has a laterite soil, and is poor in fertility and subject to periodical famines; the incidence of leprosy is far higher than in the Bishnupur sub-division which has a more fertile alluvial soil. The Sadar subdivision (population 788,608) is divided into 13 thanas. After a preliminary survey it was resolved to concentrate on the Sadar thana in the centre of which is the Bankura town. This thana has a population of 109,706 inhabitants and contains 11 smaller divisions under Union Boards. Each of these Union Boards has on an average some 7,000 inhabitants and contains 25 to 30 villages. The eleven Union Boards of the Sadar thana were visited in turn and the methods of leprosy control explained to the villagers with a view to ascertaining what amount of local co-operation would be available. The Achuria Union Board was fixed upon for the initial experiment.

LEPROSY CONTROL.

The procedure adopted is as follows. The investigation party consists of three doctors experienced in leprosy work, and five trained but unqualified assistants. Accommodation was kindly given in some buildings connected with the leper home, but the doctors found quarters in the town of

Bankura. Bicycles were used for reaching the villages. The Achuria Union Board was visited and a leprosy executive appointed. Their duties are (*a*) to choose suitable representatives from each village to be formed into the Union Board Leprosy Committee, (*b*) to arrange for the building of a clinic, (*c*) to arrange for local volunteers to help in the work and especially for doctors to run the clinic, and (*d*) to raise funds to meet the clinic and other expenses. The Leprosy Committee is responsible for all the anti-leprosy work in the U.B. area ; each committee member is responsible for anti-leprosy measures in his own village.

The party next carried out a house to house leprosy survey, a list being made of all cases, divided into highly infectious, slightly infectious and non-infectious. Those diagnosed on clinical grounds, but found on routine examination to be bacteriologically negative, were classified as non-infectious, and those found bacteriologically positive as infectious cases. In the Achuria Union Board area the survey showed 27 highly infectious (C-2 and C-3), 26 less infectious (C-1) and 92 non-infectious cases. Unfortunately objection was made to examination by some Mussalman villages, so that the survey could not be completed. The clinic building having been erected the local doctors were at first assisted on clinic days by doctors belonging to the party until the former became sufficiently proficient and were able to run the clinic without outside assistance. The Leprosy Committee is responsible for seeing that all leprous patients within the area attend the clinic regularly once a week.

Seeing that infection is spread by the comparatively small number of infectious cases it is considered very important that all such cases should be effectively isolated ; otherwise treatment alone is unlikely to control the disease. Thus the most important function of the U.B. Leprosy Committee is to arrange for isolation and see that it is carried out. Chief stress is laid on the isolation of the highly infectious (C-2 and C-3) cases.

Isolation is of two kinds. For the comparatively well-to-do-villagers arrangements are made within the house compound, a room being set aside in such a way that contact with other members of the family, and specially with children does not take place. Fig. 2 shows a simple method of isolation. A small hut is built in the compound, but with the door opening directly out of the compound. The windows of the hut, however, open into the courtyard, so that, while direct contact is prevented, conversation can be carried on with relatives and food can be handed through

the windows. This illustrates the principle and shows the degree of isolation necessary to prevent the spread of infection ; but many modifications can be improvised to suit the type of compound and habits of the people.

For indigent infectious patients isolation is arranged outside the village, a plot of land being set aside by well-to-do villagers on which the leper or his friends may build huts and on which he can grow a few simple crops with which to support himself (Figs. 1 and 3). School children are encouraged to collect rice, dal, etc., from door to door to feed those who are unable to support themselves adequately by their own labour.

Voluntary isolation of lepers is no new thing in India. It has been practised among the aboriginal tribes all over the country from time immemorial. Ignorance, however, often renders it ineffective, as the infectious cases are not recognised, and often the only cases isolated are maimed cripples in whom active disease may have already died out. In actual practice we find that there is little difficulty in persuading the poor to isolate themselves ; the public opinion of the village sees to that as soon as it is definitely known that an individual is a danger to the community. With the well-to-do and influential the case is different ; they are more in a position to defy public opinion, and in some cases pressure from authorities outside the village may be necessary.

It will be realised that in order to carry out a scheme such as the above a tremendous amount of propaganda and persuasion is necessary. This is primarily supplied by the investigation party ; but once the more educated and intelligent members of the community have become convinced, they become responsible for carrying on propaganda, enforcing isolation and seeing that treatment is carried out regularly.

We have already noted that certain Mussalman villages could not be surveyed due to objections raised by the inhabitants ; but there are known to be at least 76 cases among them. It is interesting to note that no fewer than 21 non-infectious and 33 infectious Mussalman cases are voluntarily attending the clinics, it is thus likely that the opposition raised by those villages will in a short time give way.

As mentioned above, house to house survey of the Achuria Union Board area, apart from the Mussalman villages, showed 53 infectious (C-1 = 26, C-2 and C-3 = 27) and 92 non-infectious cases. Of these 53 infectious cases,

36 may be counted as more or less indigent ; 19 out of these 36 are highly infectious, 16 of which are non-isolated ; and 20 are slightly infectious, only one of which is as yet isolated. Those belonging to well-to-do families number 17 (C-1 = 9, C-2 and C-3 = 8) and of these only two are yet effectively isolated. Of the 221 known cases of leprosy in the Union Board area, 155 are attending regularly for treatment.

It is obvious that prolonged propaganda must be continued if the disease is to be controlled. After three months, 16 out of 19 (84 per cent.) highly infectious indigent cases are isolated, but only two out of eight (25 per cent.) well-to-do infectious cases are isolated. Social and hygienic education must be given time to grow, and public opinion will, it is hoped, gradually take shape as the effects of isolation gradually become evident. One leading villager had already isolated his highly infectious wife for a number of years with the result that the disease has not spread to the other members of the family. This fact being generally known to the villagers has formed a very effective piece of propaganda in persuading others to act similarly.

OTHER UNION BOARDS.

While the attention of the investigation party has been concentrated on the Achuria U.B., other Union Boards have also been kept in close touch. Committees have been formed and clinics are in course of construction. The following is a list of such activities :—

Purandarpur Union Board.—A leprosy committee, an executive body, and a volunteers' committee have been formed. The Union Board President is the President of the Leprosy Committee. The clinic house of this Union, the gift of a local magnate, is still under construction. Four medical practitioners in this area have agreed to give their services free in running the clinic. The investigation party has commenced work in this Union, and has already surveyed 19 villages and detected 66 cases of leprosy. Of these 43 are non-infectious and 23 infectious cases. Of the 23 infectious cases 10 are only slightly infectious and have not yet been segregated. The remaining 13 cases are highly infectious, and of these three are already effectively isolated, while there is hope that the remaining 10 will also be in about a month's time. As soon as the clinic is completed, treatment of all cases will be begun.

Kalpathar Union Board.—Here a leprosy committee and an executive body have been formed. In this place the

clinic building, which is under construction, is the gift of the Union Board President, who has also been elected as President of the Leprosy Committee. The investigation party intend to concentrate on this Union after they finish the previous one.

Jagadalla Union Board.—A leprosy committee with an executive body and village sub-committee have been formed. Three medical practitioners of this Union are willing to render free service to the clinic. One eminent doctor of the town has consented to bear the cost of erecting a shed and the expense of one year's medicine.

Narra Union Board.—A leprosy committee and an executive have been formed. A doctor has agreed to render free service to the clinic. The Vice-President of the Union Board has given a piece of land for the clinic, and the President has agreed to bear the cost of the building.

Sanbandha Union Board.—A leprosy committee and an executive body are formed. A doctor has agreed to run the clinic. Arrangements are in progress for the erection of the clinic and for raising funds.

Junbedia Union Board.—A leprosy committee and sub-committee have been formed.

CONCLUSIONS.

Work has more or less been started in seven out of the eleven Union Boards of the Bankura Sadar thana. The first centre has necessarily been the most difficult to deal with, as the scheme was new and the Investigation Party had not then the experience in this type of work which they have now gained. It is hoped that this method of leprosy control will gain in popularity as it advances and as its results begin to show themselves and that Union Boards in other thanas will themselves take the initiative in dealing with the disease.

Several doctors from other parts of India have already visited the centre and have expressed great interest in the methods adopted. It must, however, be noted that the already organised Union Board system is a great asset in this form of leprosy control, and where these Boards or similar organisations do not exist a considerable modification of method may be necessary. In more backward provinces the zemindar may have to take the place of the Union Board in arranging for buildings, organisation, and finance.

In this paper we have confined ourselves to leprosy control. Another paper will presently be published dealing with the question of epidemiology as brought out by the careful study of the spread of leprosy in families.

Fig. 1. Patient isolated outside the village.

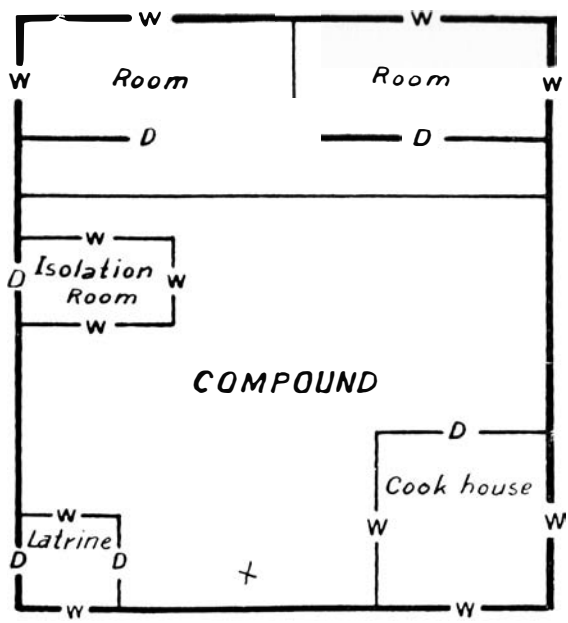
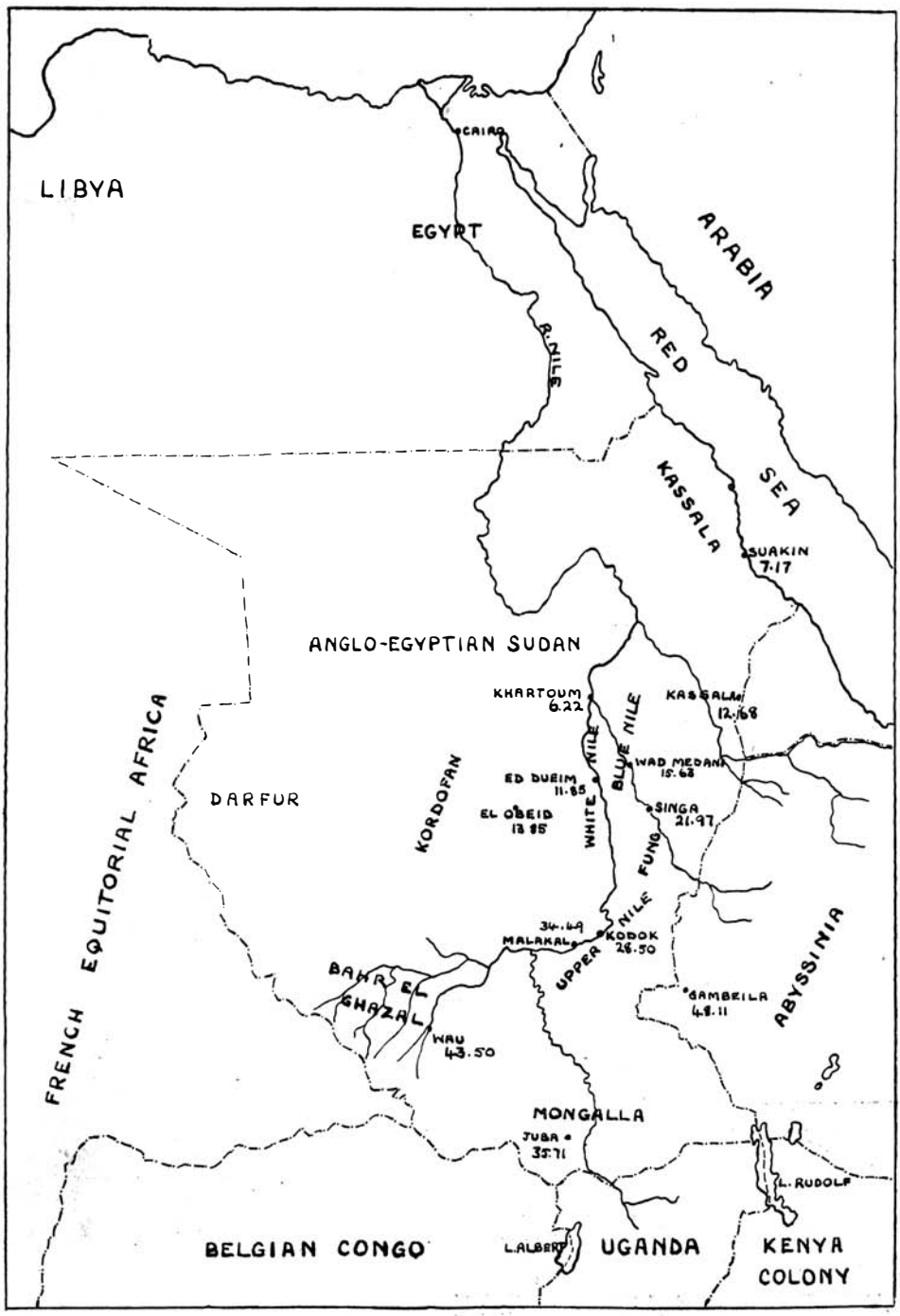


Fig. 2. Plan for isolation within the compound

Fig. 3. Three infectious brothers isolated in a hut outside the village.

(Reprinted from "Leprosy in India")



Map of the Anglo-Egyptian Sudan, showing the rainfall (in inches) at certain of the principal towns.