Up-to-date Leprosy Work in India.

I. THE DICHPALI LEPROSY HOSPITAL.

By The Rev. G. M. Kerr.

The only claim for notice this hospital has is that it is a hopeful attempt to deal, according to present-day methods, with the leprosy problem in the Nizam of Hyderbad's Dominions, the largest of the Native States of India. In this State, according to census returns, there are 4,214 lepers, but in our judgment this number should be multiplied by at least five, or possibly ten, to give anything approaching a true estimate of the incidence of the disease.

The Leper Home was started in 1916, when segregation was the only course open in leper work, and every leper applicant was admitted irrespective of the stage of the disease. Now, however, in the light of present possibilities, this policy is altered. We were in danger of being silted up with old and impossible cases. These we arranged for otherwise, and what was a home has now, without losing any home-like qualities, become a hospital with some 400 cases almost all suitable for treatment. This type only is admitted now.

The hospital is built on a healthy site of 200 acres. The main building is the treatment block, the chief feature of which is that the working rooms, *i.e.*, the treatment room, dispensary and laboratory, are large and airy, with plenty of verandah space, affording easy facility for group treatment according to sex and also stage of the disease. The residential wards are of simple construction. A small building of two rooms, each sufficiently large for three inmates, is, we find, the most satisfactory. Behind the ward is a small compound at the end of which is a separate cookhouse and open-air bathing enclosure for the inmates of each room. We attempt to grade the inmates in these wards according to the stage of the disease, but this is exceedingly difficult since caste and religious differences have to be respected.

The social economy of the Institution is likewise of the simplest nature. Well-nigh all the inmates of the general wards are dependent on us for maintenance, and the daily ration consists of one pound of rice and one anna for minor expenses. This money allowance is spent at the Institution shop, all patients being permitted to look after their own mess arrangements. For those who have regular manual labour or orderly work to do, extra rice and money allowance is made. With these arrangements our people are quite content and the total expense individually per

month for food, clothing and medicine has been eleven rupees halli sicca, *i.e.*, 13 shillings. Since the introduction of potassium iodide in the treatment, however, this has increased to 14s 6d. Much more, we believe, could be done in arranging a better and more suitable dietary for individual patients, but this involves such social complications and extra expense that, save in special cases, nothing has been attempted.

One feature of the Hospital has been very successful. At some distance from the general quarters, four special blocks of wards are reserved for private patients. These have separate comfortable living quarters for which they pay five rupees monthly, while they undertake their own maintenance. These special wards are invariably full, patients coming from all parts of India.

On the average there are 50 women inmates, but we find women lepers generally are too far advanced in the disease before they seek admission, and those who come are very largely from the lower strata of Indian life. We have never permitted any leprous husband and wife to live together in the Institution. Early cases among the girls and young women should be provided for, but with the usual type of adult women patient here all they seek, and very largely all they need, is a haven of shelter, not a hospital.

It is otherwise with our young people. Of these we have over 100, mostly lads under 20 years of age. Were all our inmates of this character the medical results would be striking indeed, as the great majority of them are uncomplicated cases, and, besides, have youth in their favour. They form one big, happy family with a fine communal spirit. Every hour of their day is absorbed. When not immediately under treatment they are busy in school, weaving-shed or garden, and in the evening their play-fields are a pleasant sight.

We can provide for 400 inmates only, and there may be 40,000 lepers in this State. As yet we have no propaganda among them. Should we do this, the present steady stream of applicants would speedily become a torrent. How then is the problem to be tackled? Certainly not by the indefinite enlargement of this Institution, or even by the duplication of it elsewhere in the State. The only hope is in making the treatment available everywhere. When, at every hospital and dispensary, leprous patients at a treatable stage of the disease can be adequately cared for as out-patients and instructed how to safeguard those with whom they come in contact, then only may we hope that the disease will be stamped out. With this in view we have established instruction courses

for Medical Officers. Dichpali is now recognised by the Indian Council of the British Empire Leprosy Relief Association as the teaching centre for Southern India. The standard and tests are the same as those of the School of Tropical Medicine, Calcutta. The courses extend for 12 days and adequate information and practical experience is given in the diagnosis and treatment of the disease. The Nizam's Government is sending its Medical Officers in rotation to these courses, and military, railway and missionary doctors also come. As a result, leprosy clinics will in time be established in town hospitals throughout the State. Two are already at work in Secunderabad. For several years now our medical staff have conducted a model out-patient dispensary in Hyderabad. But this is work which should be undertaken more widely by the Government Medical Officers. In the near future we hope to see many such centres not merely in the towns but in the districts. Only by such means can leprosy be brought under control and, in time, eliminated.

II. TREATMENT AT DICHPALI.

By Mrs. Isabel Kerr, M.B., Ch.B.

As the result of our seven years' experience of the treatment of leprosy, we are more and more convinced that our first duty is towards cases who will respond to our efforts within reasonable time. We must induce people who hide their disease to come for treatment, since so long as leprosy can be hidden it is generally at a stage when it can be remedied.

Our percentage of successes is in inverse ratio to the age of the patients. The youths in our leper lads' hostel make much more rapid progress than the men and women. After the age of 25 recovery is distinctly slower. We feel, therefore, that if energy and means are limited they should be spent on the younger generation in the hopes that the elder generation of lepers will die out and there will be none to take their place. We could wish, therefore, to see our hospital filled with those who will respond to our efforts in comparatively short time, while suitable provision should be made elsewhere for those who require longer time or who may not benefit by treatment. There is good hope that we may attain this desirable end. One week, recently, we had 37 applicants, and one day, still more recently, there were 12, and of these a good proportion were early cases. If efficient treatment is guaranteed this type of case will be encouraged to come.

Up to the beginning of the present year we used the hydnocarpus oil and esters along with such drugs as were required for complications. The most common of these are of specific origin, and patients with a positive Wassermann had courses of novarsenobenzol or sulfarsenol. This latter is still in use for some cases, but Avenyl (Hg33) is generally used now, as this is cheaper and allows of both syphilis and leprosy being treated intensively at the same time.

The statistical results of ester and oil treatment are as follow :—

Symptom-free	18 per cent.
Much improved	60 per cent.
Improved	20 per cent.
No improvement	2 per cent.

After treatment for 12 months or more, 63 per cent. of infective cases become negative to microscopic examination.

Last February we changed our treatment somewhat and we commenced giving sodium hydnocarpate, in place of the ester, with the addition of potassium iodide. We began with about 100 cases—the youths in the leper boys' hostel and 30 men who had been on ester treatment for a considerable time, some of whom we wished to discharge, but elected to give them a course of iodide before doing so. Sodium hydnocarpate and potassium iodide is now the recognised treatment here with well over 300 cases under it.

It is not possible in so short a time to give results, but what strikes one first is the ease with which one can induce reactions in the great majority of skin cases. It is exactly like giving a vaccine. With the sedimentation test as a guide the dosage can be determined and regulated. It may suit a very acute case to have potassium antimony tartrate rather than the iodide. In others the sodium hydnocarpate may do very well alone and the iodide given when a certain degree of immunity has been reached.

The point that we can illustrate best from the few months' experience is this: That potassium iodide reaches foci of the disease which have been untouched by any other form of treatment. Let me give a few cases.

No. 1.—R. Y., aged 25, with skin shewing very few bacilli, had improved so far that in January, 1928, the skin was negative and all erythema had entirely disappeared. There remained, however, anæsthesia of the ulnar areas of both arms and of the side of one ankle and foot. With potassium iodide (sodium hydnocarpate being given alternately), erythematous patches re-appeared and resistant and degenerative forms of mycobacteria were found

in the skin, while the patient was disturbed by an increase of anæsthesia on the ulner areas, with neuritis. All these aggravated symptoms were merely reactions, and when they died down the sensation had returned in both forearms, and the ankle had greatly improved, leaving anæsthesia in the initial lesion only.

No. 2.—M.B. was reported an A2 case, but with 50 grains of Iodide several positive areas appeared.

No. 3.—L.P., who was admitted in May, 1924, with very nodulated skin, improved so far that though his skin remained positive in places, nodules had disappeared, and no reactions were being induced by ester treatment. With 15 grains of potassium iodide crops of nodules reappeared. He is still reacting, and has only reached 60 grains.

No. 4.—D. had 200 grains for three weeks before he showed sign of reaction. Then rose-coloured nodules appeared on his eyelids and upper part of his face generally.

No. 5.—O. reacted with 200 grains. He had a very painful neuritis of an ulnar nerve, and continues to react with quite small doses.

No. 6.—A boy in the healthy school had been free from symptoms for four years, but with 200 grains of iodide an anhydrotic insensitive patch about the size of a rupee appeared on the right forearm. This cleared up within a few weeks.

No. 7.—A. was a suspect case aged 10, who had been under treatment for some months, reacted to 15 grains of iodide, showing two small positive areas over the abdomen. This cleared up within a few days.

Case No. 7 shows how useful potassium iodide is in the treatment of contacts, and Case No. 6 indicates the value of this drug as a test of cure.

A large proportion of our patients have eye-reactions. Where the face is infiltrated they are common. One case was interesting. He had had conjunctivitis, apparently leprodotic, in the right eye for some time, and we were chary of giving iodide. On risking small doses, given very carefully, the conjunctivitis cleared up and has not appeared again, despite the fact that the patient is taking 200 grains twice a week.

These few months' experience has convinced us that potassium iodide, carefully administered, is a valuable adjunct in treatment.