

## Treatment in Persia with 2 per cent. and 6 per cent. Alepol Solutions.

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**F**OR three and a half years we have been giving regular medical treatment to the lepers residing in the village of Mehrabkhan, a short distance from Meshed. For the first eighteen months we used the ethyl esters of chaulmoogra oil intramuscularly, and found them quite satisfactory, except that in the larger doses they occasionally caused much discomfort, and at times abscesses were produced. (In a quarter of 1 per cent. of the cases there were abscesses of the buttocks.)

Following this for another period of eighteen months, we used "Alepol" intramuscularly and intravenously in the specified 3 per cent. and 1 per cent. solutions, varying the method according to the needs and desires of the patient, the condition of the buttocks, the accessibility of the veins, etc., etc. We observed that the "Alepol" was not nearly as irritating as the ethyl esters of chaulmoogra oil, and that the lepers "enjoyed" their injections more than the previous ones. The changing, in an individual, from intramuscular injections to intravenous ones, when his thin buttocks offered no more available tissue for injection, was always appreciated by the patient. In those cases where the veins became obliterated or were difficult of access, it was possible to resort again to the intramuscular administration.

It is of course very difficult to state definitely which treatment was most effective therapeutically, but our observation was that "Alepol" produced favourable results more rapidly than the ethyl esters of chaulmoogra oil.

The injections of "Alepol," both intramuscularly and intravenously, were given twice a week in increasing doses of 1 c.c., if the condition of the patient permitted it. If the leper developed more nodules, if his ulcers became more extensive, or if he had fever or other complications, such as nephritis, the dose was not increased—often radically decreased to a dosage which he tolerated. Occasionally it was necessary to discontinue injections for several weeks in patients with an extended course of fever, painful lepromas of the cornea, etc.

The 3 per cent. solution intramuscularly and the 1 per cent. solution intravenously were given up to as much as 32 c.c. twice weekly without any disconcerting reaction, the only objection being to the actual bulk of the dose which caused a certain amount of discomfort, when injected in the buttocks. It was therefore decided to use solutions 100 per cent. stronger in order to decrease the actual c.c. of solution given, and now for more than three months we have been using the 2 per cent. and 6 per cent. solutions of Alepol in distilled water (with 0.5 per cent. carbolic). Intramuscular injections are given unless contra-indicated, and in a number of cases we have given as high as 22 c.c. of the 6 per cent. solution without bad results. Intravenous injections as high as 12 c.c. of the 2 per cent. solution have been given with no untoward results. The only caution we would suggest is not to increase the dosage too rapidly (*i.e.*, not more than 1 c.c. increase per week), as we found that five patients had a severe œdema of the face and neck following too rapid an increase in dosage. This reaction soon subsided when the injections were omitted for a week or ten days. We are now giving injections twice weekly to 110 lepers, and find that this more concentrated solution is readily tolerated and without unfavourable results. In cold weather the solution should be warmed to body temperature, as otherwise it is liable to cause discomfort to the patient.

In addition to the above treatment, the various lesions of the lepers are dressed twice a week, mercurochrome being applied to the open sores, and they are then dressed with sterile gauze and bandaged. Nodules are painted, a few at a time, with 50 per cent. trichloroacetic acid. For a period of several months we gave potassium iodide orally to selected cases among the healthier, stronger lepers, but in at least

50 per cent. of these cases it produced unfavourable results after a short time, and had to be discontinued. Intravenous injections of 20 c.c. of 5 per cent. sodium iodide solution weekly was efficacious in a number of lepers who were unable to take potassium iodide orally. Special conditions, such as syphilis, malaria, worms, nephritis, diarrhœa, etc., are, of course, treated by the required therapy.

Persia being a high, dry country, with much sunshine and little rainfall, the leprosy problem is not as big a one as in some lands, but the disease is one which can be and should be eradicated in a decade or two with the proper co-operation of the government and other interested parties. At present this is the only place in all Persia where regular medical treatment is being given to the lepers, and new cases come in every month from various parts of the country, and from Russia and Afghanistan also. It is strange that practically none of the lepers are really Persians, the most are inhabitants of Persia ; about half of them are the Mongol-type Berberees from Afghanistan way, and the other half are Turks from the western border of Persia. In co-operation with local Persian agencies, as well as outside organisations, such as the American Mission to Lepers and the British Empire Leprosy Relief Association, we are doing what we can to rid this portion of the world of this horrible and unnecessary disease.