

The Treatment of Leprosy.

A REVIEW OF PRESENT-DAY METHODS.

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The past two years have seen further advances in the treatment of leprosy. So much so, that those who have not the time to give to the special study of this disease wonder which is the best drug to use out of the many that are advocated. The object of this article is to review briefly some of the present-day methods and endeavour to guide those who are in difficulties as to which drug should be employed in treatment.

The ideal treatment for leprosy should satisfy the following points: (1) A drug which rapidly controls and eliminates the disease; (2) One which is cheap; and (3) One which is painless and easy to give. It can be said at the outset that no drug which is in use at present satisfies these criteria. Among the drugs which approach nearest to the ideal are the following:—

(1) Hydnocarpus oil and 4% Creosote.

(2) Alepol.

(3) Potassium Iodide.

Hydnocarpus Oil and Creosote.

This remedy gives the most uniformly good results of all the drugs used in leprosy treatment. In those countries where hydnocarpus oil is easily obtainable it is the drug which should be used as a routine. This remedy is easily administered by sub-cutaneous infiltration, or intramuscularly. It is also generally successful although the time taken to clear up an advance case will be considerable. At the outset of treatment it is unwise to make any statement as to how long it will take before a patient becomes symptom free. Few, if any, cases of leprosy clear up in three months, and many will take anything up to three years or more before it is safe for them to stop treatment. It is dangerous to make generalisations with regard to leprosy, but it can be said that provided care is given to the clearing up of pre-disposing diseases and all conditions which are likely to reduce the patient's resistance, *e.g.*, the lack of proper food and exercise, then hydnocarpus oil and creosote will be found to be eminently satisfactory in the majority of cases.

Alepol.

In countries where hydnocarpus oil cannot be obtained, the

new preparation called "Alepol" should be used. At present we are trying it in selected cases and finding it satisfactory. The chief drawback to this drug is that it appears to cause pain in higher dilutions than 2%, although other workers do not report this to be the case even in solutions as strong as 4%. So far, our conclusions are that this drug seems to have taken us a step nearer towards the endeavour to find the ideal remedy. There are two advantages that Alepol has over other drugs for leprosy. First, as it is made up in a powder form it is easily exported, and secondly the drug is extremely cheap. Cheapness is one of the chief concerns when large numbers of lepers are under treatment. Alepol should be dissolved in distilled water for preference and 0.5% carbolic acid should be added. Care should be used in adding the carbolic acid, and if pure carbolic acid is added in order to make 0.5% carbolic in Alepol, then the fatty acids are liable to be precipitated. The carbolic acid should be diluted first, then added. This solution can be given equally well intravenously.

The technique for intravenous medication should be that followed by the School of Tropical Medicine in Calcutta, that is, draw an equal quantity of blood into the syringe containing the Alepol solution and then inject the whole slowly. This method overcomes the tendency to blocking of the vein as a result of a thrombus set up because of the slightly irritant nature of the solution. The drawback to intravenous therapy in leprosy is that to ensure success trained assistants are necessary. In many cases leprosy treatment is carried out by lay missionaries, and therefore intravenous methods are not always possible. The two remedies described can be safely employed by the laymen.

Potassium Iodide.

Besides the remedies already briefly described there are one or two more potent remedies which are proving useful in the treatment of leprosy. Among these the most important is the administration of potassium iodide by the mouth, the use of which was described by Dr. Muir in the last number of "Leprosy Notes." In those cases which are in the early stages of the disease, and whose health and general condition are good, this remedy is effective, and sometimes rapid in its results. Great care should be taken, however, in selecting cases for potassium iodide therapy. Any case whose general health is lowered should only begin iodides cautiously, or not at all, for in such cases the breaking down of leper foci may cause a greater degree of dissemination of the disease, as the body has not acquired the resistance necessary to combat a sudden flooding of the system by myriads of bacilli. In early cases where the general health is good and the patient

can take plenty of exercise then iodides may produce a dramatic effect. In cases which already show signs of commencing resolution of lepromata either as the result of treatment, or due to the natural tendency of the body in the course of time to overcome the disease, then iodides will assist in the further breaking down and ultimate resolution of the disease. Those who have seen post mortem examinations in lepers, and have seen the myriads of million leper bacilli in the body, and realise how easily they multiply and disseminate, can easily understand that caution must be used in applying this most potent remedy.

Iodides are frequently recommended as aids to ascertaining whether a case has been cleared up or not. While it may be said that if a patient does not react to large doses of iodides he can be discharged more readily, yet it is suggested that our object, especially in nodular cases, should be to bring the patient as rapidly as possible to the stage when all active signs have disappeared. If a patient has been in this stage for from six months to a year then the general resistance of the body should be trusted to keep the disease in check.

In nodular, or skin cases which have become symptom free, no one claims that all the bacilli in the body have been destroyed. As in tuberculosis so in leprosy, the bacilli are encased in fibrous tissue in the lymph glands, etc., in the body. The question arises, is it wise to break down this protection which the body produces, and risk the flaring up of the disease as a result of the administration of potassium iodide? Such a method would not be considered in the sister disease tuberculosis, and, the writer holds, it should only be cautiously applied in leprosy. In India, where large numbers of the cases are found to be the highly resistant nerve cases, this method is more justified. In countries where the more serious nodular cases are in the majority, potassium iodide may continue to light up the disease constantly, and the patient never be discharged. However, if patients resist large doses of potassium iodide, one can conclude with more confidence that they are symptom free.

With regard to diagnosis, it must not be concluded that if a patient does not react to large doses of iodides the case is not one of leprosy. The clinical tests still remain the most certain in the diagnosis of leprosy, for the writer has seen even skin cases resist 240 grs. of iodide twice a week for a month without a reaction. This method is of positive value in confirming a diagnosis if a reaction is produced. No laboratory or therapeutic test can displace the clinical diagnosis, for the disease can be certainly diagnosed in the very early stages. Where leprosy lies latent, as

for example in untainted children, the writer is doubtful whether we are justified in stirring the disease to activity by large doses of iodides, for, the great majority of such children do not develop the disease if separated from their parents. The chief drawback to the iodide therapy is the cost, for potassium iodide is an expensive medicine.

Any other method which produces reactions, such as the intravenous injection of typhoid bacilli, or some other method of protein shock, may prove of value. In other words, in the stage when the disease is beginning to subside any form of therapy which will produce a smart reaction will be found to be beneficial. A word of caution should be added to the effect that sometimes the most dramatic results are the least permanent. Under a protein shock reaction all nodules and other skin manifestations of the disease may disappear, only to reappear when conditions in the body are more favourable to the growth of the bacilli. No skin case should be discharged or paroled under six months to a year from the time all active signs have cleared up. If in doubt potassium iodide may be given, but it should be remembered that the natural resistance of the body should be relied on, rather than the artificial breaking down of leprotic foci which have been or are being enclosed in fibrous tissue capsules. Iodide or some other form of protein shock therapy is of great value, but those who undertake such treatment must be fully cognisant of the limitations of such methods. No case which has the slightest sign of tuberculosis should be given potassium iodide.

In the treatment of leprosy the chief factor is the building up of the resistance of the body, and any measures that do this are of great value. Every case must be taken on its merits and studied individually. The present-day treatment of leprosy is full of hope, and physicians have in their hands remedies which will cause the subsidence of the disease in the great majority of cases; therefore the hope of ridding the Empire of leprosy is a legitimate and practical one. Let everyone concerned in this fight put their full strength into it, and prepare for a long, arduous and relentless warfare, knowing that in the end, if we patiently and steadfastly pursue our goal, we, or those who follow us, will gain the victory over this dreaded enemy of mankind.
