

Potassium Iodide in Leprosy.

The present article is no more than a brief sketch of the uses of potassium iodide in leprosy. Those desirous of using it in the diagnosis and treatment of the disease are referred to the 4th edition of the booklet 'Leprosy, its Diagnosis, Treatment and Prevention,' published by the Indian Council of The British Empire Leprosy Relief Association.

Potassium iodide was used by Danielssen about the middle of the 19th century. He recommended its use in confirming the recovery of patients apparently cured. In 1914 Leboeuf recommended it in three classes of cases:—

1. Those who fail to react to even large doses, *i.e.*, mild early and typical cases.

2. Those who display or fail to display a febrile reaction according to the dose administered.

3. Those that react even to the smallest doses (1 to 2 centigrams a day); these are far advanced and of the tuberculous type.

He recommended the inunction of chaulmoogra oil along with iodide given orally.

Some workers have recommended iodide because of the increase of nasal secretion induced as a help in finding acid-fasts in the discharge from the nose. Marchoux and one or two others considered that iodides might be of some therapeutic use, but most other writers have considered it dangerous, and a drug to be avoided.

In Calcutta we have been using it in small quantities to supplement injections of Hydnocarpus oil and its preparations for the last six or seven years, but were led to adopt its use more fully by the following considerations:—

1. The treatment of leprosy is twofold—building up the general strength and resistance of the patient, and breaking down the resistance of the leprosy bacillus. The latter, if carried out too fast or too suddenly, is apt to interfere with the former, weaken the patient and lead to an exacerbation of the disease; but it

the latter is carried out slowly and with due regard to the former, so that the patient, while having the lepromatous tissue cleared up, maintains his natural resistance, then improvement is steady and satisfactorily maintained.

Keeping the above principle in mind we require to have in our armamentarium the most powerful remedies both of the former and the latter type. Among the drugs which break down the leproma and the defences of the leprosy bacillus chaulmoogra or hydnocarpus oil and its derivatives have long held the foremost place. In some cases, however, they fail to act even in large doses, *i.e.*, in the nerve or "A" type of leprosy (the first class of Lebeouf). In these cases iodides either by themselves or in combination with hydnocarpus injections will continue this breaking down process and will often show up lesions which were not known to exist and then clear them up.

Then again there are the second and third classes of Lebeouf. It is possible in these cases (those of the B2 and B3 type) to produce the same effects by small doses of iodide given orally as are produced by large doses of hydnocarpus injected subcutaneously or intramuscularly; and not only that but also the degree of reaction aimed at can be much more accurately obtained, seeing that iodide is eliminated from the body within 48 hours, and the reaction (when the principles mentioned above are observed) only lasts as long as the iodide is in the body. In such cases iodide is given once a week, either by itself or along with a small injection of hydnocarpus; the required degree of reaction is obtained, as indicated by the rise of temperature and the other signs of reaction, and the patient has five days in which to recoup his strength and bring it up to the required level.

The dose of iodide ranges from half a grain to 240 grains, and the dose tolerated by each patient is ascertained by beginning with small doses and gradually increasing them as the leproma is eliminated from the body and the patient *pari passu* tolerates larger doses.

In potassium iodide, therefore, we have a most powerful *leproma-breaking-down* remedy, especially when it is supplemented with hydnocarpus injections and the local applications of such caustics as trichloroacetic acid; only (let me repeat) this instrument must be used with due respect to the maintenance of the patient's general health.

Iodides not only directly break down the leproma, but also indirectly produce autovaccination. The broken down products act as antigens in the body and produce antibodies, and this acquired immunity has in itself a marked therapeutic effect. It

must be remembered, however, that this process, if not wisely regulated, may also produce an opposite allergic effect, with the result that a continuous lepra fever is produced, sometimes with disastrous effects on the patient.

When this occurs, and also when the general strength of the patient needs building up, we have found that the heavy metals, antimony, copper, iron and arsenic, given in very small doses have a most beneficial effect. When the reaction is in the nerve trunks, ephedrine gives marked and often lasting relief.

2. The second consideration in the use of potassium iodide is its use as a means of diagnosis. In early cases where the diagnosis is doubtful, it will often show up lesions which help to confirm the diagnosis. This test is even more valuable when it is combined with the erythrocyte sedimentation test. Further details of this use of iodides, however, must be gathered from the booklet mentioned above.

3. The third use of iodides is that mentioned by Danielssen, *viz.*, to confirm the reality of cure. Indeed, we would go so far as to say that, generally speaking, no patient, whatever treatment has been used, should be allowed to stop treatment until he has taken maximum doses of potassium iodide (240 grains for adults) once or twice a week for a period varying from three to six months.

Details as to dosage and the principles regulating the dosage cannot be given in this short article, but may be found in the booklet referred to.

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Results of Potassium Iodide Treatment.

Dr. Marie Wardman, of the C.M.S., who is now in charge of the medical work at the Home for Lepers at Purulia, Bihar, India, writes that she has fifty cases on this new treatment, and much hard work is involved in keeping the records up-to-date and accurate. The temperature of every patient is taken four times a day. Dr. Wardman adds:—

The treatment seems well worth while, even though involving much suffering in some cases. All cases are voluntary, of course. We are already seeing changes in about six weeks as great as in nearly a year by hydnocarpus oil injection. It is truly working wonders, more especially in the bad cases. Also it seems to offer a new means of diagnosis in early doubtful cases. Daily we have more and more applications for the new treatment.