

EDITORIAL

Induced Leprotic Reaction

The subject of leprotic reaction is always of interest. We do not understand it fully, but we guess that much light will be thrown on the immunology of leprosy when we do come to understand the mechanism of reactional states. In this issue (page —) there is a useful example of the orderly and analytical approach to the subject,⁽¹⁾ and also in this issue (page —) a review of a symposium on the erythema nodosum leprosum section of the subject.⁽²⁾ Clear-cut ideas on histopathology

and accepted, but at least there is general agreement on the beneficial nature of leprotic reactions, except for the danger of the enhancement of nerve damage if the nerves happen to be involved. In the long run the reactions are favourable in that the final victory of the patient over his disease is advanced by them. An increase in the incidence of such reactions is also generally reported and has been interpreted as due to the releasing action of sulphone therapy. Even in pre-sulphone days leprotic reaction was classified as being beneficial, and this led to essays in the artificial induction of leprotic reaction. The first method was the use of potassium iodide by oral administration. Danielssen ⁽³⁾ in 1886 used it quite extensively in the treatment and diagnosis of the disease, and it is clear that the activating or re-activating action of the iodide was the basis of the aid to diagnosis and the source of the post-reactional clinical improvement in the patient. Many other workers confirmed the action of iodide and by 1929 Muir ⁽⁴⁾ *et al.* again emphasized that iodide by mouth produce focal and general symptoms indistinguishable from lepra reaction, and that they have a specific effect in showing up concealed epromatous foci. On the whole, over the course of years, this method did not find general favour, as many considered it tricky to control and inclined to be dangerous. Yet it has not been forgotten, and in 1953 Schujman ⁽⁵⁾ reported on the question again. He reminded us that the lepra reaction can occur spontaneously in lepromatous patients, such as have a certain predisposition or special sensitivity, but some lepromatous cases never have it. It is prone to appear at puberty, menstrual periods, during and after childbirth, at times of emotion, and particularly in toxic and infectious intercurrent states. It may also be released by the administration of certain drugs, especially potassium iodide, hydnocarpus oil, and the sulphones. He used various provoking agents in his studies, including potassium iodide, tuberculin,

Stefansky leprolins, and smallpox vaccination intradermally, and found that potassium iodide and smallpox vaccination gave the surest and strongest reactions. Some lepromatous cases failed to react to any agent, even if the dose were high. Where there was a reaction to iodide or the vaccination, it was directly proportional in intensity to the dose of the iodide or the degree of positivity of the vaccination, and the clinical and bacteriological picture of the induced reaction was always identical with that typical of spontaneous reaction. More important still, he found that the immediate and remote effects were beneficial to the patient, and similar to those of spontaneous reaction.

The potassium iodide is made up as a solution of equal parts of the salt and distilled water, of which 20 drops contain approximately 1 gram of potassium iodide. The course begins with 10 drops by mouth daily, given 5 at lunch and 5 at supper, and 10 drops daily are added to reach 120 to 150 drops daily. When the patient does not show the least sign of reaction the medication is suspended, but sometimes signs of reaction appear the second day, and usually the full picture appears on the third day. The full picture includes fever, weakness, arthralgias, myalgias, and neuralgias, ocular reaction, and an exanthem which is nodose or polymorph erythema. If the reaction does not prejudice the general condition of the patient, the course of iodide and consequently the reaction are kept going for about 2 weeks, and in practice are suspended only when the pains are severe or the eye reaction too intense. The same patient can bear 3 or 4 induced reactions at intervals of 4 to 7 months. Smallpox vaccination by puncture or scarification gives very similar results, though the leprotic reaction is somewhat slower to appear and more often the symptoms have to be controlled by anti-reactive drugs.

The usual attitude of modern physicians to leprotic reactions is to consider them a nuisance and a danger, and to pounce on them with any or all of the anti-reactive medications, including latterly the corticosteroids, or even oral BCG. It is salutary, however, to consider this thread of wisdom coming down to us from the past, reminding us that it is possible and may even be advisable to induce lepra reaction artificially. Naturally we would recoil from any idea of using artificial induction in the non-lepromatous types, because of the real danger of nerve damage, but for the slow and anergic lepromatous types, even in these busy days of widespread sulphone therapy, perhaps Danielssen and Muir and Schujman and others have "got something."

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