HYPERESTHESIA

To the EDITOR:

While travelling in the south of China recently I was visited by a man who does a good deal of leprosy work. He has been puzzled by the appearance, following treatment, of hyperesthesia in previously anesthetic spots. This was new to him. I would like to learn whether this is a common complaint in the experience of other men treating leprosy. If this inquiry is published please omit name.

M. D.

[This inquiry was referred to certain clinicians dealing with leprosy, whose replies follow. If any other reader cares to contribute to the subject his communication will be published promptly after receipt.—EDITOR]

From Dr. N. E. Wayson, Surgeon, U.S.P. H.S., Director, Leprosy Investigation Station, Honolulu:

The occurrence of hyperesthesia in previously anesthetic spots is not a common complaint among patients hospitalized at this Station. The symptom has been met with a few times, but more often the complaint is that of paraesthesia, and even this is of relatively rare occurrence.

From Dr. E. Muir, Leprosy Research Worker, Calcutta:

The question regarding the appearance of hyperesthesia following treatment in previously anesthetic spots is rather indefinite. What spots are meant, and what is implied by hyperesthesia? Also, what treatment was used?

Personally I have never found hyperesthesia, by means of objective tests, in macules which had formerly been shown by these tests to be anesthetic. Patients, the soles of whose feet have been anesthetic so that they could not feel small stones or irregularities of the ground, will, as sensation becomes restored, find it painful to walk; but this may be explained by the fact that the small muscles of the sole have become atrophied and no longer supply padding and protection. Also, in cutaneous cases recovery is often accompanied by reaction of the endo- and perineurium to the bacilli which are contained in these tissues.

The leprolin test shows that if there are many lepra bacilli in the body the tissues do not react to bacilli; whereas if there are few bacilli in the body the tissues do react. Thus as the bacilli diminish under treatment a point is reached at which increased reaction to the bacilli present in the body begins to take place. Hence the reaction, accompanied by tenderness and thickening, which at this point in the recovery of the patient is so often found in the nerves, both the larger nerve trunks and their finer branches in the skin being affected. It is questionable, however, whether "hyperesthesia" is a suitable term to apply to this nerve tenderness.

From Dr. C. B. Lara, Chief Physician, Culion:

Among our patients in Culion the occurrence of hyperesthesia in previously anesthetic areas following treatment has been observed only in those cases in which the anesthesia had been fairly recent (from a few months to about 1 year before treatment), and in which the sensibility has largely or completely returned to normal. Our ex-

perience regarding this particular complaint is chiefly related to its occurrence in leprous areas—anesthetic or otherwise—that have received a course of several intradermal infiltrations with the iodized wightiana ethyl esters.

The explanation of hyperesthesia in previously treated areas may be explained by several factors, among which are: (1) The return of normal sensibility in previously anesthetic areas as a result of the treatment; (2) The presence of residual inflammatory reaction following the last previous intradermal injection into the areas; (3) The use of irritating antileprotic drugs as may frequently happen when the process of manufacture is not standardized; (4) The psychic element.

In our experience the most remarkable feature of this complaint is that patients who for some time have been able to receive intradermal injections with little or no complaint begin to have trouble. After a certain period—varying with the individual patient from a few months to about a year—the same method of treatment in previously treated areas seems to be attended with almost unbearable pain. Where formerly 20 to 50 injections in a certain area could be borne well, only a few punctures are sufficient to make him complain of extreme pain, thus limiting considerably the application of this method of injection. The excessive pain is only felt at the moment of puncturing the skin and during the injection of the drug. That it is not due to excessive irritation by the drug is shown by the fact that on removal of the needle it almost completely disappears, and no undue inflammatory reaction follows as would occur with an irritating preparation.

A fairly careful check has been made among patients that have been receiving treatment in this Colony for at least a year. (1) We employed the intradermal method of injection in previously treated areas where the last previous treatment had been given: (a) from one week to five weeks before, and (b) from two months to twelve months before. (2) At the same time we compared the pain produced by: (a) the puncture of the needle alone, with (b) the combined effects of the puncture and the injection of the drug; this was done in both non-anesthetic areas that had been previously treated, and in apparently healthy (and untreated) areas close to the treated areas or on a symmetrical region of the body. The cases were especially selected for their intelligence and cooperation. In only a few in-

stances was the repeated intradermal treatment into an apparently healthy skin more painful than the first one. The order of degree of pain, from the greatest to the least, for the majority of the cases was as follows: (1) new intradermal treatment in apparently healthy skin; (2) intradermal treatment in previously treated leprous area; (3) needle puncture in healthy skin and (4) needle puncture in previously treated area. From these observations it would appear that there is a large psychic element in the complaint of hyperesthesia among patients that have received intradermal treatment for some time.

Completely anesthetic areas that have not responded to the treatment have never been associated with the complaint of hyperesthesia on subsequent intradermal treatment, except when the anesthetic area was situated on the finger or a similar region of the body, where there is very little loose tissue and where small nerve trunks that are still sensible may be compressed by the intradermally-injected drug.

A general hyperesthesia may occur following treatment with massive doses of the chaulmoogra-group drugs. This is a general poisonous effect of the drug on the nervous system and may be observed readily in experimental animals. This is a possibility to be considered when massive clinical doses are employed.