DESENSITIZATION WITH LEPROSY BACILLUS PROTEINS

To the Editor:

Regarding the inquiry about my leprolin—"leprolina proteica total" (LPT), a protein extract of leprosy bacilli obtained from lepromas [The Journal **26** (1958) 51-56]—specifically as to whether or not repeated injections have been tried in persons giving the early (Fernandez) reaction to ordinary lepromin, to see if the hypersensitivity upon which that reaction depends would be abolished, as you once suggested might be possible [The Journal **18** (1950) 487-492], please be informed that no systematic observations of that nature have been undertaken as yet. How-

ever, I may cite in preliminary fashion observations on a single active tuberculoid case in which the repeated injection of LPT in increasing doses not only virtually abolished the early reactions but seems to have had significant effects on the clinical lesions.

The case was a tuberculoid one of the sarcoid variety which presented numerous infiltrated plaques, many of them apparently frankly nodular. The patient was bacteriologically negative and hypersensitive to LPT, a 0.1 cc. dose of a 1/1000 dilution causing a Fernandez reaction with infiltrated erythema measuring 12 x 15 mm. He was desensitized by repeated injections of LPT, starting with 0.2 cc. of the 1/1000 dilution. The dose was gradually increased, each time with a higher concentration, a total of 44 injections being given. The last injection, given recently, corresponding to 30 doses of the original LPT, was given subcutaneously without inducing local or general manifestations. When 0.1 cc. was injected intradermally this high concentration provoked an infiltrated erythema only 10 mm. in diameter, whereas the normal dilution would indubitably have been without effect.

The most interesting results have been in the clinical aspect of the patient. Coincident with this attempt at desensitization the infiltrated plaques decreased rapidly in intensity, so much so that now, after three months, the greater part of the cutaneous lesions have totally regressed, there remaining only the oldest ones with central atrophic cicatricial changes. This patient was never given the lepromin test, to avoid the possibility that to do so might increase the state of hypersensitivity. It is therefore impossible to answer your further question, i.e., whether this desensitization, virtually abolishing the early reactivity, had any effect on the late reaction.

This observation leads directly to the following question: Is it possible that specific desensitization with protein derivatives of *M. leprae* may be beneficial to the course of the disease in hypersensitive tuberculoid patients, especially those who show markedly infiltrated plaques which frequently in regressing leave marked atrophy? If so, such an intervention —together with sulfone treatment—might hasten the resolution of such cases which do not respond any too well to sulfone treatment alone.

From a study which our group is making of the clinical evolution and the lepromin reaction in tuberculoid leprosy, it would seem that hypersensitivity has no close relationship with the degree of the immunity or resistance. Furthermore, it seems that it may play a harmful role in the evolution of this form of the disease. These observations need further confirmation.

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