Leprous Myositis

TO THE EDITOR:

This is with reference to the paper entitled "A Histopathologic Study of Striated Muscle Biopsies in Leprosy" by J. C. Gupta *et al*, published in the IJL **43** (1975) 348-355.

I am a little disturbed by this paper which includes unclear and incorrect muscle pathology, and fails to take note of one earlier paper on this subject which described most of the changes that occur in the muscle and the neuromuscular endings in both tuberculoid and lepromatous leprosy.

While the authors have described and tabulated a lot of histopathological "changes," many of these are nonspecific and in fact frequent end-results of myopathies and denervation atrophies. Thus, in Figure 1, "Intramysial granulomas extending along



sarcoplasm" are mentioned, while all that we see is a poorly photographed and badly shredded section of a longitudinally cut muscle, bearing large and small mononuclear cells among the shreds of muscle tissue. These cellular clusters could be shown in a better section to be amongst the muscle fibers, probably constituting an endomysial exudate.

Figure 3 attempting to show "Extensive foam cell leproma" actually shows nothing but a few remaining atrophic muscle fibers amidst fatty tissue, which is the usual endstage of any myopathy or atrophy. One fails to see how the diagnosis of a "leproma" can be accepted on mere hematoxylin and eosin staining. Similarly, Figure 5 shows groups of atrophic fibers (if this is a muscle of an adult subject), amidst fatty tissue, representing the late stage of an atrophic process.

Figure 4 probably represents the most glaring error of all, as we see clearly that an oval structure under the surface of a muscle fascicle is either a nerve twig or a muscle spindle, probably the former though this is not certain on account of the poor quality of the picture. The capsule bounding the oval entity is either the perineurium or the capsule of the spindle, probably the former. In any event this is certainly not a "tuberculoid granuloma" or a granuloma of any sort. Figure 2 is the only picture which manages to illustrate what it attempts, namely a mononuclear cell cluster replacing a muscle fiber as seen in cross section. The authors have not only exhibited unfamiliarity with muscle pathology but have failed to consult even basic text-books of muscle disorders or pathology, such as those by Adams, Denny-Brown and Pearson, 1963, Paul B. Hoeber Inc., New York; or by Walton and several authors, 1974, Churchill Livingstone, London.



The paper to which I wish to invite the pertinent attention of the above authors (and of other interested readers) is the one by Darab K. Dastur on "The Motor Unit in Leprous Neuritis: A Clinico-Pathological Study," published in Neurology-India 4 (1956) 1-27. This paper has been quoted in literature on neuropathology and muscle pathology but has been missed by most of the few recent writers on the subject of muscle in leprosy, and has been briefly reviewed by Dastur himself in 1) Bombay University Symposium on Leprosy, held in 1965 under the chairmanship of Dr. R.G. Cochrane, edited by N. H. Antia and D. K. Dastur, Bombay University Press, 1967; 2) Pathology of the Nervous System, ed. J. Minckler, New York: McGraw-Hill Book Co., 1972, vol. 3.

Almost all possible changes that beset motor and sensory nerve endings and the muscle fiber, as seen in vitally stained whole-mounts of muscle and in variously stained paraffin sections are described and illustrated in over 40 clear photomicrographs. In addition, the paper presents detailed clinical features of sensory and motor status in 69 patients with leprosy, and also gives perhaps the first account of bacilli in Schwann cells in a lepromatous nerve. The point of relevance at the present is the so-called "myositis" of lepromatous leprosy with which Gupta et al (1975) and most of the authors quoted by them seem to be overly concerned. In the above mentioned paper by Dastur (1956), where generally the flexor carpi ulnaris was biopsied, three of the six lepromatous cases showed interfascicular inflammatory exudates as well as acid-fast bacilli. In two of these the exudate as well as the M. leprae were in intramuscular nerves (Fig. 1), and in the third a bacillus was found between two muscle fibers.

Recently, Dastur (personal communication) reexamined the muscle sections of these lepromatous cases and failed to find any organisms within muscle fibers. About a fifth of the muscles from tuberculoid cases showed inflammatory exudates made up of large and small mononuclear cells, only four of these showing a Langhan's type giant cell in the intramuscular exudate (Fig. 2), and only in these cases was the term "granuloma" used. Similarly the term "myositis" was used with reserve and restricted to cases who showed extensive inflammatory exudation amongst muscle fascicles or fibers. Denervation atrophy of the muscles was the most frequent change encountered. As stated later by Dastur (1967), the muscle in leprosy is affected generally by damage to the related motor fibers in mixed nerve trunks and, less frequently, by an extension into the muscle of the inflammatory exudate around neurovascular bundles, i.e., an intramuscular neuritis.

—Daya K. Manghani

Senior Scientist in Charge Nerve Muscle Research Cell Medical Research Centre of Bombay Hospital Trust 12, Marine Lines Bombay, India Reply: In reply to Dr. Manghani's comments we would like to state that the material studied included biopsies from apparently normal looking biceps muscles not showing evidence of atrophy or functional impairment. Various pathologic changes observed in such biopsy tissues are reported. Nerve fibers were not involved. Hence, we do not think that the muscle changes were the end result of damage to the related motor fibers and suggested them to be the result of extension of the granulomas into muscle tissue. Regarding his comments on photographs, we beg to differ from his opinion.

We are happy that he seemed so interested in our observations but are sorry to note that they upset him. We would only wish that he would undertake a similar study and then present his own findings, contradictory or supportive, of our observations. We thank him for mentioning the names of a few books on muscle disorders or pathology which are already familiar to us.

-D. K. Gupta

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