

## Diagnostic Efficacy of Cutaneous Nerve Biopsy in Primary Neuritic Leprosy

TO THE EDITOR:

I was interested to read the above-titled JOURNAL article by Drs. Mary Jacob and Rachel Mathai [Int. J. Lepr. 56 (1988) 56–60]. Nerve biopsy is certainly a valuable and revealing procedure, in the right hands, and I agree that it might be particularly helpful in primary neuritic leprosy, which appears to be relatively common in India. I am, however, very far from convinced that one can safely regard it as “. . . a simple office procedure . . .” and I would like to emphasize that in our publication on sural nerve biopsy [Haimanot, *et al.*, Int. J. Lepr. 52 (1984) 163–170], quoted by Jacob and Mathai (their reference 9), we carefully emphasized that nerve biopsy should be attempted “. . . only by experienced observers, including an operator who is trained in nerve biopsy.” (One of our authors was a qualified

neurologist/neuropathologist.) I also note with some concern (in Materials and Methods) that a “. . . thin sliver of the main peripheral nerve trunk, such as the ulnar, was taken in a few cases.” Such trunks contain mixed fibers, and there is some risk that motor elements may be damaged. Finally (again in Materials and Methods), does the statement “. . . a 1-cm piece of the nerve was sliced with a scalpel . . .” mean that a full 1-cm length (segment) of the nerve was removed? Would this not result in permanent loss of sensation in the area supplied?

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### Drs. Jacob and Mathai Reply

TO THE EDITOR:

We are writing in response to the letter from Dr. A. Colin McDougall on our article entitled “Diagnostic Efficacy of Cutaneous Nerve Biopsy in Primary Neuritic Leprosy.”

We agree that nerve biopsy should be performed by experienced persons. The technique of biopsy of a cutaneous nerve is simple because the course of these nerves can be traced under the skin at specific sites. It may be noted that the cutaneous nerves chosen for biopsy were the radial cutaneous nerve at the wrist, the cutaneous branch of the common peroneal nerve above and medial to the medial malleolus, and the sural nerve at the ankle as it winds behind the lateral malleolus. Any other cutaneous nerve which was biopsied was palpable in close proximity to an area of sensory loss. All cutaneous nerve biopsies in our series were performed by dermatologists or dermatol-

ogy trainees with not less than 3 months of training in minor surgical procedures.

Concern has been expressed that permanent loss of sensation will result when a full 1-cm segment of a cutaneous nerve is removed. The cutaneous nerves chosen for diagnostic purposes were from the sites of established neurological deficits. This was mentioned in the section on Materials and Methods. Thus, there is no need to fear worsening of sensory function after biopsy.

The possible danger of performing a sliver biopsy from the trunk of a peripheral nerve was also pointed out by Dr. McDougall. Sliver biopsy of the ulnar nerve above the elbow was performed by competent surgeons on two patients who presented with total (sensory-motor) neurological deficit indicative of damage to the nerve at that site. The size of the nerves in both patients was normal. It may be argued that even though there was existing neurological