

# COMMENT: PERSISTENCE OF *MYCOBACTERIUM LEPRAE* IN THE PERIPHERAL NERVES OF MULTIDRUG-TREATED LEPROSY PATIENTS

Sir,

The paper by Shetty *et al.* (*Lepr Rev*, 1992; **63**: 329–36) entitled ‘Persistence of *Mycobacterium leprae* in the peripheral nerves of multidrug-treated leprosy patients’ points to the need for very sensitive techniques for the detection and monitoring of nerve damage in treated patients, preferably well before clinical signs and symptoms are evident.

Low *et al.*<sup>1</sup> described a new approach to the detection of autonomic abnormalities of neuropathic origin based on the use of laser Doppler velocimetry to detect changes in fingertip blood flow following deep inspiratory gasp or cold challenge to the contralateral limb. We have found this technique to be a reliable and reproducible way of detecting and quantitating impairment of autonomic reflexes in newly-diagnosed leprosy patients with no obvious deformity.<sup>2,3</sup> In addition, autonomic reflexes, particularly those elicited by contralateral cold challenge, were impaired in an unexpectedly high proportion of apparently healthy, fully treated, ex-leprosy patients. There are obviously several explanations for such dysautonomia in treated patients but persisting bacterial antigen or viable bacteria could well be a principal cause.

It would therefore be of great interest to apply the technique of laser Doppler velocimetry together with histological studies on the persistence of *M. leprae* in peripheral nerves after completion of MDT in order to determine whether this technique could provide a non-invasive indication for the need of further therapy. At present, the equipment is somewhat cumbersome and costly but, provided that there is a demand for such equipment, it could be simplified and miniaturized for easy field use.

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## References

- <sup>1</sup> Low PA, Neumann C, Dyck PJ, Fealey RD, Tuck RR. Evaluation of skin vasomotor reflexes by using laser Doppler velocimetry. *Mayo Clin Proc*, 1983; **58**: 583–92.
- <sup>2</sup> Beck JS, Abbot NC, Samson PD, Butlin R, Grange JM, Cree IA, Forster A, Khan F. Impairment of vasomotor reflexes in the fingertips of leprosy patients. *Journal of Neurology, Neurosurgery and Psychiatry*, 1991; **54**: 965–71.
- <sup>3</sup> Abbot NC, Beck JS, Samson PD, Butlin CR, Brown RA, Forster A, Grange JM, Cree IA. Impairment of fingertip vasomotor reflexes in leprosy patients and apparently healthy contacts. *Int J Lepr*, 1991; **59**: 537–47.