COMMENT: THE USE OF HISTOPATHOLOGY IN LEPROSY DIAGNOSIS AND RESEARCH

Sir,

'The use of histopathology in leprosy diagnosis and research' by Lucas and Ridley, published as an editorial (*Lepr Rev*, 1989; **60:** 257–62), in which some immunopathological techniques have also been reviewed is highly informative. While sharing their concern about the interobserver discrepancy in the reporting of early/indeterminate leprosy I would like to make a few comments based on the limited experience I have.

In developing countries like India leprosy histopathology is confined to a few institutions. Why talk of histopathology and other newer tests when an acceptable standard of smear techniques has not been maintained in field programmes. Histopathology should only be considered as the next medium for diagnosis and classification of leprosy after a good smear technique has been established.

Diagnosis of early leprosy is the concern of many, both clinicians and patients, and it is natural that the histopathologist's help is expected. Biopsy has two clear advantages over other tests. First, a thorough search is possible by studying multiple sections, and second, the host agent interaction shows earlier in histology than in clinical features. So far as the criteria for diagnosing the early or preganulomatous stage of leprosy is concerned, it is to be noted that with present-day knowledge, *Mycobacterium leprae* is the only bacterium having affinity for or capable of invading peripheral nerves.[1-3,6] Inflammation of peripheral nerves (as evidenced by perineural infiltration, Schwann cell proliferation and loss of Schwann cell polarity etc.) and the presence of acid-fast bacilli (AFB) may be taken individually as a diagnosis for indeterminate leprosy. Similar views have also been expressed in several other studies.[1-6] The scanty histopathology services available in developing countries must concentrate on these features. Many studies indicate that examination of several sections definitely show either foci of neuritis or AFB.[3,5,6] Periappendageal and perivascular infiltrate only mean study of more sections or that a repeat biopsy must be done and is not a clear diagnosis. Noncommital statements like 'non specific dermatitis', 'suggestive of leprosy' etc. need to be avoided as much as possible in the diagnosis of leprosy. Leprosy is basically a disease of the peripheral nerves and its agent is *M. leprae*. These two aspects must decide the diagnosis of leprosy not only in early but also in advanced (determinate) cases. Even in less well-equipped laboratories disease can be diagnosed histopathologically with considerable certainty if one is particular about the following prerequisites. In early or pregranuloma stage the infiltrate needs to be supported by nerve involvement or the presence of AFB and in advanced/granuloma stage the granuloma needs to be qualified again by nerve damage (anaesthesia clinically) or the presence of AFB. If the pathologists insist on these criteria leprosy will be differentiated from all other conditions (referred to in the article) producing epithelioid cell or macrophage granulomas, and the interobserver variation will be minimized. In countries with verticle programmes, histopathology services must be organized to meet the minimum requirement for diagnosis and classification thus enabling the laboratories in developed countries to concentrate more on research.

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