Clinico-Pathological Correlation Across the Leprosy Spectrum: Relevance in Current Context

TO THE EDITOR:

The study of correlation between the morphologic features of different groups of leprosy and their histopathology has been a subject of intriguing dialogue. Bhatia, *et al.* [2] need to be complimented for refocusing attention on it. However, its academic significance has diminished over the years. Perhaps a meticulous and detailed study incorporating the latest, newer techniques for attempted early diagnosis would have provided a better insight into this fascinating undertaking.

It is a retrospective analysis and undoubtedly provides a considerably larger sample size as compared to some of the earlier prospective studies [10–12]. However, the lack of well-defined clinical and histopathological criteria, essential for maintaining the uniformity of observations, is its major lacunae. Their absence invariably results in interobserver variation, and seriously compromises the specificity and/or sensitivity of the ultimate outcome.

The histopathologists deserve special mention for their consorted endeavor resulted in a high clinico-histologic correlation. However, a low concordance in indeterminate leprosy once again compels one to reserve the complimentation, and cast doubt on its role in early diagnosis. Indeterminate leprosy is undoubtedly a prelude to determinate groups [13]. A hypopigmented macule, its cardinal morphology, may test the acumen of even an expert leprologist [8]. Evidently the task of a leprosy health worker engaged in active surveying is a difficult and demanding one. The present endeavor, therefore, reiterates the limitations of histopathology. The diagnosis of early leprosy continues to haunt the leprologists.

It would have been fitting had the definite clinical criteria utilized for the purpose of making diagnosis been recounted and shared among all individuals engaged in it. The scope could have been broadened further by utilizing the latest techniques to assist the diagnosis. The latest stains and histochemical techniques, including combined staining with periodic acid-ethanol and gelatin and methenamine silver, may demonstrate a bacterial cell wall and myelin in the same sections. The endoneural nerve involvement may be confirmed using antibodies to S-100 proteins [3, 5]. Immunocytochemical staining for neuropeptides may reveal neural damage. In addition, numerous diagnostic procedures, including the lymphocyte transformation test (LTT), migration inhibition factor (MIF), fluorescent leprosy antibody absorption test (FLA-ABS) [1], detection of specific antigens of *Mycobacterium leprae* using monoclonal antibodies, estimation of antibodies to the synthetic analog of phenolic glycolipid-I (PGL-I) of *M. leprae* [6, 7], DNA probes for *M. leprae*, polymerase chain reaction [4], and *in situ* characterization of lymphocytic subpopulation and cytokines and their receptors [9], may facilitate early diagnosis. However, these laboratory procedures await validation before they should be considered for field application.

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