

TROPICAL DERMATOLOGY

” A STUDY ON THE ROLE OF S100 IMMUNOHISTOCHEMICAL STAINING IN DEMONSTRATING NERVE DESTRUCTION PATTERN AND ITS UTILITY IN DIAGNOSING LEPROSY.”

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Introduction: Skin granulomas pose a variety of differential diagnostic possibilities, which include non-leprosy granulomatous inflammation such as tuberculosis, sarcoidosis, and fungal infections. The presence of neural granulomas is a diagnostic hallmark for leprosy. However, nerve twigs within granuloma are often difficult to visualize on hematoxylin and eosin-stained sections (H and E) either due to their small size or due to extensive destruction. This problem is compounded by the paucity of acid-fast bacilli (AFB) in the tuberculoid spectrum.

Objective: To study the S100 staining pattern of nerves across the spectrum of leprosy.
To study the utility of S100 staining in detection of leprosy.

Materials and Methods: The biopsy specimens of Clinic-histopathologically diagnosed cases of leprosy were stained with S100 immunoperoxidase stains. Bacillary index were calculated and staining patterns of nerve damaged were graded as follows : a) Absent b) Intact c) Fragmented. 5 non leprosy, cutaneous granulomatous diseases were used as controls The data was analysed using suitable statistical methods.

Results: S100 was superior to and more sensitive than H and E in demonstrating nerve destruction in leprosy especially in borderline tuberculoid leprosy. S100 is more sensitive than H and E in identifying nerve fibres inside the granuloma and in distinguishing between lepromatous and non lepromatous granulomas.

Conclusion: S100 staining is an ancillary tool in demonstrating nerve destruction pattern in tuberculoid and indeterminate leprosy. Reliable marker to differentiate between lepromatous and non lepromatous granulomas.