



TROPICAL DERMATOLOGY

ULTRASONOGRAPHY IN HANSEN'S DISEASE

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INTRODUCTION: Hansen's disease primarily affects the peripheral nerves, the target cell being Schwann cells and secondarily involves skin and mucous membranes. Once it manifests on the skin as anaesthetic patches or deformities it will be too late to prevent complications. The ultrasonography (USG) is non-invasive technology to study the peripheral nerves in suspected patients. I hereby highlight how simple, useful and economical to use it in Leprosy.

AIM: To calculate the cross sectional areas(CSA) of peripheral nerves
To study structural changes in nerve sites that cannot be biopsied for histopathology.

MATERIALS AND METHODS: Fifty five clinically diagnosed cases of leprosy attending the Dermatology out-patient department and healthy individuals as controls were taken up. Bilateral ulnar, median and common peroneal nerves were studied. The study period was between November 2017 to April 2018. Informed consent was taken from the all participants. The sonologist was unaware of whether the participant has leprosy or a healthy control

RESULTS: 110 nerve points were examined. 75 were found to be clinically thickened and 105 were found to be thickened ultrasonographically. The most common ultrasonographic finding were focal thickening in 85.3%, 53% showing hypoechogenicity and loss of fascicular architecture, 0.1% revealed inflammation around the nerves. The right and left ulnar, median and common peroneal nerves showed significant thickening in leprosy patients when compared with healthy controls. The CSA values were higher for patients than controls for ulnar, median and common peroneal nerves thus negating the effect of dominant side showing increased nerve size. A value above .08 cm² is considered a good predictor of nerve thickness.

DISCUSSION: Ultrasound is noninvasive and cost effective technology to detect nerve thickening, increased vascularity, hypoechogenicity, structural changes and an important modality to diagnose conditions like pure neural Hansen's disease with smear negativity which warrants immediate treatment.

