

CLINICAL PRACTICE

Clinical Images

Erythema Nodosum Leprosum



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J Gen Intern Med 36(5):1429–30

DOI: 10.1007/s11606-021-06620-z

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A 77-year-old woman originally from India presented with diminished sensation in her distal extremities, and a diffuse rash, which progressed into annular plaques (panel A) and nodular lesions (panel B). Electromyography and nerve conduction studies revealed diffuse sensorimotor peripheral neuropathy. Punch biopsy of a nodular lesion revealed numerous bacilli (panel C) consistent with multibacillary (lepromatous) leprosy and scattered neutrophils and small vessel vasculitis representing erythema nodosum leprosum (ENL) (panel D). Leprosy is a chronic granulomatous disease caused by *Mycobacterium leprae*, which affects primarily the skin and peripheral nervous system. Classification of leprosy is based on the wide spectrum of host cellular immune re-

sponses to the *M. leprae* antigen, ranging from tuberculoid (TT) to lepromatous leprosy (LL)¹. ENL is a poorly understood, but common immune complication of LL that affects approximately 50% of patients with LL and causes significant disability and morbidity in endemic regions². The most common clinical symptoms include pain, nodular and papular skin lesions, edema, neuropathy, and arthralgias, but can also affect other organs including the eye, liver, spleen, and kidney^{1, 2}. Untreated, ENL can result in permanent neurological damage and disability. Management of ENL aims to control acute inflammation and prevent the onset of recurrent episodes. ENL is treated with corticosteroids alongside antimycobacterial agents (Fig. 1).

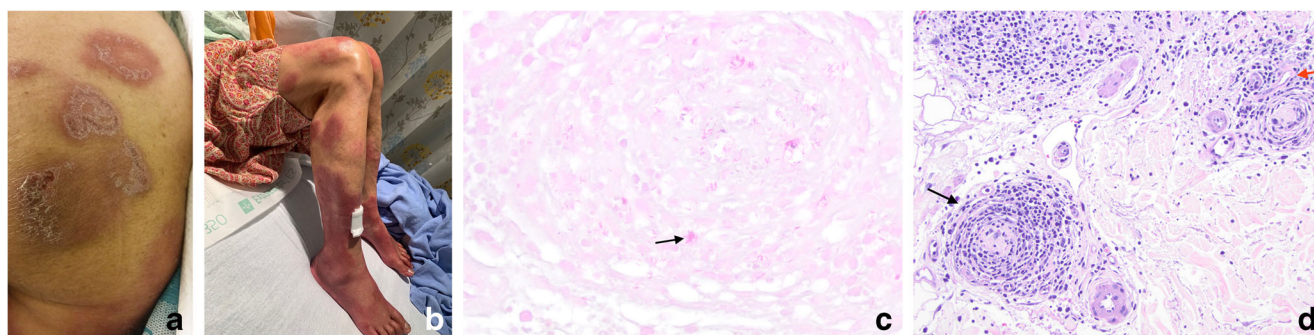


Figure 1 Panel a Painless, annular plaques on right gluteal region. Panel b Erythematous, nodular lesions on bilateral shins. Panel c Right leg punch biopsy with Fite stain demonstrates numerous acid-fast bacilli (black arrow), consistent with multibacillary lepromatous leprosy. Panel d Punch biopsy with H&E demonstrates perivascular (red arrow), perineural (black arrow), and interstitial infiltrate of lymphocytes, plasma cells, histiocytes, and scattered neutrophils consistent with erythema nodosum leprosum.

Received April 16, 2020

Accepted January 7, 2021

Published online January 29, 2021

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Compliance with ethical standards:

Conflict of Interest: The authors declare that they do not have a conflict of interest.

REFERENCES

1. **Costa PDSS, Fraga LR, Kowalski TW, Daxbacher ELR, Schuler-Faccini L, Vianna FSL.** Erythema Nodosum Leprosum: Update and challenges on the treatment of a neglected condition. *Acta Trop* 2018;183:134-141.
2. **Walker SL, Balagon M, Darlong J, et al.** ENLIST 1: An International Multi-centre Cross-sectional Study of the Clinical Features of Erythema Nodosum Leprosum. *PLoS Negl Trop Dis* 2015;9(9):e0004065.

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