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Images in Clinical Tropical Medicine

Non-Trophic Cutaneous Ulcers in Lepromatous Leprosy

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A 44-year-old woman had progressive burning parasthesias and sensory loss in both upper and lower limbs, followed by weakness of distal muscles of the hands and feet for four years. She had redness and swelling of both hands and feet, multiple painless ulcers over the dorsum of the fingers (Figure 1A) and feet (Figure 1B), and thickened, non-tender, bilateral, ulnar, superficial cutaneous branch of radial and common peroneal nerves. She also had predominant small fiber sensory polyneuropathy in a glove and stocking pattern, intrinsic muscle weakness of the hands and feet, and intact deep tendon reflexes. Results of hematologic and biochemical tests were within references ranges. Tests results for vasculitis and viral markers were negative. A nerve conduction study showed asymmetrical predominantly axonal sensorimotor polyneuropathy (Figure 3) and absent waveforms on sympathetic skin response testing on both upper and lower limbs. A split skin smear was positive for acid-fast bacilli by Ziehl-Nielsen staining (Figure 2A, B). A skin biopsy from the leg showed dermal perivascular lymphocytic infiltrates, nerve twig inflammation, and positive staining for lepra bacilli.

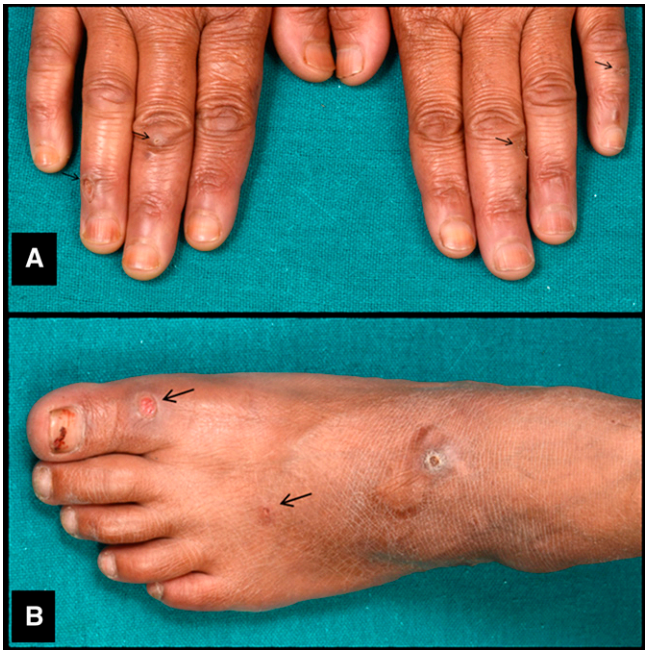

FIGURE 1. **A**, Multiple ulcers on the dorsum of the fingers (**arrows**) of the patient with associated swelling and redness. **B**, Active ulcers on the dorsum of the big toe and midfoot (**arrows**) and a healed scar on the upper dorsum.

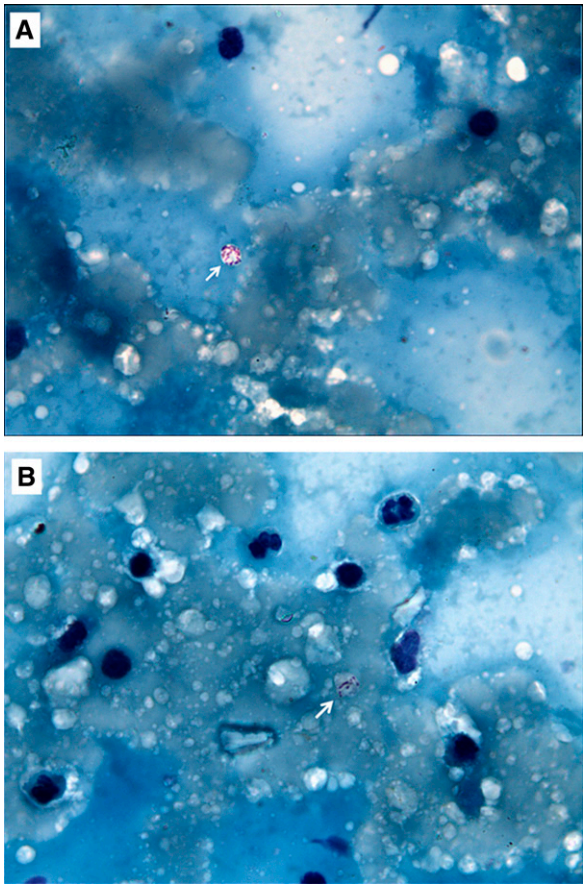

FIGURE 2. Ziehl-Nielsen staining of the split skin smear (**A**, **B**) revealing acid fast bacilli (white arrows).

Glove and stocking sensory loss in lepromatous leprosy is caused by involvement of small dermal sensory and autonomic nerve fibers,[1] whereas non-trophic ulcers are caused by cutaneous vasculitis and small fiber involvement by lepra bacilli.[1,2] The patient was given a multi-bacillary regimen[2] (dapsone, 100 mg/day; rifampicin, 600 mg/day; and clofazimine, 50 mg/day) and showed symptomatic healing of cutaneous ulcers and reduction of burning paraesthesias at two-months follow-up.

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		PATIENT PARAMETERS				NORMAL PARAMETERS			
Nerve	Side	Latency (msec)	Amplitude (millivolts)	Velocity (cm/sec)	Fwave (msec)	Latency (msec)	Amplitude (millivolts)	Velocity (cm/sec)	Fwave (msec)
Median (Motor)	Rt	4.1	4.6	49	30	≤ 4.2	≥ 4.0	≥ 48	≤ 31
	Lt	4.2	3.7	49	31				
Ulnar (Motor)	Rt	3.5	3.4	49	32	≤ 3.4	≥ 3.7	≥ 49	≤ 32
	Lt	3.6	3.3	46	31				
Tibial (Motor)	Rt	5.8	3.8	40	58	≤ 6.0	≥ 4.0	≥ 40	≤ 58
	Lt	5.6	4.2	44	55				
Peroneal (Motor)	Rt	5.6	2.0	38	57	≤ 5.5	≥ 2.8	≥ 40	≤ 56
	Lt	5.4	2.1	42	58				
Median (Sensory)	Rt	3.4	18	46	N/A	≤ 3.5	≥ 17	≥ 44	N/A
	Lt	3.6	14	44					
Ulnar (Sensory)	Rt	3.5	13	44	N/A	≤ 3.2	≥ 17	≥ 44	N/A
	Lt	3.2	12	48					
Sural (Sensory)	Rt	4.2	6	41	N/A	≤ 4.4	≥ 10	≥ 40	N/A
	Lt	4.4	5	40					

FIGURE 3. Nerve conduction parameters for the patient and normal reference values (N/A: Not Applicable).

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