

A Masquerading Solitary Skin Lesion: Unusual Presentation of Multibacillary Leprosy with Dermoscopic Assistance in Diagnosis

Sir,

A 35-year-old otherwise healthy male presented to the dermatology outpatient department with a single asymptomatic lesion on his left forearm since 1 month. He had no other cutaneous or systemic complaints. On examination, a solitary, well-defined, normoaesthetic, erythematous plaque of about 3 × 2 cm size with prominent follicular openings was present over the distal extensor surface of the left forearm [Figure 1]. The rest of the cutaneous, peripheral nervous system and systemic examination were insignificant. Dermoscopic examination of the lesion (with a *Dermlite DL4* third-generation dermoscope, original magnification ×10, polarized noncontact) was performed which revealed diffuse reddish-brown background with multiple ill-defined orange-brown globules at places. Central whitish streaks with multiple arborizing vessels in the periphery were also seen [Figure 2]. Clinical differential diagnoses of extrafacial granuloma faciale, sarcoidosis, and pseudolymphoma were considered. The pathological examination of the biopsy specimen from lesion revealed an atrophic epidermis with a narrow grenz zone. There was a diffuse lymphohistiocytic infiltrate in the papillary and reticular dermis with a diffuse collection of epithelioid cells and foamy histiocytes [Figure 3]. The Wade-Fite stain was strongly positive for acid-fast bacilli. Therefore, the pathological report was consistent with a diagnosis of lepromatous leprosy. At the follow-up visit 1 month later, the patient presented with few erythematous papules on the flanks [Figure 4]. A slit-skin smear from lesions on flanks was positive for acid-fast bacilli with a bacillary index of 3.5. With a final diagnosis of

multibacillary (MB) lepromatous leprosy, the patient was started on the World Health Organization multibacillary multidrug therapy (WHO MB-MDT).

Leprosy (Hansen's disease) is a chronic, granulomatous, multisystem infection caused by the acid-fast bacillus *Mycobacterium leprae*, and may present with a wide range of clinic-patho-serologic manifestations (especially in the MB patients e.g., lepromatous, histoid variants, etc.), therefore, also known as a great mimicker.^[1,2] Still, the disease is more likely to present with typical manifestations, with a field diagnosis easily considered/possible in the "endemic" regions with the WHO's cardinal signs.^[3] However, a number of atypical presentations of the disease have been described, which may sometimes present a challenge even to the trained eyes of an insightful dermatologist.

Classically, the MB lepromatous disease presents as multiple red-brown nodular infiltrates (lepromas) in the skin and mucous membranes occurring symmetrically. The lepromatous pole presenting as a solitary lesion is one of the rarest presentations, with only a few cases reported in the literature.^[4-7] The propensity of leprosy for unusual presentations is likely to lead to an undue delay in the correct diagnosis. The patient described by Yoder *et al.* had a single erythematous plaque on the left elbow with loss of sensation to touch and to pinprick, which indicated the possibility of leprosy.^[4] However, in our case, there was no sensory loss on the lesion or anywhere else in the body and there was no peripheral nerve thickening, further obscuring the clinical diagnosis. Although the precise etiology of this presentation is not known, it has been hypothesized that minor

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Figure 1: Normoaesthetic erythematous plaque on the left forearm

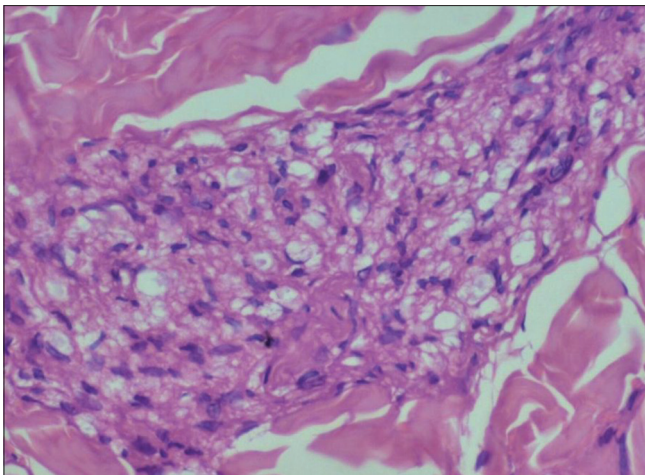


Figure 3: Vague collection of epithelioid cells and foamy histiocytes in the dermis. (H and E, original magnification, 40×)

trauma, direct exposure to *M. leprae* or low temperature could possibly be the pathomechanism.^[5,6] Apart from microbiologic and pathologic examinations, dermoscopy has been useful with certain subtle clues and is likely to expand the armamentarium of diagnostic methodology in leprosy. Under a dermoscope, yellow-orange structures in combination with linear vessels in branching patterns indicate a granulomatous process. In the present case, however, dermoscopy also demonstrated a whitish-yellow area with streaks, which has not been observed in previous observations in granulomatous conditions. The dermoscopic finding of whitish-yellow color with streaks, as seen in our case, is attributable to the peculiar whorled arrangement of histiocytes in the multibacillary granuloma of leprosy.^[8]

To conclude, lepromatous (MB) leprosy presenting as a solitary clinical lesion is a rare occurrence. Dermoscopic features as seen in our patient, along with a slit-skin smear certainly help the clinician by providing early vital diagnostic clues. Although many countries have achieved the elimination of leprosy (defined as a public health problem), early diagnosis and



Figure 2: Dermoscopic examination of the lesion revealed diffuse reddish-brown background with multiple ill-defined orange-brown globules (black circle) at places. Central whitish streaks (red arrow) with multiple arborizing vessels (black arrow) in the periphery are also seen



Figure 4: Asymptomatic erythematous papules on the flank at the follow-up visit after 1 month

management remain essential for the eradication of this chronic and mutilating disease.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have

given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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