

Case Report

Multidermatomal zosteriform lupoid cutaneous leishmaniasis: A case report

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Abstract Leishmaniasis is the result of infection with intracellular protozoan parasites belonging to the genus *Leishmania*. Cutaneous leishmaniasis (CL) may present with unusual clinical variants such as acute paronychia, annular, palmoplantar, zosteriform, erysipeloid, lupoid and sporotrichoid. Infection is transmitted by the bite of the sandfly. We report a multidermatomal zosteriform lupoid cutaneous leishmaniasis.

Key words

Leishmaniasis, zosteriform, lupoid, multidermatomal

Case report

A 39-year-old man was referred to our clinic with multiple erythematous plaques studded with papules, pseudovesicles, and small nodules around previous scar tissue on the left lower portion of the back and abdomen since 2 months (**Figures 1 and 2**). First he had been treated as herpes zoster without response to treatment by a general practitioner. There was a history of cutaneous leishmaniasis some years ago that had been treated successfully with systemic meglumine antimoniate. A smear and biopsy were taken but smear were negative for leishmaniasis and biopsy showed a granulomatous infiltrate in the dermis (**Figure 3**), PCR test was positive. The patient's electrocardiogram (ECG), CBC, chest X-ray, and serum urea, creatinine and electrolytes were within normal limits. Tuberculin test was negative. Regarding history and location of patient's living (endemic for leishmaniasis) and the PCR test,

therapy for leishmaniasis was started with combination of meglumine antimoniate in a dose of 20 mg/kg body weight intramuscularly daily for 20 days, and liquid-nitrogen cryotherapy every other week. After 2 months treatment was successful and almost all the lesions had cleared that was confirmative for diagnosis of leishmaniasis. (**Figure 4**)

Discussion

Leishmaniasis is the result of infection with intracellular protozoan parasites belonging to the genus *Leishmania*. The infections cause a wide spectrum of clinical changes that divide leishmaniasis into four broad divisions based on the extent and severity of involvement in the human host: cutaneous leishmaniasis (CL), diffuse cutaneous leishmaniasis (DCL), mucocutaneous leishmaniasis (MCL), and visceral leishmaniasis (VL).¹

Cutaneous leishmaniasis (CL) caused by several species of *Leishmania*. CL, owing to *L. major* and *L. tropica*, is an important public-health problem in Iran.² The disease begins as a small erythematous papule, which may appear immediately after the bite of sandfly

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Figure 1 Papulonodular lesions on back in dermatomal distribution.



Figure 2 Papulonodular lesions on anterior abdominal wall in zosteriform distribution.

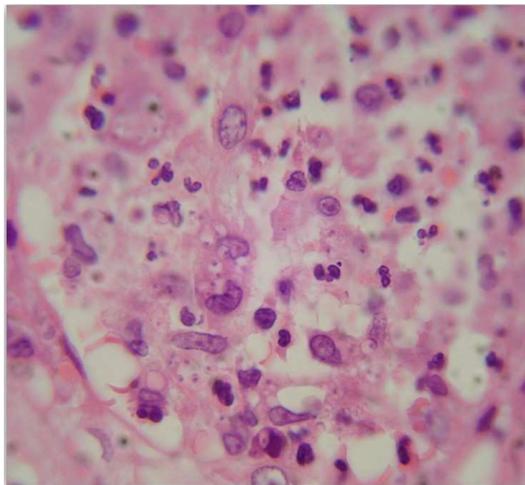


Figure 2 A A granulomatous infiltrate in the dermis.



Figure 4 Subsidence of lesions after parenteral antimicrobial treatment.

but usually appears 2 to 4 weeks later. The papule slowly enlarges in size over a period of several weeks and assumes a more dusky violaceous hue. Eventually the lesion becomes crusted in the center. When the crust is removed, a shallow ulcer is found, often with a raised and somewhat indurated border.¹

The common clinical types are the nodular and papular; rare variants are erysipeloid, annular, paronychia, palmoplantar, sporotrichoid, lupoid and genital forms.³⁻⁶ Unusual lesions may be morphologically attributed to an altered host response or owing to an atypical strain of parasites in these lesions.

CL is a disease with different clinical features.³⁻⁶ Many of the lesions are typical and

present no diagnostic difficulties. However, a zosteriform presentation is rare, especially with multidermatomal involvement. The most commonly involved sites are exposed areas.⁶ Our patient presented with an unusual lesion on a covered area. The lesion was zosteriform and multidermatomal, around a scar tissue on the left lower part of the back, flank, and abdomen with papules, and pseudovesicular lesions on an erythematous background.

Differential diagnosis included herpes zoster in which lesions are vesicular and pustular with duration of less than one month and should be treated with oral acyclovir; lupus vulgaris that tuberculin test usually is positive and there is necrosis in histopathology; subcutaneous and deep mycosis in which

smear and histopathology are diagnostic; and other granulomatous disease such as sarcoidosis and granuloma annulare and lymphocytic infiltration have some different clinical and histopathology features and treatment regimens. Past history and morphology of the lesions associated with previous scar and excellent response to antileishmanial treatment and the positive PCR test confirmed the diagnosis.

Zosteriform CL and multidermatomal zosteriform has rarely been reported,^{4,6} but a lupoid multidermatomal zosteriform pattern has not been recorded. Our patient had been mistakenly treated for herpes zoster on several occasions. The mechanism of multidermatomal involvement is not clear, but altered host immunity may be involved. The clinical pattern of the disease is determined by the interaction between the host immune responses and the strain of the parasite involved and, to some extent, on the site of involvement.^{4,5} In an endemic area it is necessary for the physician to be aware that

any atypical lesion should be investigated for cutaneous leishmaniasis.

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