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CASE REPORT

Topical potent corticosteroids and R-CDOP improved mycosis fungoides after 20 years treatment as tinea corporis

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ABSTRACT

A 62-year-old woman reported with progressive pruritus rash that persisted on her buttocks and extremities for a duration of twenty years. She was initially diagnosed with tinea corporis but then the morphological and histological features were consistent with MF. As MF is considered as a "great imitator", it is important to emphasize that cutaneous characteristics, skin biopsy, histology, and immunohistology may need to be performed in patients with chronic dermatoses resistant to treatment to rule out the underlying malignancy.

Keywords: Mycosis Fungoides; Pautrier's Microabscesses

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1. Introduction

Mycosis fungoides (MF) is a low-grade lymphoproliferative disorder in which neoplastic T-cells infiltrate into the skin and present as patches, plaques, tumors, or erythroderma[1]. MF has a wide spectrum of clinical manifestations that are often non-specific and create challenges in early diagnosis. Therefore, clinical experience is particularly important in differentiating MF from other skin diseases.

2. Case presentation

A 62-year-old woman reported with progressive pruritus rash that persisted on her buttocks and extremities for a duration of twenty years. She denied of any previous trauma or the concurrent use of any drug. She was initially diagnosed with tinea corporis and was treated with oral antifungal drugs, which did not impart any improvement. A previous skin biopsy revealed epidermal lymphocytic exocytosis in with minor spongiosis. Clinically, the buttocks, bilateral upper and lower extremities had multiple deep-red to violaceous, symmetric, indurated annular plaques covering approximately 10% to 12% of the body surface area. Notably, no blisters or versicles were present, but these plaques were rimmed with multiple crusts and superficial erosions at the edges accompanied by intense itching (**Figure 1**). There was no palpable cervical or axillary lymphadenopathy.

Results of laboratory investigations were within normal limits.

Skin scratch and fungal culture test were negative. Skin biopsies were collected from the edge of a lesion on the left upper extremity and a new lesion on the right thigh. Hematoxylin and eosin staining revealed a superficial dermal and epidermotropic infiltrate of atypical lymphocytes with nuclear contour irregularities focally distributed along the dermal-epidermal junction and aggregated in Pautrier's microabscesses. Epidermal hyperplasia with marked spongiosis and parakeratosis was observed (**Figure 2**). Immunohistochemical staining showed abundant infiltration of CD3 and CD4 lymphocytes (**Figure 2**).

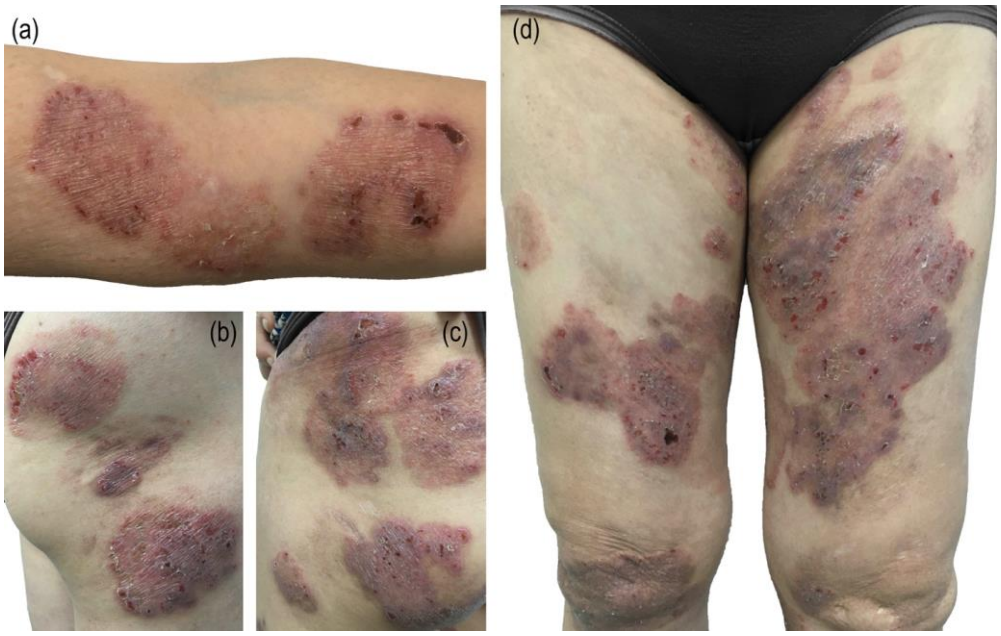

Figure 1. Clinical manifestation at the time of presentation.
Multiple deep-red to violaceous, symmetric, indurated annular plaques covering the upper extremities (**a**), buttocks (**b**, **c**), and bilateral lower extremities (**d**). These plaques were rimmed by multiple crusts and superficial erosions.

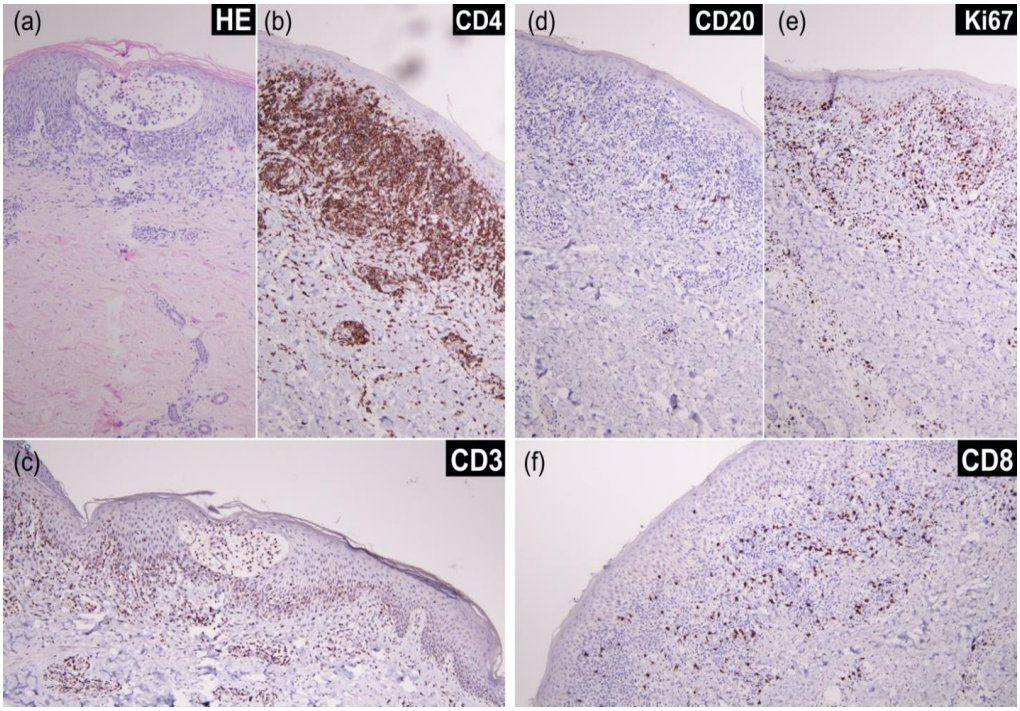

Figure 2. Pathologic pattern in the affected lesion.
Histological section from a biopsy specimen shows the features of a superficial dermal and epidermotropic infiltrate of atypical lymphocytes along the dermal-epidermal junction and aggregation in Pautrier's microabscesses. The paraffin-embedded tissue samples were deparaffinized and stained with (**a**) hematoxylin-eosin (HE), (**b**) CD4, (**c**) CD3, (**d**) CD20, (**e**) Ki67, and (**f**) CD8. Numerous CD3-positive T cells, predominantly CD4-positive T cells, were identified. CD8- and Ki67-positive cells were scattered, and few CD20-positive cells were identified (original magnification × 20).

CD8 was scattered and positively expressed on these cells. Nuclear positivity for Ki67 was found in approximately 40% of tumour cells. The morphological and histological features were consistent with MF. The patient underwent further examinations to determine the extracutaneous involvement. Computed tomography and bone marrow biopsy analyses were normal. Based on the sum of her clinical and histologic findings, our patient was diagnosed with plaque-stage MF. Currently, CTCL treatment is dependent on the stage of disease. Widespread, advanced disease or refractory early-disease requires systemic therapy. Biological or targeted therapies including bexarotene and interferon are first choice, with more immunosuppressive chemotherapies being reserved for refractory or rapidly progressive disease[2,3]. This patient was treated with topical potent corticostersoids and R-CDOP (Rituximab, cyclophosphamide, liposome doxorubicin, vincristine and prednisone) regimen that brought a favorable improvement in pruritus and cutaneous lesions.

3. Discussion

As MF is considered as a "great imitator", clinical presentation is a major factor determining the diagnosis of this disease[1,4]. Intra-epidermal blisters may appear secondary to the confluence of clefts formed by micro-collections of atypical lymphocytes in the epidermis (Pautrier's microabscesses), which explains the presence of superficial erosions and crusts at the edges of the lesions[5,6]. In the case presented here, the initial diagnosis of tinea corporis was understandable given the presence of itchy-centric plaques; however, no improvement with antifungal therapy and induration of the lesions suggested an underlying neoplastic condition. Early diagnosis of MF to improve outcomes and prevent fatal events requires clinical suspicion and awareness in dermatologists. In conclusion, it is important to emphasize that cutaneous characteristics, skin biopsy, histology, and immunohistology may need to be performed in patients with chronic dermatoses resistant to treatment to rule out the underlying malignancy.

Conflict of interest

None declared.

Sources of funding

None declared.

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