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Authors

Dastgheib, Ladan
Boroujeni, Nahid Hemmatian
Aslani, Fatemeh Sari

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Crusted scabies masquerading as psoriasis plaques in a patient suffering from burn scars

Ladan Dastgheib¹, Nahid Hemmatian Boroujeni¹, Fatemeh Sari Aslani²

Affiliations: ¹Molecular Dermatology Research Center, Department of Dermatology, Shiraz University of Medical Sciences, Shiraz, Iran, ²Department of Pathology, Molecular Dermatology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

Corresponding Author: N. Hemmatian Boroujeni, Dermatology Department, Faghihi Hospital, Shiraz, Iran, Tel: 98-91-24768923, Fax: 98-71-32319049, Email: n_hemmatian_b@yahoo.com

Abstract

A 30-year-old woman, presented with erythematous scaling plaques on her trunk with severe pruritus and a burning sensation that began 3 months prior to her visit. She had a history of a thermal burn in that area, three years prior. Topical corticosteroid application for 3 months had no positive effects. Skin biopsy was done and scabies mites were found.

Keywords: scabies, psoriasis, steroids, adverse effects, pruritus

Introduction

Scabies is a worldwide infestation, preferentially in developing countries. The causative agent is *Sarcoptes scabiei* var. *hominis*. These mites live in the cornified layer and lay eggs. The immune system response to these mites, their fecal material, and eggs result in severe itching. All age groups can be

infested, but the elderly, immunocompromised, and young children are at higher risk [1].

Other factors facilitating infestation include poor hygiene, crowded unhygienic quarters, and immunodeficiency. HIV and the use of immunosuppressive drugs increase scabies infestations and cause abnormal presentations [2]. Hyperkeratotic plaques in the site of infestation develop, harboring huge numbers of mites. Using topical corticosteroids can alter the natural course of the disease in several ways including decreasing pro-inflammatory cytokines (e.g. IL-1, IL-6), TNF, and phagocyte activity. These methods can lead to reduced immune responses and itching sensation promoting a crusted scabies appearance [3, 4].

Case Synopsis

A 30-year-old woman with a history of a 3 year old burn on her chest presented in dermatology clinic with the chief complaint of severe pruritus and a



Figure 1. A) Erythematous scaly plaques in site of previous burn scar. B) White scale and thick well demarcated erythematous plaque. C) The non-scarred inter mammary region free of lesions.

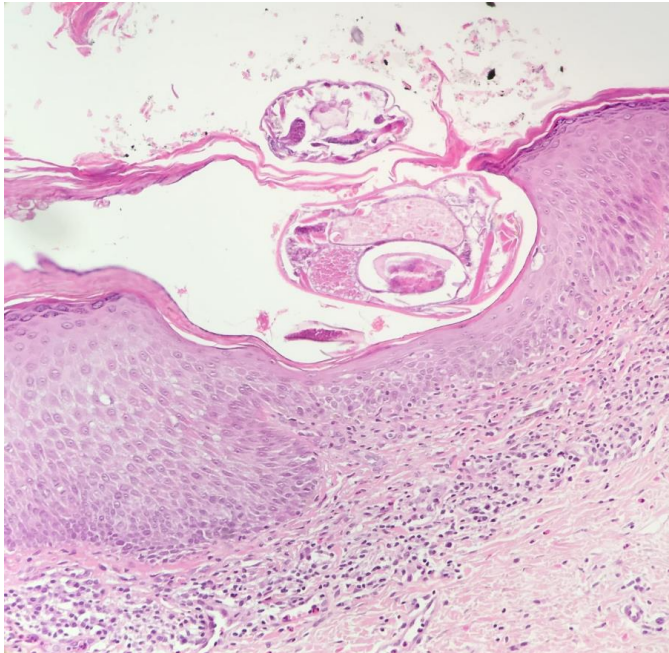


Figure 2. There are two mites in the stratum corneum within burrow. H&E, 100x.

burning sensation for 3 months. Clinical examination revealed thick erythematous scaling plaques at the site. The plaques coalesced and formed a large erythematous plaque confined to the location of scars on her chest and lower abdomen. The rest of her skin was normal, except for keratosis pilaris and a few excoriated papules scattered on her abdomen (Figure 1). The patient stated that she had been using topical corticosteroid for the past 3 months after the initial diagnosis of psoriasis, which was made by another dermatologist. Her nails were normal and Auspitz sign was negative. The lesions were confined only to the site of the previous burn.

A biopsy was performed with the differential diagnosis of eczema, psoriasis, and lichen simplex chronicus. However, histologic examination showed mites and eggs within the stratum corneum. The superficial dermis showed a mild to moderate mixed inflammatory infiltration composed of lymphocytes, plasma cells, and eosinophils (Figure 2). After treatment with permethrin 5% cream at the onset of treatment and once again in two weeks (ivermectin was not available), the pruritus and burning

sensation stopped and scales started to diminish (Figure 3). All family members were also treated with topical permethrin cream.

Case Discussion

Scabies with an unusual presentation can be misdiagnosed as other diseases, such as pustular psoriasis [5], rupioid psoriasis [6], and atopic eczema. If the diagnosis is delayed, complications such as impetigo and subsequent glomerulonephritis can occur. Also, the risk of scabies transmission might increase [1]. Skin biopsy, scabies scraping, adhesive tape test, and dermoscopy can be used to detect help detect the mites [7].



Figure 3. Resolution post-treatment

Conclusion

Our case of crusted scabies was unique, since the **patient was suffering from “localized crusted scabies” confined to the site of previous burn scars.** Diagnosis of scabies, especially with unusual presentations, can be challenging.

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