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CASE REPORT

Necrolytic Acral Erythema in a Seronegative Patient: A Rare Presentation of a Rare Dermatosis

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Abstract

We report a 34-year-old man who presented to us with mildly pruritic bilaterally symmetrical brownish plaques over the dorsum of both hands and feet for 2 months, whose dermatological and histopathological findings were in accordance with necrolytic acral erythema, but the serologic marker for hepatitis C virus was negative. He showed irrefutable clinical improvement with oral zinc therapy. Very few cases of necrolytic acral erythema without the presence of HCV infection has been reported, which led to this report.

Keywords

Necrolytic Acral Erythema, Seronegative, HCV

Introduction

Necrolytic acral erythema (NAE) was first reported in 1996 among seven Egyptian patients who were infected with hepatitis C virus.[1] It is characterized by well-circumscribed erythematous or dusky discoloration, along with peripheral blister formation and scaling over acral areas.[2] NAE is a unique presentation of hepatitis C infection and is considered as a dependable marker for the diagnosis of the same. Very few cases of seronegative NAE has been reported. We report a case of NAE from Southern India who was seronegative for hepatitis C virus.

Case Report

A 34-year-old man presented to us with mildly pruritic bilaterally symmetrical brownish plaques over the dorsum of both hands and feet for 2 months. The lesions started as erythematous papules which later coalesced to form dusky plaques with scaling. There was no history of any trauma. Patient gave no history suggestive of hepatic dysfunction or diabetes mellitus. On dermatological examination, well-demarcated bilaterally symmetrical hyperpigmented plaques with scaling were present over the dorsum of both hands and feet *(Figure 1)*. Nails, hair and mucosal membranes were normal. Routine blood investigations were done which were within normal limits. Serology for hepatitis C was negative.

Histopathological examination of the lesion revealed acanthosis, hyperkeratosis, parakeratosis, spongiosis, neutrophilic abscess in stratum corneum, hypogranulosis, focal hypergranulosis and a large vesicle in stratum corneum filled with few scattered neutrophils, lymphocytes and acantholytic cells. Underlying dermis showed perivascular mononuclear cell infiltration *(Figure 2)*. These findings were in accordance with NAE. Patient was diagnosed with NAE on the basis of the above-mentioned history, clinical examination and histopathological examination. He showed irrefutable clinical improvement with oral zinc therapy (elemental

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Fig 1. Well-demarcated bilaterally symmetrical hyperpigmented plaques over the dorsum of both hands

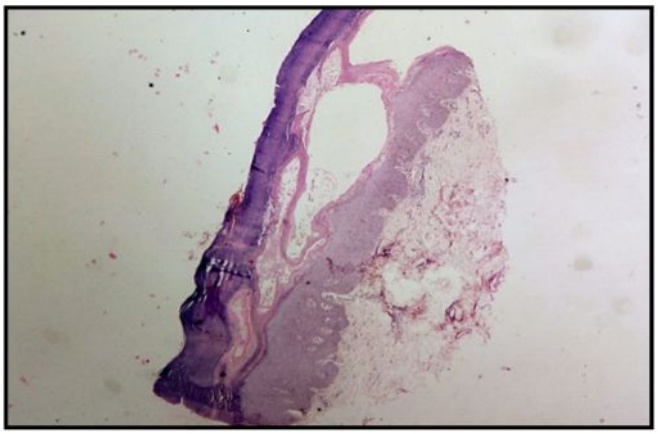

Fig 2. Acanthosis, hyperkeratosis, parakeratosis, spongiosis, neutrophilic abscess in stratum corneum

zinc 50mg TDS) and topical emollients within 3 weeks.

Discussion

Necrolytic acral erythema (NAE) is a rare dermatosis which involves acral areas and its presence strongly suggests hepatitis C infection. Necrolytic acral erythema affects individuals aged between 19 to 58 years, without any sex predilection.[3] Although the exact etiopathogenesis of this dermatosis remains an enigma, various mechanisms have been attributed such as hepatic impairment, hypoalbuminemia, zinc deficiency and HCV infection.[4]

NAE can clinically presents in three stages, an initial stage of erythematous papules, blisters, and erosions, followed by a fully developed stage characterized by well-demarcated dusky scaly plaques and a late stage showing progressive thinning with increased hyperpigmentation.[5] It is important to differentiate NAE from other dermatoses like psoriasis and other necrolytic erythema.[3,4,5] Oral zinc supplementation is the main treatment option.[6] Ribavirin and interferon alpha can be given in HCV seropositive cases.[3] Topical or intralesional steroids and topical tacrolimus are other treatment options. Majority of the reported cases of NAE were seropositive for HCV. [7] Diagnosis of NAE is rather challenging but nonetheless essential, as it may lead to an early diagnosis for HCV infection. Very few cases of necrolytic acral erythema without the presence of HCV infection has been reported, making it a rare presentation of a rare dermatosis.[8] It is therefore important to keep in mind that rarely necrolytic acral erythema can occur even in the absence of HCV infection as in our case.

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Conflicts of Interest

There are no conflicts of interest.

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