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Case Report

Pityriasis lichenoides-like drug reaction with numerous eosinophils

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Abstract: Pityriasis lichenoides-like drug reactions simulate pityriasis lichenoides clinically and histopathologically, though important differences exist. As a rule, pityriasis lichenoides has minimal to no eosinophils. However, this case illustrates that pityriasis lichenoides-like drug reaction can present with numerous eosinophils. This, in our experience is not rare, but contrasts with clinical reports in the literature that describe pityriasis lichenoides-like drug reactions with minimal to no eosinophils in the infiltrate. While similar, distinguishing these diseases is important given that pityriasis lichenoides is a lymphoproliferative disorder with a more protracted clinical course that is difficult to treat. We provide histopathological clues to aid in this important distinction.

Keywords: Pltyriasis lichenoides, pityriasis lichenoides-like drug reaction, drug hypersensitivity, inflammatory infiltrate, eosinophils

Introduction

Pityriasis lichenoides, including its main subtypes of pityriasis lichenoides et varioliformis acuta (PLEVA) and pityriasis lichenoides chronica (PLC), presents clinically as recurrent crops of spontaneously regressing erythematous papules [1]. Histologically, pityriasis lichenoides is characterized principally by vacuolar interface dermatitis with parakeratosis, exocytosis, erythrocyte extravasation, rare necrotic keratinocytes, occasional spongiosis, and a superficial to occasionally deep perivascular lymphocytic infiltrate [2]. Eosinophils are rarely found within this inflammatory infiltrate [3]. While the etiology of pityriasis lichenoides is unknown, some believe it is a hypersensitivity reaction to various antigens, including infections and drugs. Multiple studies have also demonstrated dominant T-cell clonality within lesions of pityriasis lichenoides, which has resulted in its categorization as a type of lymphoid dyscrasia [1, 4].

Drug hypersensitivity reactions can present in myriad ways and can histologically simulate eczema, psoriasis, lichen planus, and even pityriasis lichenoides [5]. Even though many consider pityriasis lichenoides to be a hypersensitivity reaction to various antigens such as drugs, pityriasis lichenoides-like drug eruptions differ in that they usually remit after cessation of the offending medication, unlike pityriasis lichenoides which recurs. Similar to ordinary pityriasis lichenoides, documented cases of pityriasis lichenoides-like drug reaction in the literature are not associated with eosinophils in the inflammatory infiltrate [5, 6]. Herein we report a case of pityriasis lichenoides-like drug reaction with a significant number of eosinophils present in the inflammatory infiltrate. In our experience, this is a common occurrence and is likely an underreported histopathologic presentation of a drug hypersensitivity reaction.

Case report

A 62-year-old man with a past medical history significant for schizoaffective disorder and transurethral resection of the prostate complicated by urethral stricture was admitted to the hospital for suicidal ideation and a worsening diffuse rash. The dermatology team was consulted for the rash. Eleven days prior to admis-

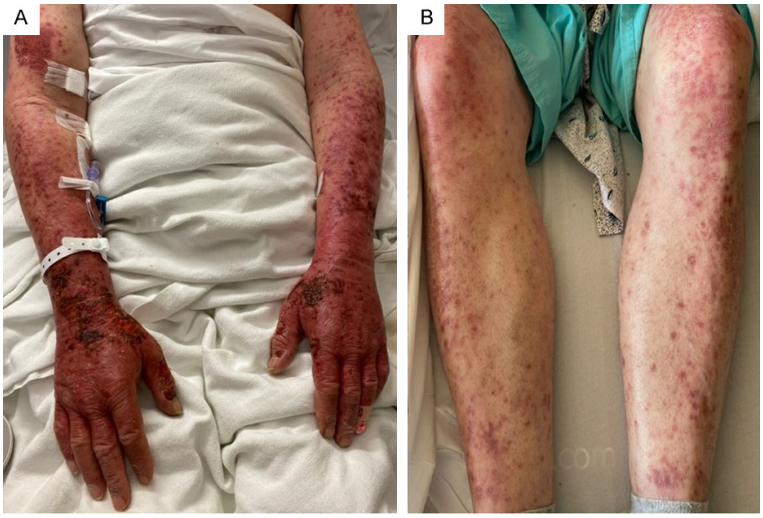

Figure 1. A. Numerous round red scaly papules and plaques, some eroded, present on bilateral arms. B. Appearance of rash after approximately three days of intravenous methylprednisolone.

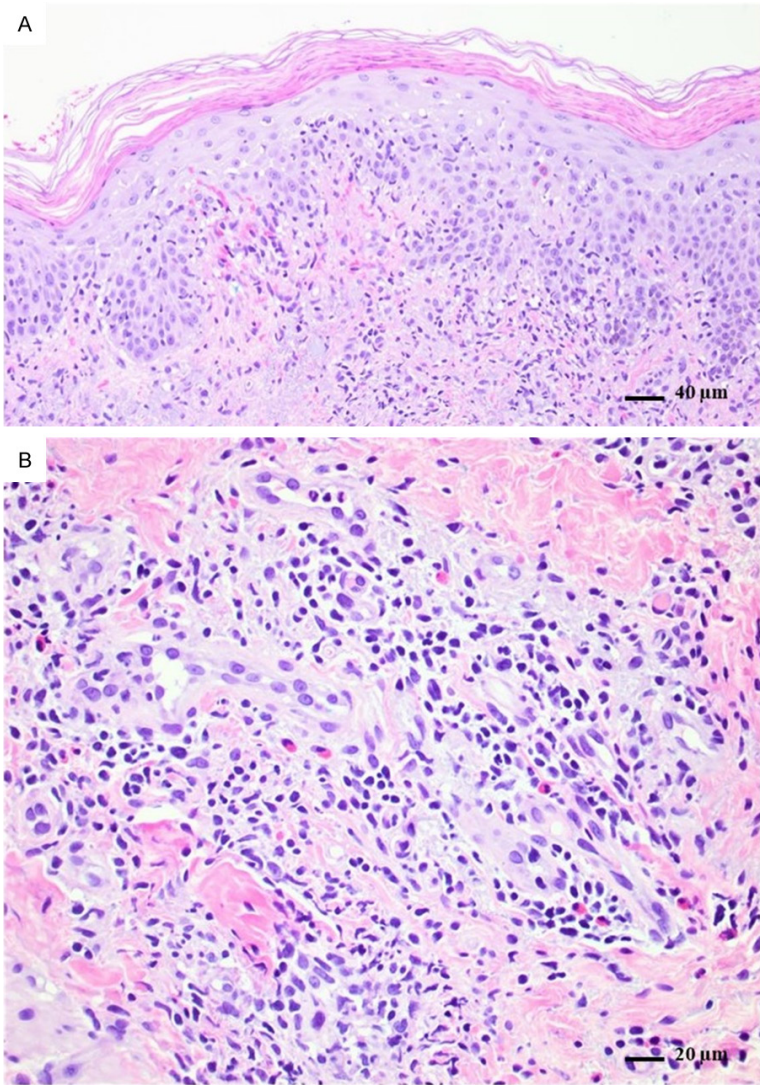

Figure 2. A. Vacuolar interface dermatitis with parakeratosis, exocytosis, focal spongiosis, rare necrotic keratinocytes, and erythrocyte extravasation (hematoxylin and eosin [H&E], 200×). B. Deep perivascular lymphocytic infiltrate with numerous eosinophils (H&E, 400×).

sion, the patient was started on cephalexin for a urinary tract infection. He developed the rash roughly five days later. The patient did not start any other new medications prior to the onset of the rash. Upon admission, the patient had a heart rate of 120 beats per minute and a temperature of 100.4 degrees Fahrenheit; otherwise, his vital signs were within normal limits. His skin exam was notable for well-demarcated, coalescing scaly red papules, some eroded, present on the chest, back, bilateral arms, buttocks, and bilateral legs (**Figure 1**). Other than a mild crusting on his upper and lower lips, no mucosal lesions were present. The patient's laboratory values, including complete blood count and comprehensive metabolic panel, were within normal limits. Two biopsies, one for hematoxylin and eosin and one for direct immunofluorescence, were obtained from the left forearm. Histology revealed a vacuolar interface dermatitis with parakeratosis, exocytosis, focal spongiosis, rare necrotic keratinocytes, erythrocyte extravasation, and a superficial to deep perivascular lymphocytic infiltrate with numerous eosinophils (**Figure 2**). The direct immunofluorescence findings were non-specific. The rash resolved with cessation of the cephalexin and intravenous methylprednisolone 1 mg/kg/day for four days followed by a short prednisone taper.

Discussion

Pityriasis lichenoides-like drug reactions are variants of drug hypersensitivity reactions that simulate pityriasis lichenoides clinically (scale, crust, erosions) and histologically (parakeratosis, interface changes, exocytosis, erythrocyte extravasation), as seen in this case. However, important differences exist between pityriasis lichenoides-like drug reactions and pityrasis lichenoides. As a rule, pityriasis lichenoides has minimal to no eosinophils [3]. This case illustrates that pityriasis lichenoides-drug eruption can present with numerous eosinophils, which in our experience is not rare and likely under-reported. While similar, distinguishing these diseases is important given that pityriasis lichenoides is a lymphoproliferative disorder with a more protracted clinical course that is difficult to treat, and it is hoped that this histopathological clue can aid in this important distinction.

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The patient signed an informed consent to publish the images and information presented herein.

Disclosure of conflict of interest

None.

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