PICTORIAL ESSAY

Pyoderma Gangrenosum in an Immunosuppressed Patient

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Abstract

Pyoderma gangrenosum (PG) is a rare, cutaneous, and ulcerative disorder that occurs as a result of neutrophil dysfunction and is generally seen in patients with underlying systemic diseases. PG is mainly treated by corticosteroids and immunosuppressive agents. We present this case as a rare case of rapidly progressive PG in a lady with sarcoidosis that occurred despite being on immunosuppression with azathioprine.

Keywords: Azathioprine, Inflammatory exudate, Immunosuppression, Neutrophil dysfunction, Pyoderma gangrenosum.

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Case Description

A 51-year-old female, known case of sarcoidosis on azathioprine, presented with a history of development of small painful, erythematous lesions over the medial side of both thighs, initially noticed 3 months back, and now rapidly progressing to a necrotic ulcer with a ragged undermined edge with violaceous borders over the last month (Fig. 1). Over the next 4 weeks, this also spread to the lower abdominal wall. Biopsy of the lesion from both thigh and abdomen showed an inflammatory exudate rich in neutrophils, admixed with nuclear debris and fibrin, suggestive of PG (Fig. 2). There was no evidence of vasculitis or granuloma. She was treated with pulse therapy of intravenous steroids followed by oral steroids with regular moist wound dressings. Other predisposing conditions like inflammatory bowel disease (IBD), rheumatological disorders, and thrombosis were ruled out. The patient underwent debridement of the ulcer and was continued on steroids, with gradual improvement over the next 2 months.

Introduction

Pyoderma gangrenosum is an uncommon sterile neutrophilic dermatosis that presents as an inflammatory and ulcerative disorder of the skin with undermined bluish edges and surrounding erythema.[1] Although it may occur at any age, predilection is more for young and middle-aged women. More than 50% of patients have associated systemic disease, with the strongest association being IBD, hematologic disorders, and arthritis.[2] Factors contributing to PG include aberrant neutrophil function, genetic susceptibility, and dysregulation of the immune system.[3,4] Incidence of PG is 3–10 cases per million population per year.[3] PG is often a diagnosis of exclusion as there are no specific lab or histopathological findings to confirm the diagnosis.

Discussion

Pyoderma gangrenosum is a well-recognized condition, but despite this, there is often a failure to make an early diagnosis. Diagnosis of PG is clinical, and histology can be supportive and helps in ruling out similar lesions, like vasculitis, infections, etc. It is important for all clinicians to actively consider PG when assessing patients with ulcers, as appropriate and prompt treatment at an early stage of the disease may avoid the complications of prolonged systemic treatment, delayed wound healing, scarring, and inappropriate therapy like surgical debridement as PG can demonstrate pathergy.[5] In our case, the development of PG in a case of sarcoidosis who was on disease modifying drugs and its involvement of abdominal viscera makes it a unique and interesting case.

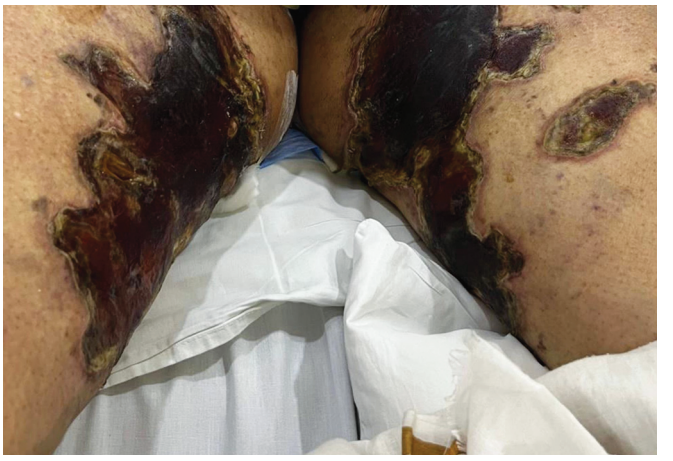

Fig. 1: Necrotic ulcers with ragged undermined edges and violaceous borders over both medial thighs

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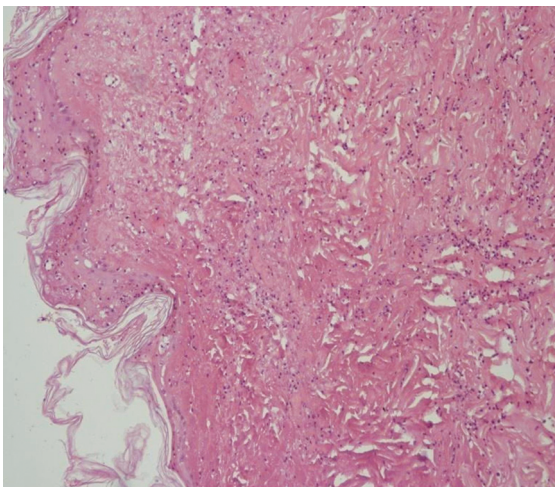

Fig. 2: Skin biopsy showing inflammatory exudates rich in neutrophils, admixed with nuclear debris and fibrin suggestive of PG

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