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Case Report

Intraocular Jarisch-Hexreihmer Reaction After Initiation of Antibacillary Treatment in Immunocompetent Patients: About Two Cases

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Abstract

Pyoderma Gangrenosum (PG) is a rare, ulcerative skin condition frequently associated with Inflammatory Bowel Disease (IBD). This case report describes a 45-year-old woman with a history of ulcerative colitis who presented to the emergency department with painful and evolving lesions on her skin and oral mucosa. The lesions, initially small pustules, progressed into large ulcers with purulent bases, consistent with PG. Management included high-dose systemic corticosteroids for her IBD to address the underlying chronic disease flare. This case highlights the importance of recognizing PG in patients with IBD, underscores the value of a multidisciplinary approach, and emphasizes the need for timely diagnosis and accurate management to improve patient outcomes in the acute setting.

Keywords: Pyoderma gangrenosum; Inflammatory bowel disease; Skin ulcers; Emergency department

Abbreviations

PG: Pyoderma Gangrenosum; UC: Ulcerative Colitis; ED: Emergency Department; IBD: Inflammatory Bowel Disease; TNF: Tumor Necrosis Factor

Introduction

Pyoderma gangrenosum is a rare, ulcerative skin condition often associated with systemic diseases such as inflammatory bowel disease, including Ulcerative Colitis (UC) [1,2]. In the acute ambulatory setting, it can often be mistaken for infection and mistreated, thus delaying proper identification and care. This report discusses a case of a 45-year-old woman with UC who presented to the Emergency Department (ED) with multiple cutaneous pustules and ulcers highly suspicious for PG.

Case Presentation

The patient was a 45-year-old female with past medical history of ulcerative colitis diagnosed at age 13, chronic anemia, anxiety, and depression who presented to the ED with one week of progressively worsening, painful lesions on her head, neck, and upper extremities. They had initially appeared as small, red bumps that were progressively enlarging. She went to the ED previously for these lesions and was diagnosed with folliculitis and prescribed a course of oral clindamycin. She endorsed the lesions were worsening despite completion of antibiotics. She has never experienced similar skin issues and denied any new exposures or recent travel. She had not had a UC flare in over 10 years and had no prior history of significant dermatological issues.

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In addition to new skin findings, the patient also reported dyspnea on exertion and worsening abdominal symptoms for the past several weeks including watery diarrhea up to 15 times a day with nocturnal episodes, poor appetite, nausea, vomiting, abdominal pain, generalized fatigue, and up to 20 pounds of weight loss in five months. She recently re-established care with a gastroenterologist and was prescribed mesalamine a week prior, though had not yet started taking the medication. Notably, the patient was experiencing homelessness leading to difficulties adhering to her medication regimen and had been off of her UC medications for an unknown period of time.

On physical exam, multiple painful lesions at varying stages ranging from pustules to ulcers were noted on the face, neck, scalp, right shoulder, and left wrist (Figures 1-5). A few areas were open and draining white fluid. The most prominent ulcer on her left posterior neck had raised, violaceous borders with a purulent center (Figure 1).

Significant laboratory results at time of presentation included leukocytosis, electrolyte derangement, and elevated inflammatory markers (Table 1). Vitals were stable upon presentation though blood and wound cultures were ordered in the ED due to concern for disseminated skin infection. Both returned negative for organisms. Abdominal imaging revealed diffuse colonic wall thickening of the transverse colon consistent with pancolitis (Figure 6). The patient was started on intravenous methylprednisolone 1 mg/kg/day and oral mesalamine 800 mg three times daily. Colonoscopy later showed severe inflammation from anus to the hepatic flexure, and a biopsy of the colon returned with mildly active chronic colitis.

Discussion

Pyoderma Gangrenosum (PG) is a rare, immune-related inflammatory neutrophilic dermatosis that presents with rapidly progressing ulcers or pustular lesions often with sterile purulent discharge. The lower extremities are frequently affected but lesions can appear at any site on the body [1]. It is commonly associated with systemic diseases, including Inflammatory Bowel Disease (IBD), rheumatoid arthritis, and hematologic malignancies [2]. The relationship between PG and UC is well-established, with up to 5% of UC patients developing this condition during their disease course [3].

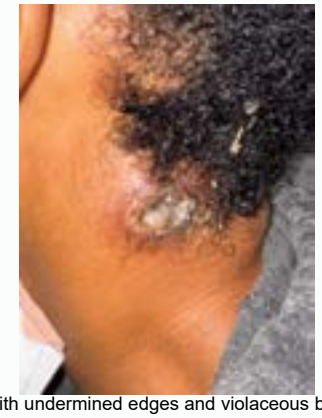

Figure 1: Ulcer with undermined edges and violaceous borders draining purulent fluid on the left posterior neck, a classic ulcerative form of PG.

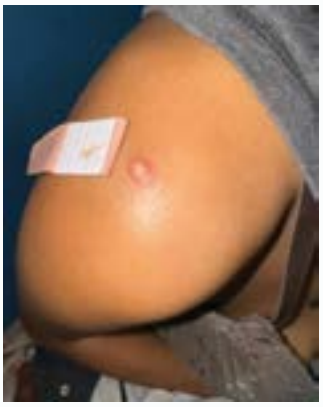

Figure 2: Erythematous pustule on the right upper extremity consistent with pustular pyoderma gangrenosum (PG), the forme fruste seen in patients with Inflammatory Bowel Disease (IBD).

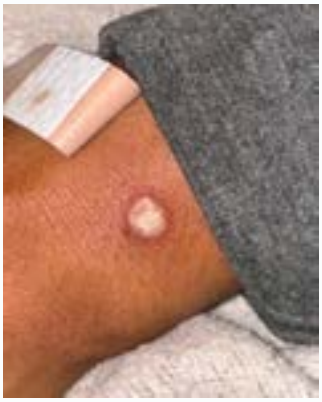

Figure 3: Erythematous pustule on the left ventral forearm consistent with pustular pyoderma gangrenosum (PG), the forme fruste seen in patients with Inflammatory Bowel Disease (IBD).

It is more common in patients with UC compared to Crohn's disease [2]. The exact pathogenesis of PG remains unclear, but it is believed to involve an aberrant immune response, particularly neutrophilic infiltration and abnormal cytokine signaling, Including Interleukin (IL)-1, IL-6, and Tumor Necrosis Factor-alpha (TNF-α) [4]. This response can be triggered by various factors, including trauma, infections, or disease flares.

Figure 4: Weeping pustular lesions present on the right nasolabial fold.

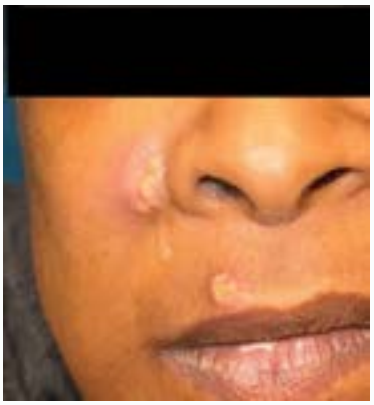

Figure 5: Nodular papule evolving into ulcer present on the upper vermilion lip.

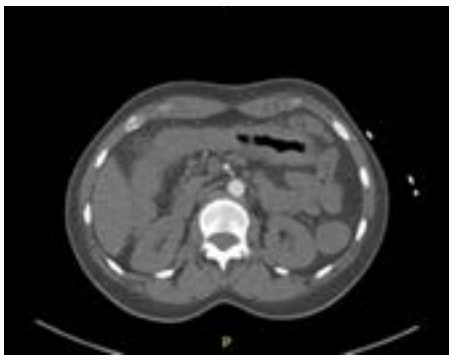

Figure 6: Nodular papule evolving into ulcer present on the upper vermilion lip.

The patient's presentation of multiple erythematous pustules that formed painful ulcers, coupled with a history of ulcerative colitis, raised suspicion for PG [5]. The rapid progression of the ulcers, from small nodules to extensive, purulent lesions, is characteristic of PG. This presentation is often mistaken for other conditions such as infected ulcers, venous stasis ulcers if on the lower legs, factitial ulcers, or vasculitis. In this case, her condition was mistaken for folliculitis on her initial visit to the ED and she was treated with antibiotics. However, antibiotics alone are insufficient for treating PG.

Successful treatment of PG typically involves systemic immunosuppressive therapy, as it responds poorly to topical treatments alone. First-line therapies include oral corticosteroids and oral cyclosporine, though biologic agents such as TNF inhibitors (e.g., infliximab) have shown efficacy, particularly in patients with concurrent IBD [2,6]. Early recognition and aggressive management are essential to prevent the lesions from progressing to deeper, more destructive ulcers and becoming secondarily infected.

The clinical presentation of PG can be highly variable, often starting as pustules or papules that rapidly evolve into painful ulcers with undermined, violaceous borders [1,7]. There are many forms of PG including bullous, vegetative/superficial, pustular, and ulcerative. Pustular PG is commonly associated with IBD, where pustules can resolve or progress to ulcerative lesions [8]. In this patient, the atypical presentation with pustular lesions aligns with the early stage of PG, which can be misdiagnosed as infection or other dermatological conditions such as impetigo, HSV, or drug reactions. Skin biopsy can be supportive by ruling out infection and other causes of cutaneous ulceration. Classic histopathologic features of PG are nonspecific and can vary depending on the age of lesion [1]. Histologic findings range from perifollicular inflammation with accompanying lymphocytic infiltration to dense neutrophilic infiltrate with abscess formation [2]. Unfortunately, a biopsy was not performed in this case as the patient eloped from the hospital a few days into treatment without additional follow-up with outpatient dermatology. However, a biopsy is not required to diagnose PG, as it primarily functions to exclude other causes of ulceration [8].

Conclusion

In conclusion, this case highlights the importance of recognizing pyoderma gangrenosum in patients with ulcerative colitis presenting with evolving pustular lesions. PG can present with a variety of clinical features, and in its early stages, may be mistaken for infections or drug reactions. Given the significant association between PG and UC, clinicians should maintain a high index of suspicion in similar cases. Prompt diagnosis and initiation of immunosuppressive therapy are critical for preventing disease progression and improving patient outcomes. This case underscores the need for a multidisciplinary approach to manage patients with pyoderma gangrenosum and poorly controlled ulcerative colitis. Early identification and appropriate treatment can significantly improve quality of life and reduce the risk of complications, such as secondary infections, delayed wound healing, and extensive tissue damage leading to scarring.

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