

Pyoderma gangrenosum in ulcerative colitis

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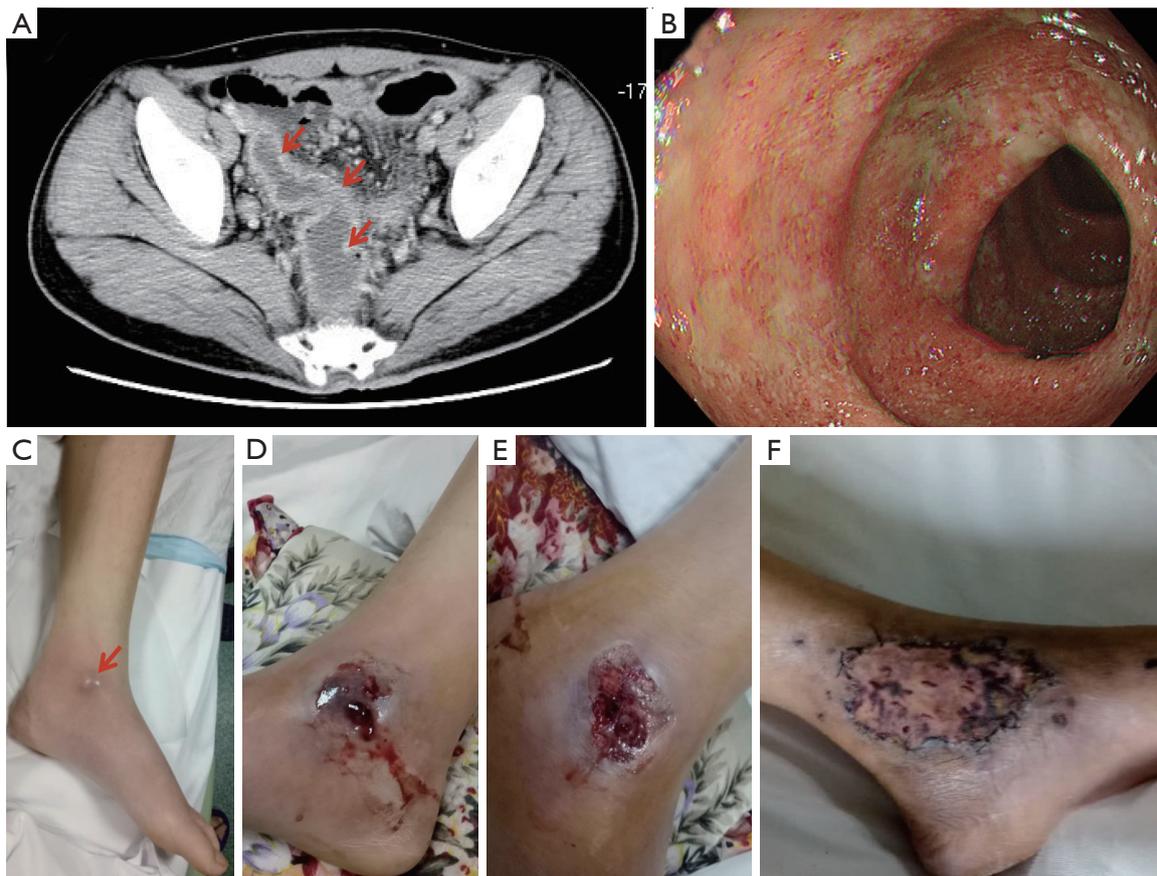


Figure 1 Pyoderma gangrenosum in ulcerative colitis. (A) Computed tomography of the abdomen. The red arrows indicate thickened wall of colon sigmoideum and rectum; (B) The colonoscopy results; (C) Lcerative lesions involving the left ankle joint shown on the 1st day after the operation; (D) Deep ulcers shown on the 3rd day after the operation; (E) Necrosis shown on the 5th day after the operation; (F) Ulcers diminished substantially with residual superficial atrophic scars on the 7th day after the operation.

A 21-year-old man presented to an outpatient clinic with an 8-month history of hematochezia, abdominal pain, tiredness, and weight loss. His abdomen was soft, with mild left lower quadrant abdominal tenderness and active bowel sounds. Laboratory evaluation revealed a hemoglobin level of 10.4 g per deciliter (normal range, 13.5 to 17.5). Computed tomography of the abdomen revealed thickened wall of colon sigmoideum and rectum (*Figure 1A*). The colonoscopy showed congestion, edema and ulcer in the same location (*Figure 1B*), and mucosal biopsy by colonoscopy suggested that submucosal abscess was formed and presented as fissuring ulcers. T-SPOT. TB assay was negative. Two weeks later, the painful and rapidly progressive ulcerative lesions involving the left ankle joint was shown sequentially accompanied by red swollen (the 1st day; *Figure 1C*), deep ulcers (the 3rd day; *Figure 1D*), and necrosis (the 5th day; *Figure 1E*). The physical examination showed skin ulcerations with both an irregular purple and a purulent base edge. The histopathological detection of an incisional biopsy sample separated from the ankle lesion revealed both superficial dermal and epidermal necrosis with leukocytoclastic vasculitis, an underlying mixed inflammatory-cell infiltrate and abscess formation. Direct microbiologic detection and cultures were negative for bacterial and fungal pathogens. A diagnosis of pyoderma gangrenosum (PG) in ulcerative colitis was made. PG is an inflammatory skin disease with characteristics of rarity, chronicity and destructiveness, in which a painful nodule or pustule breaks down to generate a progressive and expansive ulcer with a undermined, tender and raised border (1-3). PG is usually related to systemic proinflammatory states, most particularly inflammatory bowel disease (4,5). Treatment can be extremely challenging, usually involving different kinds of immunosuppressive therapies (6,7). In this patient, the debridement was given. Treatment with sulfasalazine was initiated, and 2 weeks later, methylprednisolone therapy was started. Four weeks later, dermatoplasty was performed. The cutaneous ulcers had diminished substantially, with residual superficial atrophic scars on the 7th day after the operation (*Figure 1F*). He was discharged home with synchronous resolution of hematochezia and abdominal pain symptoms, as well as with outpatient follow-up.

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Footnote

Conflicts of Interest: Both authors have completed the ICMJE uniform disclosure form (available at <https://amj.amegroups.com/article/view/10.21037/amj-20-23/coif>). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee(s) and with the Helsinki Declaration (as revised in 2013). Written informed consent was obtained from the patient for publication of this study and accompanying images. A copy of the written consent is available for review by the editorial office of this journal.

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References

1. Neil Crowson A, C. Mihm Jr M, Magro C. Pyoderma gangrenosum: a review. *J Cutan Pathol* 2003;30:97-107.
2. Wollina U. Pyoderma gangrenosum—a review. *Orphanet J Rare Dis* 2007;2:19.
3. Ruocco E, Sangiuliano S, Gravina A, et al. Pyoderma gangrenosum: an updated review. *J Eur Acad Dermatol Venereol* 2009;23:1008-17.
4. Inayat F, Hurairah A. Pyoderma Gangrenosum at a Rare Site in Crohn's Disease. *Clin Gastroenterol Hepatol* 2016;14:e75-6.
5. Plumptre I, Knabel D, Tomecki K. Pyoderma Gangrenosum: a review for the gastroenterologist. *Inflamm Bowel Dis* 2018;24:2510-7.
6. Ahn C, Negus D, Huang W. Pyoderma gangrenosum: a

- review of pathogenesis and treatment. *Expert Rev Clin Immunol* 2018;14:225-33.
7. Alavi A, French LE, Davis MD, et al. Pyoderma

gangrenosum: an update on pathophysiology, diagnosis and treatment. *Am J Clin Dermatol* 2017;18:355-72.

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