

Pyoderma Gangrenosum in Crohn's Disease: Unusual Presentation and Management

Jeyaraj Nallathambi B. Javaid

Department of Medicine, West Cumberland Hospital, Whitehaven, UK

Key Words

Crohn's disease · Pyoderma · Pyoderma gangrenosum

Abstract

Pyoderma gangrenosum is an uncommon, destructive, cutaneous ulceration which presents as ulcerative, pustular, bullous and vegetative forms, the ulcerative forms being more common. We present the case of 41-year-old woman with Crohn's disease who presented with a rather unusual form of pyoderma gangrenosum, aseptic cutaneous abscess. It was initially misdiagnosed as a fistulous tract in the abdominal wall, but later prompt diagnosis of pyoderma gangrenosum led to a very satisfactory outcome.

Case Report

A 41-year-old woman, a known case of Crohn's disease for 20 years, presented to us with a tender, slightly mobile mass in the abdominal wall in the region of her laparotomy scar from hemicolectomy done a year before for ileal stricture. Blood investigations showed a white cell count of $7.5 \times 10^9/l$ and C-reactive protein of 156 mg/l (normal: <5). CT scan of the abdomen revealed a multilocular irregular abscess cavity within the anterior abdominal wall suggesting a fistula. She was started on metronidazole, ciprofloxacin and budesonide (9 mg once daily). The dose of azathioprine was also increased to 150 mg once daily and mesalazine was continued at 1 g three times daily. Blood cultures were negative, but wound swab grew *Streptococcus milleri* and she was given a five-day course of amoxicillin to which this organism was reported to be sensitive. The abscess drained spontaneously and the C-reactive protein settled. She was managed jointly by the gastroenterology and the surgical team.

After 8 months, she again developed an abdominal wall abscess. Blood investigations showed a white cell count of $6.5 \times 10^9/l$ and C-reactive protein of 124 mg/l. Blood cultures were negative, but wound swab grew skin and faecal flora. The abscess drained spontaneously and inflammatory markers slowly settled, but left a nonhealing sinus in the abdominal wall which was discharging continuously. Assuming this to be a fistulous tract from the bowel, the option of using infliximab was considered. However, barium enema identified no fistulous tract and the barium passed from the duodenum to the ileocolonic anastomosis rapidly, so laparotomy and surgical exploration of this area was suggested. A 3×4 cm abscess cavity was encountered on surgical exploration, deep to the subcutaneous tissue at the level of the rectus. No small bowel was connected to the abdominal wall abscess. The excised tissue was sent for histological assessment, and histopathology showed chronic active inflammation in keeping with abscess formation and no convincing epithelioid granulomas; the possibility of pyoderma

gangrenosum was suggested ([fig. 1](#)). Considering pyoderma gangrenosum, again the dose of mesalazine and azathioprine was increased to 1 g three times daily and 150 mg once daily, respectively. The patient showed good improvement and the wound healed completely.

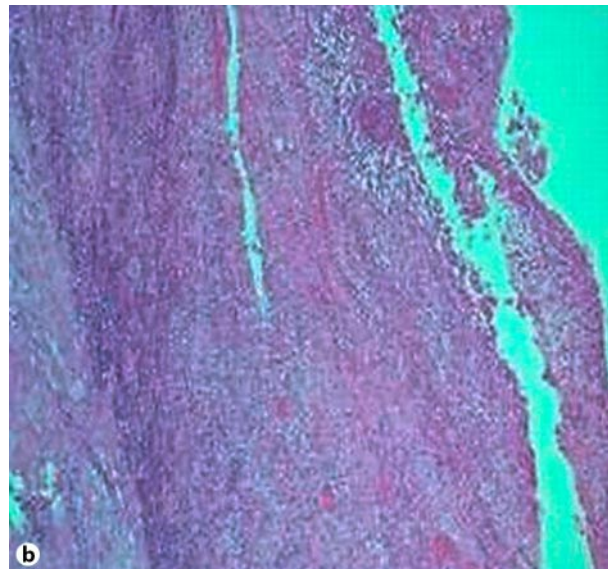
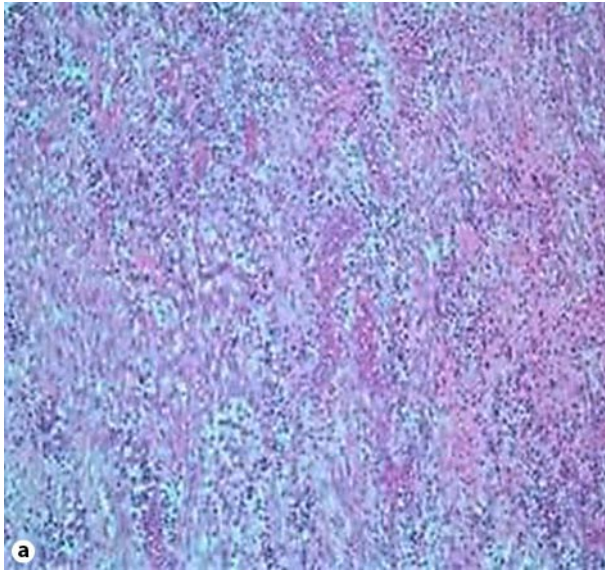
Discussion

Pyoderma gangrenosum is an uncommon, destructive, cutaneous ulceration first described by Brunsting et al. in 1930 [1]. It is part of the neutrophilic disease spectrum [2]. Systemic diseases often associated with pyoderma gangrenosum include inflammatory bowel disease, rheumatoid arthritis, haematologic malignancy and monoclonal immunoglobulin A gammopathy. Pyoderma gangrenosum can present as ulcerative, pustular, bullous and vegetative forms, the ulcerative forms being more common [3]. Our case presented as an abscess, which is a very unusual form of presentation. Two cases of neutrophilic dermatoses presenting as aseptic cutaneous abscess have been reported previously, and it was suggested due to deep localization of neutrophilic disease [4].

Pyoderma gangrenosum complicating surgical incisions are rare and include plastic surgery of the breast in reduction mammoplasty, cholecystectomy, transabdominal preperitoneal hernioplasty, splenectomy incision, abdominal stoma surgery/colectomy in patients with Crohn's disease, hip joint surgery, orthopaedic surgery involving the extremities, leg amputation, coronary artery bypass grafting and lower segment caesarean section incision [5]. In our case it occurred at the hemicolectomy surgical scar. The pathogenesis of this rare necrotizing skin disorder at surgical sites is not clear. Often occurring in the absence of predisposing factors, it has been related to a defective immune response and associated with underlying systemic diseases, reflecting a chronic ulcerative inflammatory skin disease.

Many patients present to hospital with apparently simple soft tissue infections and abscess formation. Mistaking pyoderma gangrenosum for such an infection can have serious consequences. The usual surgical treatment for an infection, like aggressive debridement and drainage, can markedly worsen the condition of pyoderma gangrenosum [6]. Yet, although it is an uncommon differential diagnosis, pyoderma gangrenosum should always be considered when wounds are unresponsive or worsening despite traditional antimicrobial therapy. Contrary to the management of infection, pyoderma gangrenosum requires high doses of corticosteroids or even additional immunosuppressive drugs such as cyclosporine and azathioprine. In our case, increasing the dose of azathioprine and mesalazine led to perfect control of the wound after surgical excision.

Fig. 1. a, b Chronic active inflammation in keeping with abscess formation and no epithelioid granulomas.



References

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