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SHORT REPORT

Fournier's gangrene complicating ulcerative pancolitis

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Abstract

Fournier gangrene is a very rare and a rapidly progressing, polymicrobial necrotizing faciitis or myonecrosis of the perineal, perianal and genital regions, with a high mortality rate. Infection is associated with superficial traum, urological and colorectal diseases and operations. The most commonly found bacteria are *Escherichia coli* followed by Bacteroides and streptococcal species. Diabetes mellitus, alcoholism, and immunosuppression are perpetuating co-factors.
Fournier's gangrene complicating inflammatory bowel disease has been reported in three patients so far, two with Crohn's disease.
A 78-year-old man diagnosed with ulcerative pancolitis was referred for fever, and painful perianal and scrotal swelling after perianal surgery for a horseshoe-type perianal abscess. Since bowel disease diagnosis, patient was on mesalazine and achieved long-term remission. Perianal abscess occurred suddenly one week before perianal surgery without any evidence of pre-existing fistula or other abnormalities. Physical examination showed extensive edema and crepitus of perineum and genitalia and patient had symptoms of significant toxicity.
The diagnosis of Fournier's gangrene was made and patient underwent emergency surgery with extensive surgical debridement of the scrotal and perianal area and Hartman procedure with a diverting colostomy. In addition, patient started on therapy with mesalazine 3gr, methylprednisolone 16 mg, parenteral nutrition and broad spectrum of antibiotics. Two days after the first operation the patient needed a second operation for perianal debridement. On the fourth day, blood cultures showed *E. coli*. Patient had an uneventful recovery and was discharged after 34 days of hospitalization. On follow up, disease review is scheduled and colostomy closure is planned.

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1. Introduction

Fournier gangrene is a rapidly progressing, polymicrobial necrotizing faciitis or myonecrosis of the perineal, perianal and genital regions,[1] with a mortality rate ranging from 15% to 50%.[2–4]

Jean Alfred Fournier, a French venereologist in 1883, first described Fournier gangrene. The cause is a polymicrobial infection associated with superficial traum,[5–7] urological diseases and operations[8,9] and colorectal diseases including carcinoma,[1] diverticulitis,[10] retroperitoneal appendix,[11] foreign bodies or staplerhemorrhoidectomy.[12]

In women, additional causes have included septic abortion, Bartholin gland or vulvar abscess, episiotomy, and hysterectomy. Insect bites, burns, trauma, and circumcision have been reported as causes of pediatric Fournier gangrene, which is rarely seen.[1]

The most commonly found bacteria are *Escherichia coli* followed by Bacteroides and streptococcal species.[13] Diabetes mellitus, alcoholism, immunosuppression and other severe chronic illnesses are frequent perpetuating cofactors.[14]

Fournier's gangrene is characterized by a sudden onset most commonly without prodromal symptoms.[15] Early diagnosis and aggressive wide debridement, combined with early colostomy[16]—and cystostomy if needed—hemodynamic stabilization, analgesia[17] and intravenous administration of broad spectrum antibiotics are the keys to successful treatment.[18]

Although the actual incidence of Fournier gangrene is unknown, the disease is relatively uncommon.

We present herein an exceptional case of a patient with long-standing ulcerative pancolitis who was diagnosed and successfully treated for Fournier's gangrene.

2. Case report

A 78-year-old man diagnosed with ulcerative pancolitis was referred to the Department of Emergencies of hospital exhibiting fever, perianal and scrotal swelling and pain.

Patient underwent elsewhere perianal surgery for a horseshoe-type perianal abscess 72 h prior and since then complained of perianal pain and fever. Patient had been diagnosed with ulcerative colitis twenty years ago. At that time and during follow up all endoscopies and subsequent bowel biopsies were compatible with ulcerative pancolitis and Crohn's disease or any other chronic bowel diseases were excluded. According to clinical examination and patient history there was no evidence of perianal disease. In addition, upper gastrointestinal endoscopy and subsequent histology were normal and terminal ileum appeared normal at all ileocolonoscopies with normal biopsies. Small bowel follow through and abdominal computed tomography were normal. No extraintestinal manifestations or significant comorbidities were so far recorded.

Since diagnosis, patient was started on mesalazine monotherapy and achieved long-term remission with 1.5 gr/d mesalazine maintenance treatment for the last ten years. For several years preceding this admission, patient had had neither bowel abnormalities nor other types of intestinal or extraintestinal complaints. The clinical course of the disease during the period of the detection of the complex perianal fistula was mild. However, two months before admission patient complained of some abdominal cramps and slight urgency in defecation that was successfully managed with combined administration of metronidazole and ciprofloxacin. Perianal abscess occurred suddenly one week before perianal surgery without any evidence of preexisting fistula or other bowel abnormalities.

Physical examination showed extensive edema and crepitus of perineum and genitalia (Fig. 1) with fat stranding and a foul-smelling discharge also present. Patient exhibited symptoms of significant toxicity but there was no abdominal distention and no discomfort or rebound. In detail, vital signs were as follows: blood pressure at 100/62 mm Hg, temperature at 39.6 °C; heart rate was 98 bpm and respirations at 17 per minute.

Arterial blood gases were normal with pH at 7.34. Laboratory investigation revealed elevated white blood cell count (23,200/mm^3), thrombocytosis (576,000/mm^3), with hemoglobin at 12.1 gr/dl, C-reactive protein at 290 mg/dl, while biochemical profile was unremarkable with no signs of organ failure.

The diagnosis of Fournier's gangrene was made with those clinical and laboratory criteria and patient underwent emergency surgery. Extensive surgical debridement of the scrotal and perianal area and a Hartman procedure with a diverting colostomy was performed (Fig. 2). In addition, patient started on therapy with mesalazine 3gr, methylprednisolone 16 mg, parenteral nutrition and broad spectrum of antibiotics. Two days after the first operation the patient needed a second operation for perianal debridement. On the fourth day, blood cultures showed *E. coli* and antibiotics were modified accordingly. Although an ulcerative colitis flare was very probable at that time and all precaution were taken, of note colorectum status during the period of gangrene treatment was in remission and there were no signs of bowel disease relapse. Operational endoscopy was not possible at the time of the emergent surgery; however, the experienced colorectal surgeon did not notice any significant bowel abnormality on bowel margins.

Patient had an uneventful recovery and was discharged after 34 days of hospitalization. On follow up a new endoscopy and disease review is scheduled in order to re-evaluate initial diagnosis and plan colostomy closure.

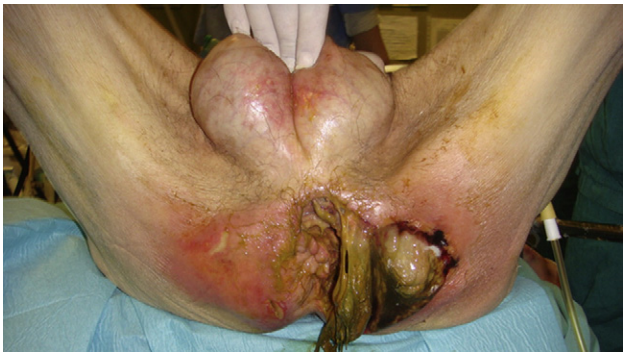

Figure 1 Extensive edema and crepitus of perineum and genitalia with fat stranding in a patient with ulcerative colitis diagnosed with Fournier's gangrene.