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Case Report:

Necrotizing Fasciitis: two cases in a single family

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Despite recent intense media coverage, necrotizing fasciitis has been a well recognised if uncommon clinical entity for many years.[1,2] A mother and son, both of whom have inflammatory bowel disease, presented to our unit within a three month period of each other.

Case 1 A 55-year-old woman presented with two or three week's history of increasing perianal pain. She had a long history of ulcerative colitis and ankylosing spondylitis and had been taking a prolonged course of steroids. The perineum was erythematous and an extensive area of cellulitis was present which included both labia majora and both groins.

A large area of necrotic skin and fat was excised. This procedure was complicated by the rapid onset of septic shock necessitating admission to the intensive care unit. Further debridement was necessary on the third post-operative day and pan-proctocolectomy was carried out on the following day. At laparotomy there was no evidence of perforation or abscess formation. Ventilation, inotropic support and antibiotic therapy were required for two weeks. Necrotic tissue from the perineum grew *Bacteroides* spp.

Case 2 A 29-year-old man, with a past history of sigmoid colectomy for a vesico-colic fistula secondary to Crohn's disease, presented with a 24-hour history of severe perianal discomfort which prevented him from walking. Despite medical management, including steroid therapy, he had ongoing symptoms of Crohn's disease and elective total colectomy was planned. Examination revealed erythema and tenderness in the right perianal region. He was taken to theatre within 12 hours and the ischio-rectal area incised. No pus was obtained. Twelve hours later he had developed an exquisitely tender spreading cellulitis in the right groin and he was taken back to theatre immediately. Skin was excised to fascial level and 1 centimetre beyond the boundaries of the cellulitis. Group C *haemolytic streptococci* and coliforms were cultured from the exudate. Histology confirmed the presence of necrosis and marked inflammation.

Both patients required skin grafting to cover the areas of skin loss. They made a steady uneventful recovery.

DISCUSSION

Necrotizing fasciitis is a life-threatening infection characterised by rapidly developing gangrene of the subcutaneous tissue with ensuing necrosis of the overlying skin.[3] It has similarities to the idiopathic scrotal gangrene described by Fournier which is confined to the skin of the male genitalia.[1]

Regardless of the family relationship between the two patients, no evidence exists that they or any of the other recent British cases can be linked.[4] The common denominator is more likely to be that both had chronic inflammatory disease which predisposed them to this condition. Furthermore, the immunosuppressive effect of steroid therapy may have made them more susceptible to fulminant infection.

These cases illustrate the main principles of management,[3,5] namely:

1. Prompt resuscitation with intravenous fluids, intravenous broad spectrum antibiotics and intensive care management.
2. Early and radical excision of all involved tissues.
3. Early wound inspection and further debridement as necessary.

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Organisms frequently isolated from operative specimens include coliforms, *Bacteroides* spp and *Streptococcus faecalis*.[3] Antibiotic therapy should not be delayed until sensitivities are obtained and the presence of anaerobes necessitates the use of metronidazole, usually in combination with cephalosporins and penicillin. Although more easily recognised, Fournier's gangrene is treated in much the same fashion.[6]

Mortality rates of 43-100 percent have been reported from necrotizing fasciitis.[3] However, early detection and aggressive surgical management can reduce mortality to 10 percent.[5]

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