Necrotizing Fasciitis of the Thigh Secondary to Rectal Perforation

PING-JEN CHEN¹, TSUNG-CHIH TSAI¹, CHIEN-MING CHAO¹,²,³

A 57-year-old man presented with lower abdominal pain and progressively painful swelling over the right thigh. He had a history of chronic hepatitis B, surgery for rectosigmoid cancer, and concurrent chemoradiotherapy. His body temperature was 36.4°C, pulse rate 122/min, respiratory rate 34/min and blood pressure 72/50 mmHg. Physical examination revealed mild abdominal tenderness, and diffuse swelling and tenderness in the right thigh. His white blood cell count was 2,400/mL (85% neutrophils), creatinine, 1.8 mg/dl, and C-reactive protein, 180.6 mg/l (normal < 6 mg/L).

Radiography of the right femur showed severe emphysematous changes over the soft tissue of the right thigh (Fig. 1). Computed tomography of the right thigh showed a large amount of air in the fascia over the obturator internus, iliopsoas, gluteaus, and quadriceps muscles (Fig. 2). Additionally, it revealed a rupture of the right wall of the rectum communicating with the aforementioned air (Fig. 2). His family refused aggressive surgical intervention, and therefore, only antibiotic treatment with imipenem and teicoplanin were given for coverage of intra-abdominal infection and necrotizing fasciitis of the thigh. Three days later, his blood culture grew E. coli and Group D streptococcus, which was resistant only to...
clindamycin. However, his condition gradually deteriorated and he died one week later.

Necrotizing fasciitis is a life-threatening soft tissue infection, usually from a small, insignificant wound or surgical incision. Additionally, several intra-abdominal diseases, including perforated diverticulitis, acute appendicitis, and retroperitoneal abscesses, can cause necrotizing fasciitis of the thigh in rare cases\(^1\textsuperscript{-3}\). Herein, we demonstrated that rectum perforation could be an unusual etiology of necrotizing fasciitis of the thigh. Computed tomography can provide useful information for the diagnosis and evaluation of the extent of involvement. Overall, this case suggests that intra-abdominal disease, such as rectum perforation, should be considered in the differential diagnosis of necrotizing fasciitis of the thigh.

**References**