

ABDOMINAL NECROTIZING FASCIITIS ASSOCIATED WITH SEVERE CLINICAL TABLE

Necrotizing fasciitis is characterized by progressive tissue necrosis and a life-threatening severe soft-tissue infection of skin, subcutaneous tissue and fascia. The etiology includes trauma, surgery and injection. In this report, we aimed to present a morbid obese female patient diagnosed with incarcerated umbilical hernia and subsequent severe necrotizing fasciitis during follow-up and discuss with the literature.

Key Words: Necrotizing Fasciitis; Tissue Necrosis; Life-Threatening

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INTRODUCTION

The first definition of necrotizing fasciitis was made in 1952 by Wilson.^[1] He identified fascia necrosis as a fixed finding accompanied necrotizing fasciitis. Minor injuries (like skin abrasion, insect bites, and folliculitis) and surgical interventions may become the source of the infection.^[2] We aimed to discuss the presented morbid obese woman who is we followed up for abdominal cellulite by a different clinic and subsequently they figured out an incarcerated umbilical hernia perforation. She developed necrotizing fasciitis in the anterior wall of the abdomen and thorax, subsequently.

CASE REPORT

A 60 years old, morbid obese woman who was followed up by another clinic with a diagnosis of abdominal cellulite for 10 days and was referred to our clinic because of foul-smelling necrotic wound in the anterior abdominal wall. The patient complained for 10 days of increasing abdominal pain, nausea, vomiting and shortness of breath, gas-of defecation, redness, discoloration and foul-smelling discharge on abdominal wall (Figure 1A). She had operated for umbilical hernia 5 years ago and there were no relevant diseases in her medical history. On physical examination, she was confused, blood pressure was 85/50 mm Hg, heart rate was 120/minute, body temperature was 37.8 °C and SO₂ was 90%. A large infected necrosis area was obvious on anterior abdominal wall and subcutaneous emphysema detected between neck and inguinal area. Her laboratory findings were as



Figure-1: A. Necrosis of abdominal wall; B. Dirty intraabdominal tissues; C & D. Thorax and abdominal CT



Figure-2: A & B. Double gun ileostomy

follows: WBC: 24.55 K/mm³, Hemoglobin: 7.1 g/dl, BUN: 88 mg/dL, creatinine: 0.75 mg/dL, Na: 134 mmol/L, K: 3.6 mmol/L, C-RP >320 mg/L. For treatment, 0.9% of NaCl solution infused at a rate of 200 cc/hour. Incarcerated

umbilical hernia, subcutaneous emphysema and pneumopericardium and pneumo-mediastinum detected on urgent thorax and abdominal CT (Figure 1C, 1D). Patient was taken into the operation room for debridement under the emergency conditions. A large excision performed on necrotic abdominal wall. There was intestine and omentum in incarcerated hernia bag. And intraabdominal tissues were dirty (Figure 1B). Necrosis seen in an intestinal segment and some part of the omentum were excised. A double gun ileostomy performed. (Figure 2A, 2B). After intra-abdominal wash out with saline, a Bogota bag was applied for the closure of the fascia defect and surgical procedure was finished. She followed up in the intensive care unit. Daily debridement and nutritional support provided for the patient. Her clinical course dramatically improved in the follow up. She referred to general surgery ward on 48th day. A granulation tissue developed on intestinal content and the defect was closed with split thickness skin grafting. She was extubated after 3 months.

DISCUSSION

Necrotizing fasciitis described in 1871 by Joseph Jones.^[3] However, today, the first described sense used by Wilson in 1952.^[1] By definition, it is characterized by progressive tissue necrosis of the skin, subcutaneous adipose tissue and the fascia.^[4] Trauma, surgery and injection may become the etiology. But it should be develop without predisposing reason.^[5] Predisposing factors are included advanced age, diabetes mellitus, obesity, malignity, heat burn, immune-compromised situations, surgical interventions, trauma, and worse hygiene.^[2] Although our patient had no chronic disease, she was morbid obese (BMI:46). Abdominal inspection may be difficult in obese persons. Skin tags should be examined carefully. Redness in skin may cause a cellulitis misdiagnosis. Abdominal pain was considered as a result of cellulitis and no further investigations performed. Therefore incarcerated hernia bag remained undetected.

Microbial agents in necrotizing fasciitis are included streptococci, enterobacterecea, and anaerobic bacteria.^[6] Streptococci and enterobacterecea pathogens were

positive in wound cultures in our case. Skin flora may cause intrabdominal infections especially in obese individuals.

Necrotizing fasciitis require both medical and surgical attention. Mortality found as high as 15-52% in patients without early diagnosis and 71% in patients whom surgical intervention delayed.^[7] The patient admitted to our hospital 10 days after the symptoms. A large infected necrosis area was obvious on anterior abdominal wall and subcutaneous emphysema detected between neck and inguinal area. Surgical intervention was followed by antibiotic therapy and fluid replacement was performed.

CONCLUSION

Despite it is rare; necrotizing fasciitis is an aggressive clinical condition that may cause mortality. Early diagnosis and aggressive surgical debridement may reduce the mortality rate. We think that in case of morbid obesity, advanced diagnostic tools should be performed to make a proper diagnosis and not miss out a serious clinical entity like a necrotizing fasciitis.

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