Case Report

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Combination of substance addiction and Fournier's gangrenia: a case report

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ABSTRACT

Fournier's gangrene is a bacterial and rapidly progressive necrotizing fasciitis of the perianal and perineal region. It still has high morbidity and mortality. We aimed to present Fournier's gangrene, which developed in a 49-year-old male patient with substance abuse. The patient was brought to the emergency department with complaints of abdominal pain and pain in the perineum and perianal region on the 3rd day after foreign body trauma to the perianal region. Crepitation was detected under the skin in the suprapubic region of the patient. Acute abdomen was present in the abdominal examination. In the abdominal tomography, minimal fluid was detected between the bowel loops in the pelvis. Diffuse edema, heterogeneity and emphysematous changes were observed in the skin and subcutaneous tissues in the perineum, and in the rectus muscle of the anterior abdominal wall. The patient underwent an emergency laparotomy. Abscess material extending from the back of the rectus muscle to the pelvis was seen in the abdomen. Abscess and necrotic areas in the abdomen and perineum were cleaned. A protective Hartman end colostomy was opened to the patient. In the postoperative period, VAC was applied to the perianal region for 3 sessions with 72 hour intervals. Then, the wound in the perineum was closed primarily. After 3 months, his colostomy was taken into the abdomen. Early and aggressive surgical debridement, broad-spectrum antibiotics, and fluid resuscitation are critical in Fournier's gangrene. Because of this patient's late admission to the hospital and his long-term immunosuppression associated with substance abuse, his clinical condition deteriorated rapidly. It should be kept in mind that skin infections in the perianal region may progress to Fournier's gangrene in patients with conditions that may cause immunosuppression, such as substance abuse.

Keywords: Fournier's gangrene, substance abuse, necrotizing fasciitis

INTRODUCTION

Fournier's gangrene is a rapidly progressive necrotizing fasciitis of bacterial origin of the genital, perineal, and perianal regions.[1] It is typically due to the development of vascular necrosis following polymicrobial infection of the genitourinary and anorectal region, followed by further progression of bacterial infection due to localized ischemia.[2]

Mortality of Fournier's gangrene has decreased from a very high rate of 50% to approximately 10% over the years.[1] It can be said that this decrease in mortality is due to more aggressive surgical debridement, effective intravenous (IV) antibiotic administration, and improvements in intensive care techniques.[3]

The incidence of the disease is 1.6-3/100,000, it varies according to various studies, and it is seen approximately 10 times more frequently in men than in women.[4,5] Many patients have an immunosuppressive condition such as diabetes, alcoholism, substance abuse, obesity, peripheral vascular disease, local trauma, or urethral stricture that may predispose the area to polymicrobial necrotizing fasciitis.[6]

In this case report, we aimed to draw attention to the fact that Fournier's gangrene may spread to the perianal region, anterior abdominal wall and also to the abdomen, and may progress aggressively, rather than a single localization in an immunosuppressive patient with substance addiction.

CASE

A 49-year-old male patient presented to the emergency department with complaints of abdominal pain and pain and redness in the perianal region on the 3rd day after trauma with a foreign body in the perianal region. It was learned from the history of the patient that he was diagnosed

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with antisocial personality disorder and had been a substance addict for 10 years. The patient's complaints were abdominal pain that continued to increase on the 3rd day after the beating, pain in the anus area, redness and warmth. In the examination of the patient, arterial blood pressure was 140/70 mmHg, pulse was 122/min, oxygen saturation was 94%, respiratory rate was 18/min, and body temperature was 38.2°C. Abdominal examination revealed rebound and defense. Infection and necrotizing fasciitis in the perineum and perianal region had extended over the pubic bone to the posterior wall of the rectus and advanced into the abdomen. In the abdominal tomography, minimal fluid was detected between the bowel loops in the pelvis. Diffuse edema, heterogeneity and emphysematous changes were observed in the skin and subcutaneous tissues in the perineum, and in the rectus muscle of the anterior abdominal wall. In the laboratory tests of the patient, no abnormal values were found except WBC: 27,600/µL, CRP: 450.76 mg/dl, procalcitonin: 6.32 ng/ml. The patient was admitted to the general surgery service. He was operated on with the diagnosis of acute abdomen and perianal abscess. Wound culture was taken for treatment arrangement. Abscess and necrotic areas in the abdomen were debrided. Necrotic areas in the rectus muscle on the anterior abdominal wall were cleared. Necrosis and abscess areas in the perineum were debrided. After debridement, it was washed with plenty of saline and oxygenated water. Oxygenated water and saline water were used by mixing them in a one-to-one ratio. An end colostomy was performed. A protective Hartman end colostomy was opened because of the protection of the wound area from fecal contamination. In the post-operative period, 3 sessions of Vacuum Assisted Closure (VAC) were applied for 72 hours. Wound debridements were repeated when necessary between VAC applications. In this process, the treatment was arranged according to *E. coli* and Str. Proteus that cultured in wound. According to the results, meropenem and tazobactam were started as antibiotics and this treatment continued for 7 days. On the seventh postoperative day, when the clinical condition of our patient improved, the abdominal drains were removed. As a result of debridement of the perianal region and VAC applications, living tissues began to appear at the wound sites. After 16 days, the wound was closed primarily. Although hyperbaric oxygen therapy is used today, it could not be used because it was not available in our center. No adverse events were observed in the patient controls, and the colostomy was closed after 3 months.

DISCUSSION

Fournier's gangrene is a rapidly progressive necrotizing fasciitis that develops in the perianal and genitourinary regions. It general affects men more.[2] Necrotizing fasciitis is divided into three subgroups according to the type of causative microorganisms: Type 1 is polymicrobial and anaerobic and aerobic bacteria are responsible for this picture, Type 2 is usually caused by streptococci or staphylococci, and in Type 3, vibrio strains are responsible for the infection.[7]

The key to successful outcomes in complicated cases of Fournier's gangrene is clinical suspicion, aggressive and early surgical debridement, broad-spectrum antibiotics, fluid resuscitation, and early multidisciplinary organization.[2]

Our case was a middle-aged, long-term substance addicted and immunosuppressive patient. Due to his late admission to the hospital, we saw that the infection in **Figure 1, 2** progressed very rapidly and spread from the perineum to the anterior abdominal wall and into the abdomen.

As a result, Fournier Gangrene is a very important and a surgical emergency with high mortality rates

it should be known. primary care service emergency physicians as well as family physicians and dermatology doctors, this disease the necessity of having knowledge about it is obvious.

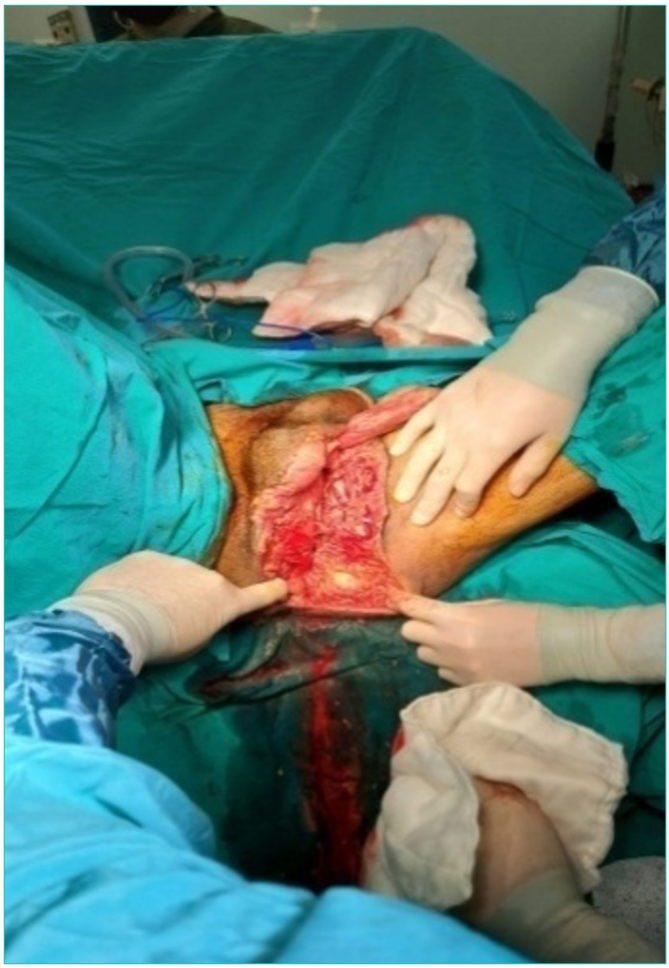

Figure 1. Intraop visual of patient's wound with Fournier's gangrenia

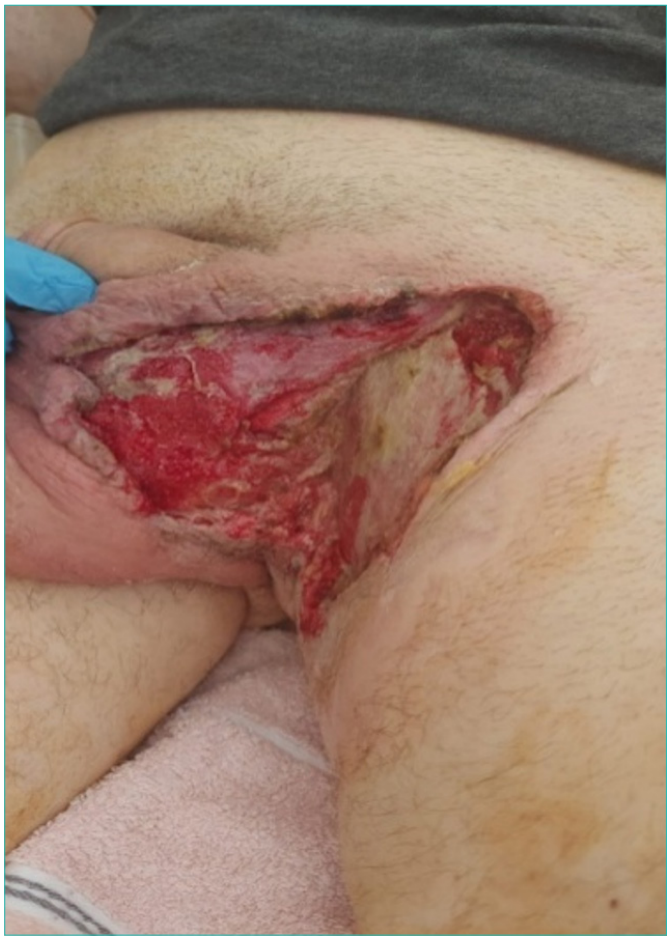

Figure 2: Postop visual of patient's wound with Fournier's gangrenia

CONCLUSION

It should be kept in mind that skin infections in the perianal regions of patients with comorbidities that may cause immunosuppression, such as substance abuse, may rapidly progress to Fournier's gangrene.

ETHICAL DECLARATIONS

Informed Consent
All patients signed and free and informed consent form.

Referee Evaluation Process
Externally peer-reviewed.

Conflict of Interest Statement
The authors have no conflicts of interest to declare.

Financial Disclosure
The authors declared that this study has received no financial support.

Author Contributions
All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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