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Case Report

Isolated penile Fournier's: a caveat

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ABSTRACT

Isolated penile Fournier's gangrene is a rare condition causing significant morbidity to the patients. It occurs due to urinary tract infection or trauma. We describe an elderly male who presented with blackish discoloration of the skin of the penis with fever. Examination revealed a necrotic patch over the shaft of the penis without any other foci of infection around the perineum. Penis was debrided, and the antibiogram showed *Escherichia coli* sensitive to amikacin. He received seven days of antibiotics, and the wound granulated well. A split skin graft was used to cover the wound to prevent contraction. This unusual presentation requires expeditious management to prevent mortality and morbidity.

Keywords: Fournier's gangrene, Diabetes mellitus, Penile necrotizing fasciitis

INTRODUCTION

Fournier's gangrene (FG) is rare, necrotizing fasciitis that involves the scrotum, genital, perianal region.[1] Isolated involvement of the penis is infrequently seen in FG.[2] It is a rapidly progressive disease caused by synergistic infection of aerobic and anaerobic microorganisms. The mortality rates remain high, especially in immunocompromised patients.[3] Clinical features can vary from fever to purulent discharge from the wound. The diagnosis is primarily clinical. Early recognition, aggressive surgical debridement with antibiotic cover forms the mainstay of treatment.[4] We report a case of isolated penile FG in a diabetic older adult.

CASE REPORT

A 64-year-old gentleman who was a known diabetic on irregular medications presented with sudden onset blistering and blackish discolouration of the skin of the penis associated with fever for five days. He had not undergone any surgeries in the past, and he denied any history of burning micturition. Upon admission, his vitals were stable, and his blood glucose levels were on the higher side. The penile shaft examination revealed a dark patch with purulent discharge from the sides of the patch. The scrotal, digital rectal and inguinal lymph node examinations were normal. He was adequately resuscitated with intravenous fluid, started on empirical broad-spectrum antibiotics and blood sugars controlled. He was taken to the operating room, and a thorough debridement was done (Figure 1).

Figure 1: Post initial debridement of necrotic patch.

His wound was managed with daily saline dressings, and culture-specific antibiotics were given for seven days. His wound improved well, and it was covered with a split skin graft taken from the left thigh on post-admission day 20. Foley's catheter was removed on the next day, and he was discharged after two days.

DISCUSSION

Fournier's gangrene (FG) is a necrotizing soft tissue infection of the scrotum and penis. It was first described by a French Venereologist, JA Fournier. Mortality in severe cases can be as high as 50%; hence early recognition and adequate treatment are of paramount importance.[1] FG usually involves the scrotum. Involvement of the Penis is rare due to its rich blood supply, and when it does, it points to the infection spreading from the scrotum. Only 10 cases are reported in the literature till 2019.[2]

FG is caused by both aerobic and anaerobic infections. The most commonly implicated organisms are *Escherichia coli*, *Streptococcus*, *Staphylococcus*, *Enterococcus*, and *Bacteroides*.[1] Predisposing factors for FG include diabetes mellitus, perianal infections, infections of the genitourinary tract, poor local hygiene, trauma, calciphylaxis of the penis, or idiopathic in some cases. FG can also occur after instrumentation or prolonged catheterization of the genitourinary tract.[4] In our case, the patient had diabetes with no history of urinary tract infection or trauma to that region.

Diagnosis of FG is mostly by clinical examination. Computed tomography (CT) has been found to be of use for evaluating the disease extent, giving better results than ultrasound or radiography. CT images will feature soft tissue thickening, fluid collection or abscess, fat stranding around involved structures, and subcutaneous emphysema.[5] Perianal and abdominal examination being uneventful, imaging studies were not done for our patient as the infection was localized to the penis.

Initial management includes fluid resuscitation and empirical broad-spectrum antibiotics till the report of tissue antibiogram is available. Rapid and aggressive surgical debridement of the necrotic tissue to bleeding edges forms the mainstay in FG treatment.[3] This can be done under spinal or general anaesthesia with suprapubic catheterization in selected cases. Wound care with daily dressings is of paramount importance in preventing infections and debridement in the future. The resultant raw area can be managed with split skin grafting as done in our case.

CONCLUSION

Isolated FG is a rare entity that occurs due to infection or trauma to the urethra in immunocompromised patients. Treatment involves aggressive debridement and culture-specific antibiotics. The mortality rate due to sepsis is relatively high if adequate treatment is not undertaken swiftly.

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REFERENCES

1. Mallikarjuna MN, Vijayakumar A, Patil VS, Shivswamy BS. Fournier's Gangrene: Current Practices. ISRN Surg. 2012;2012:942437.
2. Moussa M, Abou Chakra M. Isolated Penile Fournier's gangrene: A case report and literature review. International Journal of Surgery Case Reports. 2019;62:65–8.
3. Eke N. Fournier's gangrene: a review of 1726 cases. Br J Surg. 2000;87(6):718–28.
4. Yücel M, Özpek A, Başak F, Kılıç A, Ünal E, Yüksekdağ S, et al. Fournier's gangrene: A retrospective analysis of 25 patients. Ulus Travma Acil Cerrahi Derg. 2017;23(5):400–4.
5. Levenson RB, Singh AK, Novelline RA. Fournier Gangrene: Role of Imaging. RadioGraphics. 2008;28(2):519–28.

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