

Treatment of Isolated Penile Fournier's Gangrene with Penectomy

Muammer Bozkurt

Basaksehir Cam and Sakura City Hospital, Department of Urology, Basaksehir Olimpiyat Bulvarı yolu 34480
Basaksehir/Istanbul, Turkey

Article Info

Received: November 30, 2021

Accepted: December 20, 2021

Published: January 06, 2022

***Corresponding author:** Sasidharan PK, Av. Professor of Medicine and Former Head, Department of Medicine at Government Medical College, Kozhikode.

Citation: Muammer Bozkurt, (2022) "Treatment of Isolated Penile Fournier's Gangrene with Penectomy." *Clinical Case Reports and Clinical Study*, 6(1); DOI: <http://doi.org/12.2022/1.116>.

Copyright: © 2022 Muammer Bozkurt. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Introduction

Fournier's gangrene (FG) is rapidly progressive necrotizing fasciitis of genital, perineal and perianal regions. It is a disease with high mortality if not treated rapidly. Usually seen in patients with accompanying predisposing factors (1–3).

FG mainly occurs in the scrotum and can spread to the perineum, penis and abdominal wall, but it is very rare that it first occurs in the penis (4). Here, we present Fournier's gangrene of the isolated penis and its successful treatment.

Case Report

A 70 years old male presented in emergency with complaint of blackish discoloration and purulent discharge in the penis and increased body fever. Penile lesions started 4 days ago, fever started one day ago.

The patient was living with a permanent foley catheter and his catheter was renewed 1 month ago. He had had diabetes mellitus (DM) and coronary arterial disease for about 20 years. The patient's DM was poorly controlled. It was learned from the history of the patient, that bypass surgery was recommended to the patient because three coronary vessels were obstructed, but the patient refused the operation because his surgical performance was low.

The patient's temperature was 39.8 C, pulse 95 beats/min, Blood Pressure 105/65 mm of Hg, respiratory rate 20 breaths/min. Examination of external genital area showed ulcerated and necrotic lesions on the glans and shaft of the penis (Figure-1). The scrotum and testes were normal. In laboratory examination, WBC: 22000 / dL, CRP: 250 mg / L, procalcitonin: 6 mg / dL, blood sugar: 450 mg / dL. Blood urea and serum creatinine was normal.

After making the diagnosis of FG, broad spectrum intravenous antibiotics were given, and emergency surgery was performed for surgical debridement and gangrenous tissue excision.

Cavernosal tissues were checked after the necrotic penis glans was excised. Necrosis was also observed in the cavernosal tissue and we decided to perform penectomy. The corpus cavernosum and urethra were separated and resected from the proximal of both cavernosal bodies and sutured. Partial penectomy was performed. After resection, the remaining urethra was spatulated and neo-meatus was fixed on the penile stump (Figure-2, Figure-3). A suprapubic catheter was placed at the end of the procedure.

In the postoperative period, the patient did not have a fever. Insulin treatment was started to regulate blood sugar. Both blood glucose and other laboratory findings decreased dramatically after surgery. The dressing was repeated twice a day for 10 days and was operated for reconstruction after wound healing.

The skin flaps on the wound margins were closed primarily approximated to each other. The patient was discharged 5 days later with his foley catheter removed. After the catheter was removed, it was checked that the patient could sit and urinate. Suprapubic cystostomy was removed 3 weeks later.



Discussion

Fournier's gangrene is an extremely rare disease that occurs in 1.6 cases per 100,000 men each year (0.02–0.09%). Although it can be seen in women, it often occurs in men. (2,5)

Diabetes mellitus, advanced age, alcoholism, chronic steroid use, HIV virus infection, malnutrition and other conditions that suppress the immune system are predisposing factors for FG (1–3). In addition to these factors, traumatic conditions such as urethral catheterization, cavernosal enjektions and penil trauma may accompany the FG of the penis (4). The patient we presented; had predisposing factors such as DM, coronary artery disease and urethral catheter.

FG, which occurs mainly in the perineum and scrotum, isolated penile involvement is less common. This is probably due to the rich blood flow to the penis. In literature, FG of the penis consists of data shared as case reports (4,6–9).

FG is diagnosed by clinical examination. Treatment is aggressive surgical debridement and antibiotic therapy. Early diagnosis and early surgical treatment are very important for preventing mortality. Generally, the agent is polymicrobial, so broad spectrum antibiotics should be initiated. Surgical treatment should include excision of all necrotic and infected tissues. Predisposing factors, if any, should also be treated, such as blood sugar control. Human bite, penile self-injection with cocaine, abrasion of the penis during oral sex, urethral stricture, and DM had been observed as predisposing factors for penile fournier gangrene in the literature (4,6–9).

Partial penectomy may be sufficient for limited FG in the penile glans, while total penectomy is required in advanced necrosis. In our case, since there was necrosis up to the proximal cavernosum, near total penectomy was performed and neo-meatus was created.

Conclusion:

In the presence of fournier gangrene of the penis, early diagnosis and aggressive surgical treatment increases the chance of survival.

References

1. Thwaini A. Fournier's gangrene and its emergency management. *Postgrad Med J* [Internet]. 2006 Aug 1;82(970):516–9.
2. Benjelloun EB, Souiki T, Yakla N, Ousadden A, Mazaz K, Louchi A, et al. Fournier's gangrene: our experience with 50 patients and analysis of factors affecting mortality. *World J Emerg Surg* [Internet]. 2013;8(1):13.
3. Agwu N, Muhammad A, Abdullahi A-A, Bashir B, Legbo J, Mungadi I. Pattern and outcome of management of Fournier's gangrene in a resource-constraint setting. *Urol Ann* [Internet]. 2020;12(3):248.
4. Moussa M, Abou Chakra M. Isolated Penile Fournier's gangrene: A case report and literature review. *Int J Surg Case Rep* [Internet]. 2019;62:65–8.
5. Sorensen MD, Krieger JN, Rivara FP, Broghammer JA, Klein MB, Mack CD, et al. Fournier's Gangrene: Population Based Epidemiology and Outcomes. *J Urol* [Internet]. 2009 May;181(5):2120–6.

6. Akbulut F, Kucuktopcu O, Sonmezay E, Simsek A, Ozgor F, Gurbuz ZG. Partial penectomy after debridement of a Fournier's Gangrene progressing with an isolated penile necrosis. *Turkish J Trauma Emerg Surg* [Internet]. 2014;20(5):385–8.
7. Temiz MZ, Yuruk E, Aykan S, Tuken M, Kandirali E. Isolated Penile Fournier's Gangrene Presenting with Glans Penis Involvement. *J Coll Physicians Surg Pak* [Internet]. 2015 Oct;25 Suppl 2:S140-1.
8. Katsimantas A, Ferakis N, Skandalakis P, Filippou D. A Rare Case of Localised Isolated Penile Fournier's Gangrene and a Short Review of the Literature. *Case Rep Urol* [Internet]. 2018;2018:1–3.
9. Batmaz O, Ucar M, Caylan AE, Gök İB, Vural V. Isolated Penile Fournier's Gangrene: A Rare Case. *Cureus* [Internet]. 2020 May 4;