Surgery Research Journal
ISSN: 2768-0428

Original Article

Fournier's Gangrene: Epidemiological, Clinical And Therapeutic Aspects At The General Surgery Department Of The Ignace Deen National Hospital

Kaba Mohamed[1], Konaté Adama[1], Moussa Diakité[1], Camara Sayon Karifa[2], Keita Doubany Mariame[1], Diawara Albert Mohamed[2], Barry Thierno Illah[1], Konaté Lancinet[1], Camara Emile[1], Diallo Amadou[1], Condé Ansoumane[1], Kondano Saa Yao[1], Fofana Naby[1], Fofana Housseine[1], Touré Aboubacar[1]

[1]General Surgery Department, Ignace Deen National Hospital, Conakry, Guinea
[2]Visceral Surgery Department, CMC Ratoma, Conakry, Guinea

Correspondence
Kaba Mohamed
General Surgery Department, Ignace Deen National Hospital, Conakry, Guinea

- Received Date: 01 Oct 2024
- Accepted Date: 03 Nov 2024
- Publication Date: 10 Nov 2024

Keywords
Fournier gangrene, General surgery, HNID.

Abstract

Introduction: *The aim was to determine the epidemiological, clinical and therapeutic aspects of Fournier's Gangrene in the General Surgery Department of the Ignace Deen National Hospital.*
Patients and methods: This was a retrospective descriptive study lasting 5 years from January 1, 2018 to December 31, 2022, on the files of patients operated on for Fournier's gangrene.
Results: *We collected 26 cases of Fournier's gangrene, representing a frequency of 0.5% of the reasons for surgical interventions. The mean age was 49.08 ± 16.87 years with extremes of 26 and 77 years. There was a male predominance of 92.3% with a sex ratio of 12. The clinical picture was dominated by pain (100%), large scrotum (100%) and edema (80.7%). Risk factors were dominated by diabetes and age (60 years). Medical treatment was dominated by antibiotic therapy and rehydration solutions. The result of surgical treatment was satisfactory in 84.6% of cases, the main complication was septic shock 3 cases (11.5%), followed by anemia 1 case (3.8%), mortality was 4 cases or 15.3%.*
Conclusion: *Fournier's gangrene is a medical-surgical or urological emergency, it is a serious and rare condition. The prognosis is conditioned by the early diagnosis and management of the extension of gangrene and the often associated comorbidities.*

Introduction

Fournier gangrene (GF) is secondary to a polymicrobial infection by aerobic and anaerobic bacteria with a synergistic action[1].

Diabetes, high blood pressure, immunosuppression, chronic renal failure, alcoholism, obesity, corticosteroid use, the presence of neoplasia, poor hygiene, malnutrition, HIV infection, systemic or pulmonary diseases are factors that promote Fournier gangrene [2]. Mortality remains high, in the order of 14 to 80% often due to the onset, the delay in diagnosis and in the initiation of adequate treatment [3,4]

Patients and Methods

This was a retrospective descriptive study lasting 5 years from January 1, 2018 to December 31, 2022. All the files of patients operated on for Fournier's gangrene were included. The parameters studied were epidemiological, clinical and therapeutic.

Results

During the study period, we collected 26 cases of Fournier's gangrene, i.e. a frequency of 0.5% of the reasons for surgical interventions, male 92.3%. The mean age was 49.08 ± 16.87 years with extremes of 26 and 77 years (illustrated in Table 1). There was a predominance with a sex ratio of 12.

The clinical picture was dominated by pain (100%), large scrotums (100%) and edema (80.7%).

Table 1: *Distribution of age groups*

Age groups (years)	Effective	Proportion
26- 35	5	19,2
36- 45	6	23,2
46- 55	1	3,8
56- 65	4	15,4
≥ 66	10	38,4
Total	26	100

Average age= 49,08 years ± 16,87 Extreme 26 years et 77 years

Citation: Mohamed K, Diawara MA, Konaté A, et al. Post-Operative Peritonitis in the General Surgery Department at the Ignace Deen National Hospital : A Descriptive Study of 67 Cases. Surg Res J. 2024;4(3):1-2.

Table 2: *Distribution according to consultation time*

Consultation period (days)	Effective	Proportion
1-3	3	11,5
4-7	9	34,6
8- 15	10	38,6
≥16	4	15,3
Total	26	100

Mean time to onset of symptoms = 8.3 days Extremes 2 and 20 days

The table shows that the consultation time of 4 to 7 days was the most frequent with an average time of 8.3 days with extremes of 2 days and 20 days.

The risk factors were dominated by diabetes and age (60 years). Medical treatment was dominated by antibiotic therapy and rehydration solutions. The result of surgical treatment was satisfactory in 84.6% of cases, the main complication was septic shock 3 cases (11.5%) followed by anemia 1 case (3.8%), mortality was 4 cases or 15.3%.

Discussion

The frequency of gangrene found in our study is 0.5%. Our result is lower than that reported by some African authors [5,6] 0.64% and 0.76%.

This result in our study could be explained by the fact that our patients resort to traditional medicine in the first place. The mean age observed in our study is similar to that reported by many African authors [7, 8] a mean age of 50 ± 15.7 years with extremes of 20 and 93 years and a mean age of 38.33 years, with extremes of 22 and 70 years.

This result in our study could be explained by the predominance of urological causes (urogenital entry point) probably related to sexual vagrancy.

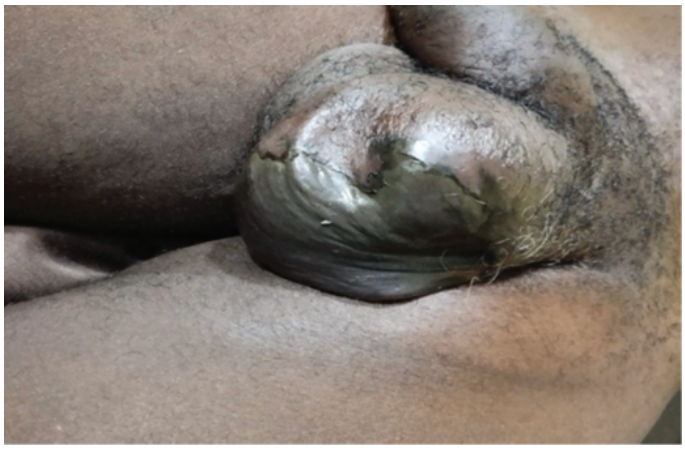

Figure 1. *Large bursa with necrosis in a 50-year-old patient with diabetes*

Diabetes was identified as the main risk factor found in all our patients. In the same vein, the studies of Phillipo et al. [9], Owon'Abessolo PF et al. [1] highlighted diabetes mellitus as the main predisposing factor associated with Fournier's gangrene. Indeed, diabetes induces a form of more or less significant immunodepression because hyperglycemia interferes with cellular immunity and promotes bacterial proliferation.

Surgical treatment remains the most effective and irreplaceable weapon. It is, still today, the determining factor in the prognosis of these infections.

In our study, all patients underwent necrosectomy. This result is similar to that of Djongoue TCR [5] i.e. (100%).

Conclusion

Fournier's gangrene is a rare but serious major medical-surgical emergency.

The management was essentially surgical associated with antibiotic therapy and rehydration. The evolution was on the one hand favorable with cure and on the other hand punctuated by complications such as septic shock and death.

Thus a future study on the poor prognostic factors of Fournier's gangrene could help us optimize the management of these patients.

References

1. Owon'Abessolo PF, Mayopa CF, Fouda JC, Mekeme J, Moby MH, Makon A. Epidemiological, Clinical and Therapeutic Aspects of Fournier's Gangrene at the Central Hospital of Yaoundé. Health Sci. 2022;23(8):71-6.
2. Lamy A, Tissot B, Pigot F Perineal Necrotizing Cellulitis Revealing Rectal Adenocarcinoma Ann Chir 2003; 128(9): 630-32.
3. Mehl AA, Filho DCN, Mantovani LM, et al. Management of Fournier's gangrene: experience of a university hospital of Curitiba. Rev Col Bras Cir 2010; 37:435-39.
4. Sarkis P, Farran F, Khoury R, et al. Fournier's gangrene: review of recent literature. Prog En Urol 2009;19:75–84.
5. Djongoue TCR. Fournier's gangrene: Diagnostic and therapeutic aspects in the general surgery and urology departments of the Gabriel Touré University Hospital. Thesis in Medicine. University of Science, Technology and Technology of Bamako Mali. 2020;1(1): 100 – 3
6. Bah I, Diallo A.B, Diallo AT, et al. Problems of the management of gangrene of the external genitalia in the Urology-Andrology department of the Conakry University Hospital. URO'ANDRO. 2013; 1(1): 44- 9
7. Rimtebaye K, Niang L, Ndoye M. "Fournier's gangrene: epidemiological, clinical, diagnostic and therapeutic aspects in the Urology department of N'Djamena. African Journal of Urology and Andrology 2014;1(2):91-8.
8. Fall B, Fall PA, Diao B, et al. Gangrene of the external genitalia: a report of 102 cases. Andrology 2009;19:45–9.
9. Chalya PL, Igenge JZ, Mabula JB, Simbila S. Fournier's gangrene in a tertiary health facility in northwestern Tanzania. BMC Resolution Notes 2015;8:48-51