

## A Study on Profile of Fournier'S Gangrene: Descriptive Study

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### Abstract

*Introduction:* The organisms cultured from Fournier gangrene are often polymicrobial and include both aerobic and anaerobic organisms. *Methodology:* The diagnosis was made on clinical basis, supported by other relevant investigations. Post operative follow up will be done to note the complications both in hospital and after discharge for 6-12 months. *Results:* Eleven patients (36.66 percent) had diabetes mellitus, Nineteen (63.33 percent) had a urogenital predisposing factor (e.g., urethral stricture, peri urethral abscess, epididymoorchitis, phimosis), and seven (23 percent) were alcohol abusers. *Conclusion:* The common presenting complaint was scrotal swelling in 9 patients(30%), overall scrotal involvement was seen in (93%) of cases

**Keywords:** Fournier's Gangrene; Clinical Profile; Etiology.

### Introduction

Jean Alfred Fournier, a French venereologist, described this clinical syndrome in 1888 and emphasized three characteristics: abrupt onset of scrotal pain and swelling in a young, healthy man; rapid progression to gangrene; and absence of a definitive cause [1]. Most contemporary studies, however, are able to identify definite urologic or colorectal causes in the majority of cases, often implicating debilitated or immunosuppressed states in the pathogenesis of the disease [2].

Sang wook lee described diabetes mellitus is an evident predisposing factor to Fournier gangrene because of the associated increased susceptibility to bacterial infection [3]. The organisms cultured from Fournier gangrene are often polymicrobial and include both aerobic and anaerobic organisms. E.coli is the most common organism reported in the literature. Less than 50% of the scrotal skin loss can often be closed primarily without difficulties immediately after trauma, with the remaining surrounding tissue. Reconstructive procedures are required for large skin and soft-tissue defects; these include burying of testicles under the thigh skin, expansion of the remaining scrotal and adjacent skin, simple skin grafting and various types of flaps like deep inferior epigastricomentary pedicle flap rectus abdominis muscle flap.

Thighs can also be a good donor site for many flaps like; gracilis muscle and myocutaneous flap, anterolateral thigh fasciocutaneous island flap, unilateral adductor minimus myocutaneous flap, anteromedial thigh flap, superomedial thigh flaps. Ferreira PC commonly used reconstructive procedures which include the split-thickness skin graft, full-thickness skin graft, local advancement flap, fasciocutaneous flap, muscle flap, or myocutaneous flap [4]. The split thickness skin graft has been reported as safe and technically easy for the treatment of skin defects following Fournier Gangrene.

### Methodology

It is a hospital based study of 30 cases, with Study design as a prospective study. After admission, patients fulfilling the inclusion & exclusion criteria will be taken in to study after obtaining written informed consent and the data to be collected regarding clinical history, examination, diagnosis,

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investigations, details of previous operative procedure. The diagnosis was made on clinical basis, supported by other relevant investigations. Post operative follow up will be done to note the complications both in hospital and after discharge for 6-12 months.

#### *Inclusion Criteria*

1. Patients with the diagnosis of Fournier's gangrene.
2. Patients who are medically fit for surgery and who have given
3. Written informed consent for the procedure and for complications associated with it.

#### *Exclusion Criteria*

1. Uncontrolled diabetes mellitus

2. Extensive sepsis.
3. Patients with immunocompromised status.
4. Multi organ failure.
5. Patients on steroid treatment.

### **Results**

There were 28 men (93 percent) and two women (7 percent). The mean + SD age of the patients was 54.5 + 14.76 years (range, 20 to 80 years). Eleven patients (36.66 percent) had diabetes mellitus, Nineteen (63.33 percent) had a urogenital predisposing factor (e.g., urethral stricture, peri urethral abscess, epididymoorchitis, phimosis), and seven (23 percent) were alcohol abusers. In 2 patients (6.66 percent), we could not find any associated predisposing factor.

**Table 1:** Age distribution

(n=30)

Age group in years	N	%
21-30	2	6.66%
31-40	4	13.33%
41-50	6	20%
51-60	9	30%
61-70	4	13.33%
71-80	5	16.66%

**Table 2:** Etiology of Fournier's Gangrene (n=30)

Causative Factor	N	%
Urethral stricture	4	13.33%
Periurethral abscess	10	33.33%
Epididymoorchitis	4	13.33%
Phimosis	1	3.33%
Perianal abscess	8	26.66%
Idiopathic	2	6.66%
Trauma	1	3.33%

**Table 3:** Pre disposing factors (n=30)

Pre disposing factor	N	%
Alcohol	7	23%
Smoking	8	26.66%
Diabetes mellitus	11	36.66%
No predisposing factors	4	13.33%

### **Discussion**

Fournier gangrene was first described as a pathology localized to the scrotum by Jean Alfred Fournier in 1883. The most common initial routes of entry are local trauma, extension of a urinary tract infection, or perianal infection. It is critical to recognize Fournier Gangrene because it is a rapidly progressive disease with a high mortality rate. Fournier's gangrene is no longer considered an idiopathic disease but rather a consequence of

common urologic and colorectal abnormalities (infections and complications of urogenital disease and colorectal disease like Urethra strictures, Periurethral abscess, Epididymoorchitis, Phimosis, Perirectal abscesses, Hemorrhoidectomy) [5,6].

Pathologic features are well defined, and the portals of entry of causative organisms are well known. Fournier's Gangrene is not only a disease of men. The lower incidence in women may be attributable to better drainage of the perianal region through vaginal secretions.

Of the patients, 28 were men (93%) and 2 was a woman (7%). The mean age was  $54.5 \pm 14.76$  years (age range, 20–80 years). Most common pre disposing factor being diabetes mellitus in Eleven patients (36.66%). The common presenting complaint was scrotal swelling in 9 patients (30%), overall scrotal involvement was seen in (93%) of cases. The commonest cause being urogenital disease and colorectal diseases (Urethral strictures, Periurethral abscess, Epididymoorchitis, Phimosis, perianal abscess) constituting 90% extensive debridement was done in all cases.

### Conclusion

The commonest cause being urogenital disease and colorectal diseases (Urethral strictures, Periurethral abscess, Epididymoorchitis, Phimosis, perianal abscess).

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