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Case report

Penile Necrotizing Fasciitis [Fournier's Gangrene] after Penile Prosthesis Implant in diabetic patient treated conservatively – A case report

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ABSTRACT

Background: Penile abscess and necrotizing fasciitis are very rare. Diabetes mellitus is the common risk factors. In our practice, this is the first reported case of penile necrotizing fasciitis after penile prosthesis insertion.

Aim of the work: We intended to present our case of penile necrotizing fasciitis treated conservatively. A written consent has been signed by the patient to release information for this study.

Case description: Our patient is a 52 years old male, who had a history of painless skin loss of the penis [ventral aspect of the lower parts of the shaft] for 7 days. The skin necrosis started 21 days after implantation of penile prosthesis. He had controlled type-2 diabetes mellitus. No specific signs were detected by general examination. There was discrete tenderness on penile wound; which was 2.5*4.2 cm of skin loss, with white patches, purulent discharge, elevated edges and erythema. The management consisted of use of antibiotics [oral combination of amoxicillin-clavulanic acid and local fusidic acid] with 0.9% normal saline washout on regular intervals. There was excellent wound healing with minimal tissue loss.

Conclusion: Our case report revealed that, the serious complication of necrotizing fasciitis may occur after implantation of penile prosthesis. Surgical intervention was not indicated and conservative medical treatment was successful.

Keywords: Penile; Necrotizing; Fasciitis; Fournier's; Prosthesis.

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* Main subject and any subcategories have been classified according to researchers' main field of study.

INTRODUCTION

Isolated necrotizing fasciitis [Fournier's gangrene] [FG] is rare condition. It usually affects males, but females could be affected, with involvement of genital, perineal and/or perianal areas. The isolated penile inclusion is very rare[1-2]. Sorensen *et al*.[3] reported an overall incidence to be 1.6 cases per 100,000 males/year, with the peak incidence in males older than 50 years.

FG was described for the first time in 1863 by JA Fournier [Hence its name]. He was a French venereologist who reported 5 cases of idiopathic penile and scrotal gangrene. The condition had a progressive course with a soft-tissue synergistic sepsis, which could be potentially fatal [high mortality rate up to 50% of cases]. The responsible organisms could be aerobic and/or anaerobic. The most common are E. coli, Bacteroides and Strepto-coccus[4].

Possible associated risk factors for development of FG include previous surgery or injury of the area, immune-suppression [e.g., diabetes mellitus, systemic lupus], malnutrition, alcohol abuse, malignancy, chronic immunosuppressive therapy [steroids or cytotoxic drugs], lymphoproliferative disorders and poor hygiene[5-6].

Clinically, the FG usually presented by scrotal pain, swelling and erythema of acute onset [indolent onset had been also described with delayed diagnosis and treatment]. Systemic manifestations of fever, rigor and tachycardia often described. The clinical symptoms aggravate within 3-5 days before hospital admission. There was purulent discharge, edematous tissues, with patches of necrotic tissues [7]. FG is a surgical emergency; the rapid initiation of therapy with broad spectrum antibiotics, wound irrigation and debridement, is of utmost importance, to avoid potentially fetal complications[8].

We presented a case of isolated penile Fournier's gangrene following penile prosthesis implantation. We underlined the importance of conservative management [oral and local antibiotics with wound care] as a significant early intervention to avoid further tissue destruction, infection or death.

THE CASE [Figure 1]

A 52 years old man presented with 7-days history of painless skin loss on the ventral aspect of the lower part of his shaft penis 21 days after penile prosthesis being implanted.

His past medical noninsulin-dependent diabetes mellitus controlled with: Glibenclamide, Gliclazide and Metformin, primary preventive on Aspirin and Statin. General examination was unremarkable.

Penile wound examination no localized tenderness, 2.5 × 4.2 cm skin loss at the proximal ventral part of the shaft 3 centimeters from the healed wound of the penile prosthesis implant, there was whitish patches, with purulent discharge, slightly elevated edges and erythema.

Empirical oral combination of amoxicillin-clavulanic acid and local Fusidic acid and 0.9%Normal-saline washout. Subsequently the patient was followed up by our tissue viability nurse, prompt local hygiene and usage of antibiotic as prescribed promoted excellent wound healing with minimal tissue loss.

DISUCSSION

We reported on a case of isolated penile FG, which occurred after insertion of penile prosthesis. The Isolated FG of the penis is uncommon due the high vascularity of the penis and few case reports were found in literature[1].

Our patient had been treated conservatively by empirical oral and local broad-spectrum antibiotics with local wound care [irrigation and debridement], with favorable outcome. Our patient had controlled diabetes mellitus, which represented a risk factor beside previous surgery for penile prosthesis implantation. Early reports from 1980s and 1990s revealed that, the frequent recognized risk factors for development of FG are diabetes mellitus, insertion of penial prosthesis[9-11] "penile fracture" [rupture of the tunica albuginea in the erect penis][12].

The diagnosis of FG is definitely clinical and become evident when there is edema, crepitus, and areas of dark red color moving rapidly towards extensive gangrene[13]. The differential diagnosis of FG gangrene may include scrotal, perineal, intra-abdominal or systemic diseases [e.g., scrotal cellulitis, inguinoscrotal strangulated hernia, testicular torsion/ abscess/ hematoma, gonococcal balanitis, acute epididymitis, vasculitis, and poly-arthritis nodousm][7].

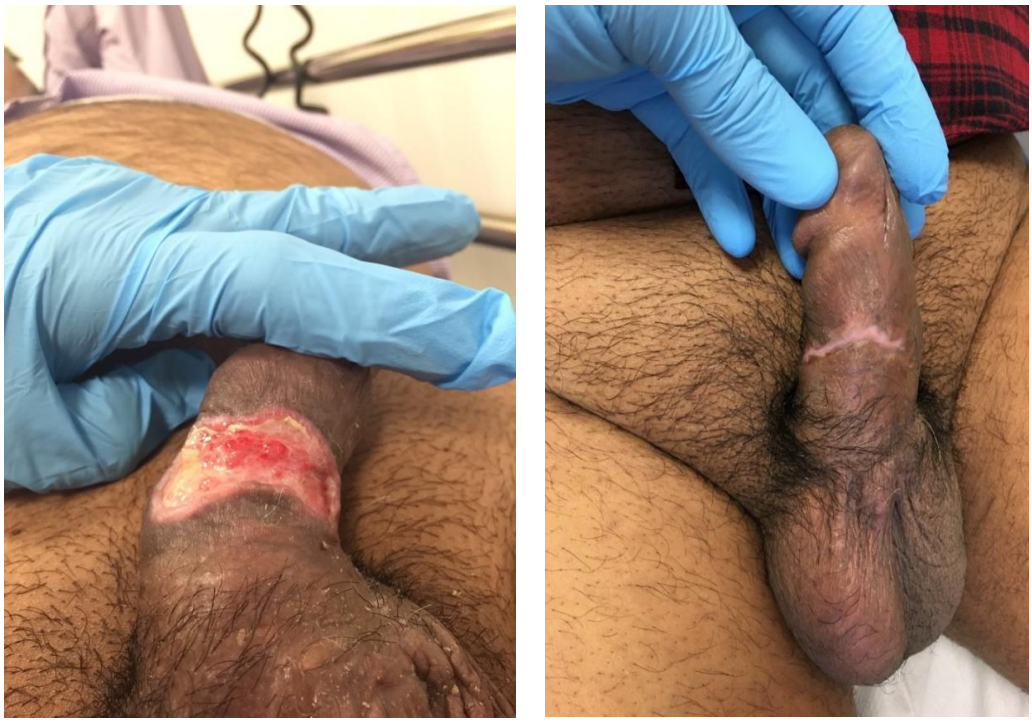

Figure [1]: Skin defect at the base of his penis overlying proximal shaft did not require skin grafting as it healed perfectly without skin contracture as the wound healed well by secondary intention. The inserted penile prosthesis was fully operative in 2 weeks from healing.

Although diagnosis of FG is essentially clinical, different investigations were proposed to identify the infectious origin or elicit specific characteristics, e.g., Gupta *et al*.[14] advocated the use of computed tomography for identification of possible infectious origin and recognition of the disease extent. Ultrasound examination and magnetic resonance imaging are useful imaging modalities for differential diagnosis[15].

Hyun *et al*. [13] and Thwaini *et al*.[16] reported that, aggressive debridement, use of broad spectrum antibiotics and intensive supportive care are the main elements of FG treatment. The debridement should be adequate with resection of all necrotic tissues till the reach of well-perfused viable tissue. Repeated surgical debridement could be indicated with uncontrolled infections. Advanced surgical interventions may be required if the case is progressed.

Fortunately, our patient responded to broad spectrum oral and local antibiotic therapy with wound irrigation after debridement. The outcome is satisfactory with fully-working implantable penile prosthesis.

CONCLUSION

Our case report demonstrated that the serious complication of necrotizing fasciitis may occur after Penile prosthesis implantation. Surgical intervention was not required and medical treatment was successfully tried

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Nothing to disclose

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