

A Case Of Fournier's Gangrene Reconstructed By Pedicle Thigh Flap

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Citation

P Mohite, A Bhatnagar. *A Case Of Fournier's Gangrene Reconstructed By Pedicle Thigh Flap*. The Internet Journal of Plastic Surgery. 2006 Volume 3 Number 1.

Abstract

Fournier's gangrene is a rare condition and delayed treatment results in fatal outcome. We managed a case of Fournier's gangrene by initial radical debridement followed by scrotal reconstruction using pedicle thigh flap to cover the bare testes with excellent results.

INSTITUTION OF WORK

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Authors have not received any financial or other kind of support.

INTRODUCTION

35-year-old male presented in the emergency department with the swelling over scrotum and watery discharge from the left side of the scrotum. Initially he developed a small swelling at the root of one of hair on the left side of the scrotum. Gradually the area around the swelling became red, painful and hard. The redness, swelling and the pain spread over whole of the scrotum within 2 days and the affected hair follicle started discharging watery fluid. Patient became feverish, dull and pale. On examination, there was gross involvement of the scrotum, which was swollen, inflamed and severely tender on touch (Figure1).

Figure 1



On examination there was gross thickening of the scrotal skin and testis were not palpable. Ultrasonography showed a scrotal wall thickening of 1 cm with collection of hyper echoic fluid around the testes. Doppler showed normal blood supply to both the testes.

Patient shifted to emergency operation theater and whole of the infected scrotal wall debrided exposing the testes. Daily dressing done with povidone iodine for 9 days after which the testes covered with the healthy granulation tissue (Figure 2).

Figure 2



On the 9th day in the elective surgery, after preparing the wound, excess granulation tissue scraped from the testes. The pedicle fascio cutaneous flaps developed from the femoral triangle on both the side as shown in the figure 3 by sharp dissection by using bipolar cautery.

Figure 3



The flaps rotated and tied over the bare testes in the midline and fixed with staples. Then the upper margins of the flaps fixed to the upper margin of the raw area finally followed by the lower margin. Flaps rotated and placed without tension with corrugated drains underneath. (Figure 4).

Figure 4



The area left behind on the femoral triangles on both the thighs due to the rotation of the flaps covered with split thickness skin graft taken from the lower anterior portion of the right thigh (Figure 5).

Figure 5



The drains were removed on the third postoperative day. The flaps were taken up well and the split thickness skin graft uptake over the residual raw area were good. The patient sent home on tenth day and was under follow up lately until last 1 year without any complications.

DISCUSSION

Fournier gangrene first described by Fournier in 1764 is a bacterial infection of the skin that affects the genitals and perineum and is an uncommon but not rare condition. Fournier's gangrene develops when bacteria infect the body through a wound, usually in the perineum, urethra or the colorectal area. Men with alcoholism, diabetes mellitus, leukemia, morbid obesity, immune system disorders are at

increased risk for developing Fournier's gangrene [1]. It is a synergistic infection caused by combination of aerobic and anaerobic organisms creating a synergy of enzyme production that promotes rapid infection and spread of infection [2]. Staphylococcal bacteria clot the blood, depriving surrounding tissue of oxygen. The anaerobic bacteria thrive in this oxygen-depleted environment and produce molecules that instigate chemical reactions (enzymes) that promote further the spread of the infection.

Intense genital pain and tenderness that is usually associated with edema and progressive erythema of the overlying skin of the overlying skin and subcutaneous crepitation are the hallmarks of the condition. Early diagnosis and prompt medical as well as surgical treatment is the mainstay of management of Fournier's gangrene. Resuscitation of patient and initiation of broad-spectrum antibiotics is important before any surgical intervention. In the initial cellulitic stage, incision and drainage of scrotum with tissue diagnosis by frozen section and radical debridement in case of established gangrene is a surgery of choice. Our patient was a case of established spreading gangrene of the scrotum and therefore we preferred radical debridement of all the necrotic tissue until we found fresh oozing blood from the edges of the cut tissue.

Array of procedures like primary skin closure, thigh pouch, split thickness skin grafting is available for the coverage but each has its own advantage and disadvantage. We tried to provide the best cosmetic appearance after the coverage of testes by fashioning the pedicle fascio cutaneous flaps from the femoral triangles on both the sides. Two series were

published one by Cannistra C et al [3], 2003 regarding scrotal reconstruction by inguinal flap and the other by Kochakarn W et al [4], 2001 regarding scrotal reconstruction by using thigh pedicle flap. We used thigh pedicle flap for coverage of bare testes and reconstruction of neoscrotum. The results were good as the final appearance was both cosmetically and socially acceptable for the patient. This fascio cutaneous pedicle flap provides thick protective cover for testes. Due to preservation of cutaneous nerve supply, the skin remains sensitive to touch. Above all patient gets normal free movement of testes inside the neo scrotum. Complications like infection, collection beneath the flap, flap necrosis and flap rejection are possible but done properly under antibiotic cover with aseptic precaution the chances of complication are rare. We do not come across any complication as far as patient is under follow up for last 1 year.

To conclude Fournier's gangrene is a rapidly spreading condition, needs prompt surgical intervention and delayed cosmetic repair.

ACKNOWLEDGEMENT

Permission of the patient for the publication of the article is taken.

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