v. 3, n. 39, 2023

International Journal of Health Science

FOURNIER SYNDROME: FROM EPIDEMIOLOGY TO PERINEAL RECONSTRUCTION - A CASE REPORT

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Abstract: The following work provides an overview of Fournier Syndrome, based on a case that occurred at the Hospital Estadual Getúlio Vargas/Rio de Janeiro, which corroborates data found in the literature. In addition, it aims to show the possibility of reconstructing the lesions using the superomedial fasciocutaneous flap of the thigh.
Keywords: Fournier's Syndrome; reconstruction; fasciocutaneous flap

INTRODUCTION

Fournier's gangrene was first described in 1883 and is a rapidly progressive disease of the tissues of the genital and perianal area with a high mortality rate, which generally affects men (10:1) aged over 50 years, with skin loss on the scrotal and perineal region very common. Women and patients of any age can also be affected. The most accepted pathophysiology is that of a polymicrobial infection that causes microthrombosis of cutaneous and subcutaneous arterioles and perifascial dissemination of bacteria, causing gangrene of overlying tissues. The most frequently isolated microorganisms among aerobic Gram negatives are Escherichia coli, Klebsiella pneumoniae, Pseudomonas aeruginosa and Proteus mirabilis.

Among Gram positive aerobes, Staphylococcus aureus, Staphylococcus epidermidis, Streptococcus viridans and Streptococcus fecalis stand out.

Anaerobes are represented by Bacteroides fragilis, Bacteroides melaninogenicus, Gram positive cocci and Clostridium species (not perfringens). Acting synergistically, these bacteria are responsible for the rapid dissemination of the process.[1,3,5]

Comorbidities such as diabetes mellitus, alcoholism, obesity and conditions that lead to immunosuppression are common and may be considered risk factors.

The patient's clinical features include sudden pain and genital or perineal swelling, fever and prostration, progressing to tissue necrosis with purulent discharge, crepitus or fluctuation, and septic shock. Imaging tests (mainly computed tomography) are useful to assess the extent of the disease.

Early diagnosis and treatment are essential in the management of Fournier's gangrene, given the severity of the condition. Aggressive surgical debridement of devitalized tissue is mandatory, in addition to frequent changing of dressings, intensive volume replacement and broad-spectrum antibiotics for gram-positive cocci, gram-negative and anaerobic bacilli. A colostomy for intestinal transit diversion can be beneficial to avoid the risk of fecal contamination of the wound [1, 2].

Despite adequate treatment, mortality is high, ranging from 3 to 67 percent [2,4]. Causes of death include sepsis, coagulopathy, acute renal failure, and diabetic ketoacidosis [2]. Patients with an anorectal source of infection appear to have the highest mortality rate [2, 4].

After primary disease treatment, patients may require secondary reconstruction of skin and soft tissue defects. Scrotal reconstruction must maintain the physiological and aesthetic characteristics as much as possible, with adequate skin and subcutaneous thickness, resistant to traction and movement, and maintain testicular thermoregulation. Multiple techniques are described in the literature, with no ideal one. The choice will depend on the size and location of the defect, as well as surgical team and patient preferences. [5,6]

This paper aims to describe the clinical case of the patient and how it corroborates with data in the literature, in addition to showing the use of the superomedial fasciocutaneous flap of the thigh for scrotal reconstruction after surgical debridement of the perineal

region due to Fournier's Gangrene.

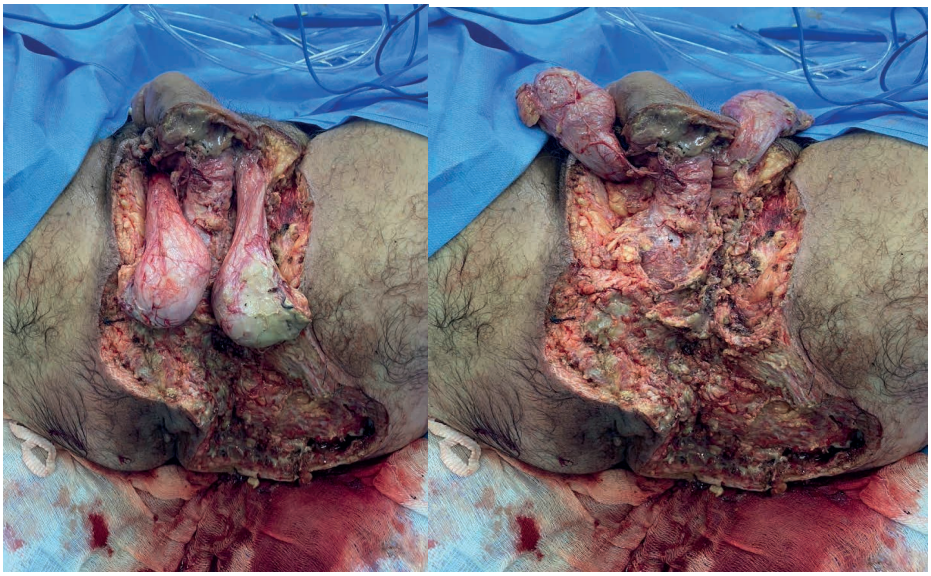
CASE REPORT

A 48-year-old patient with untreated Type 2 Diabetes Mellitus was admitted to the Emergency Room of the Getúlio Vargas State Hospital with a 3-day history of pain and erythema in the perineal region, diagnosed with Fournier's Gangrene. Surgical debridement of devitalized tissue from the base of the penis to the left gluteus was performed, broad-spectrum antibiotic therapy was performed, and follow-up with the dressing committee, which indicated a dressing with PHMB and Papain 10%. Five days after the first surgical procedure, intestinal transit was bypassed through a sigmoidostomy. After clinical compensation and improvement in the appearance of the wound, an evaluation by the Plastic Surgery team was requested. On examination, he showed a large perineal lesion with approximately 95% of granulation tissue without phlogistic signs, extending from the left gluteus to the testicle, with its exposure. After 20 days of hospitalization, a fasciocutaneous superomedial thigh flap was made bilaterally to cover the wound. The patient evolved well and was discharged on the thirteenth postoperative day.

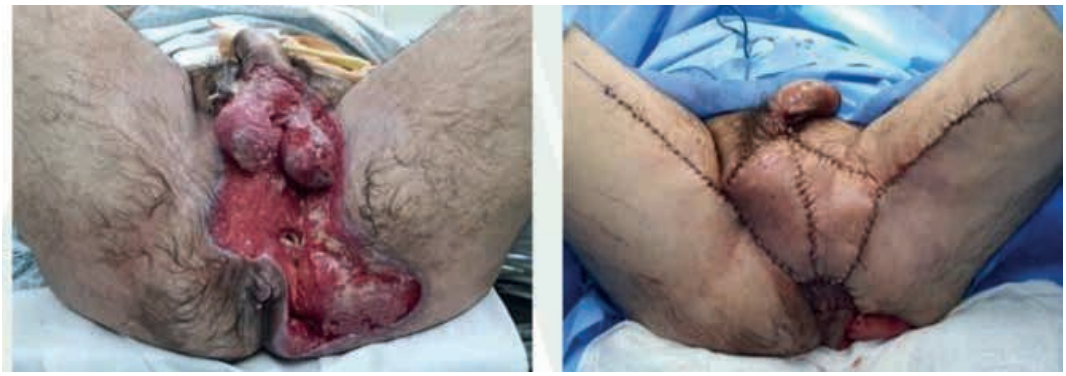
DISCUSSION

The initial treatment of Fournier's Syndrome, with broad-spectrum antibiotic therapy associated with complete debridement of devitalized tissues, preserving viable tissues, is of fundamental importance. After this initial treatment, with the wound showing granulation tissue, reconstructive treatment is indicated, which aims to cover the wound with the best possible aesthetic result. This period varies according to the patient's condition, which may interfere with tissue regeneration. Some procedures can achieve these goals: partial skin graft, total skin graft, advancement flaps, fasciocutaneous, muscular or myocutaneous flaps. The ideal is one that allows adequate functionality and the most aesthetic appearance possible. The superomedial thigh flap was first described by Hirshowitz to reconstruct the scrotum and vulva. It has rich vascularization, mainly from the branches of the femoral artery (internal and circumflex pudendal), and is safely used in diabetic and vascular disease patients. It satisfactorily replaces lost areas of scrotal skin, is technically easy and quick to perform, and produces excellent aesthetic results in both the donor and recipient areas, with scars in places that are not very visible.

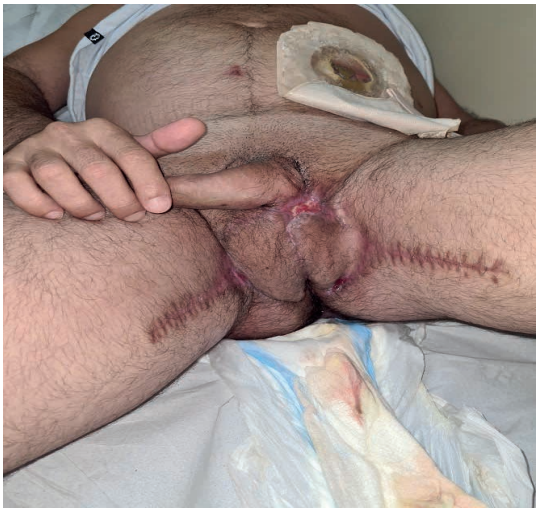
In addition to these advantages, the superomedial thigh flap is made in a single step, without sequelae to the donor area and brings back the psychological balance of the affected person in relation to the coverage of genital structures, until then exposed. The flap presents tissue similar to that of the scrotum, including hair, preservation of local sensitivity by the inclusion of the ilioinguinal nerves and the genital branch of the genitofemoral nerve. The biggest disadvantage of the flap is the availability of the donor area of the thigh, which in young patients may be scarce due to the little flaccidity in the region.



I. FIRST APPROACH (GRESSIVE SURGICAL DEBRIDEMENT)



II. CONSTRUCTION OF THE SUPEROMEDIAL FASCIOCUTANEOUS FLAP OF THE THIGH BILATERALLY (DAY 20 OF IH)



III. POST-OPERATIVE APPEARANCE - 3 MONTHS

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