RCMOS – Revista Científica Multidisciplinar O Saber. ISSN: 2675-9128. São Paulo-SP.

Ano VII, v.1 2026 | submissão: 09/11/2026 | aceito: 16/11/2026 | publicação: 21/11/2026

Case report: Fournier's gangrene in a 58-year-old adult

Relato de caso: gangrena de Fournier em um adulto de 58 anos

Reporte de caso: gangrena de Fournier en un adulto de 58 años

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Abstract: Fournier's gangrene is a potentially fatal, time-sensitive necrotizing fasciitis. We present the case of a 58-year-old male with rapidly progressive involvement of the inguinal, scrotal, penile, and pubic regions, managed with urgent surgical debridement, a prophylactic colostomy, and the application of a subatmospheric pressure system. Following multiple wound irrigations and VAC dressing changes, the patient underwent reconstruction with skin flaps and grafts, resulting in a successful recovery. Early detection, control of the infectious source, prompt initiation of antibiotic therapy, and a multidisciplinary approach are the fundamental pillars for recovery from this condition. Further studies are needed to develop risk stratification models, specific clinical protocols, and consensus guidelines to facilitate a more standardized approach to management.

Keywords: Fournier's gangrene, necrotizing fasciitis, subatmospheric pressure therapy, prophylactic colostomy

Resumo: A gangrena de Fournier é uma fascite necrosante potencialmente fatal, em que o tempo é um fator crítico. Apresenta-se o caso de um paciente do sexo masculino, de 58 anos, com acometimento rapidamente progressivo nas regiões inguinoescrotal, peniana e púbica, submetido a desbridamento cirúrgico de urgência, colostomia profilática e aplicação de sistema de pressão subatmosférica. Após múltiplas lavagens e trocas do sistema VAC, foram realizados retalhos e enxertos cutâneos, com boa recuperação. A detecção precoce, o controle do foco infeccioso, o início da antibioticoterapia e a abordagem multidisciplinar constituem os pilares fundamentais para a recuperação nesta doença. São necessários mais estudos com o objetivo de propor a estratificação de risco para a patologia, bem como protocolos específicos e consensos que permitam uma abordagem mais padronizada.

Palavras-chave: Gangrena de Fournier, fasciíte necrotizante, terapia por pressão subatmosférica, colostomia profilática

Resumen: La gangrena de Fournier es una fascitis necrosante potencialmente mortal, en la que el tiempo es un factor crítico. Se presenta el caso de un paciente masculino de 58 años, con afectación rápidamente progresiva de las regiones inguinoescrotal, peneana y púbica, sometido a desbridamiento quirúrgico urgente, colostomía profiláctica y aplicación de un sistema de presión subatmosférica. Tras múltiples lavados y cambios del sistema VAC, se realizaron colgajos e injertos cutáneos, con buena recuperación. La detección precoz, el control del foco infeccioso, el inicio de la antibioticoterapia y el abordaje multidisciplinario constituyen los pilares fundamentales para la recuperación en esta enfermedad. Se necesitan más estudios para proponer una estratificación del riesgo de esta patología, así como protocolos específicos y consensos que permitan un abordaje más estandarizado.

Palabras clave: Gangrena de Fournier, fascitis necrosante, terapia por presión subatmosférica, colostomía profiláctica

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Introduction

Fournier's gangrene is a potentially fatal necrotizing soft tissue infection characterized by rapid progression and involvement of deep tissues and fascial planes, affecting the perineum, genitalia, buttocks, and lower abdominal wall. Mortality has traditionally been estimated at between 15% and 40%, although a recent meta-analysis found a lower mean mortality rate of 7.3%. The incidence of this disease is very low, so knowledge of the condition and its standard treatment remains limited[1]. Data come mainly from retrospective case series with small sample sizes. Diagnosis is primarily clinical, with initial symptoms including perineal or scrotal pain, erythema, swelling, and crepitus. However, up to 40% of patients may initially lack cutaneous signs, creating a risk of delayed diagnosis and progression to a disease with high mortality[2].

Immediate initiation of broad-spectrum antibiotics, aggressive management of comorbidities, and urgent surgical debridement remain the mainstays of treatment. Contemporary surgical approaches are evolving toward more selective interventions without extensive debridement[4].

Case report

The patient was a 58-year-old man from a remote rural area with a history of obesity and a BMI of 35 kg/m², reference range (RR) 18.5–24.9. Four days before admission, he developed chills and fever, which were managed with antipyretics. The next day, a pustule appeared on the scrotal raphe, with erythema, warmth, and redness. He attended a pharmacy, where he received a parenteral analgesic; however, the area of cellulitis progressively expanded and purulent drainage developed. On admission, he had marked testicular edema, scrotal erythema and redness, an area of necrosis with purulent discharge, severe penile edema and blisters, and extension to the left buttock, perineum, and pubis, with severe pain disproportionate to palpation (see figures 1 and 2), associated with fever and tachycardia but no hypotension. Fournier's gangrene was suspected, the sepsis code was activated, microbiological testing and secretion cultures were requested, and antibiotic coverage with vancomycin and piperacillin-tazobactam was initiated because of the polymicrobial nature of the infection. Urgent urological assessment was followed by immediate transfer to the operating room. Surgical findings included necrosis along the midline scrotal raphe, with tense swelling extending throughout the scrotum and left inguinal region. Incision of the midline scrotal raphe released abundant purulent material. Extensive genital debridement partially involved the skin at the base of the penis, the entire scrotum with exposure of both testes, and the skin of both inguinal regions, with greater extension on the left, including part of the mons pubis. Resection extended widely toward the perineal raphe, exposing the pelvic floor

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musculature and removing the perianal skin to within 1 cm of the anal margin. The anterior perineal region and left inguinal canal were irrigated with approximately 3000 ml of saline. At the junction with the posterior perineum, gangrene was observed in the posterior triangle of the ischiorectal fossa, and an intraoperative general surgery consultation was requested. With the patient awake, diversion of colonic contents through a prophylactic colostomy was proposed to limit fecal contamination of the raw wound and allow treatment with a subatmospheric pressure system. During the first surgical stage, WhiteFoam dressings were placed to cover the testes, spermatic cord structures, and base of the penis. Two green foam dressings were then placed, one directed toward the ischiorectal fossa, followed by adhesive films. The suction system was connected, an adequate seal was confirmed, and negative pressure was set to 125 mmHg. Intraoperative cultures were obtained. During the second stage, an open colostomy was performed through a supraumbilical and infraumbilical midline minilaparotomy incision, with dissection through tissue planes and identification of a segment of sigmoid colon. An incision in the left flank provided access to the peritoneal cavity; the sigmoid colon segment was exteriorized, the colostomy was matured, and a dressing was applied (see figure 3). Admission tests showed markedly elevated C-reactive protein (CRP), 30.19 mg/dl (RR <1); blood urea nitrogen (BUN), 49 mg/dl (RR 9–20); creatinine, 1.8 mg/dl, consistent with KDIGO stage 2 acute kidney injury; white blood cell count, 20150/µl (RR 3.7–10.1); neutrophils, 90.4% (RR 39.6–73.3); thrombocytopenia, with 125000 platelets/µl (RR 150000–450000); glycated hemoglobin, 8.6% (RR <5.7); and glucose, 227 mg/dl, with newly diagnosed type II diabetes mellitus and initiation of a basal-bolus regimen. Arterial blood gases showed mild compensated metabolic acidosis, lactate below 2 mmol/l, and no oxygenation impairment. Internal medicine adjusted empirical antimicrobial therapy by discontinuing vancomycin and starting linezolid 600 mg IV every 12 hours. The patient was transferred to intensive care for comprehensive management of severe skin and soft tissue sepsis. His admission APACHE II score was 13. The sepsis panel was positive after 48 hours for methicillin-sensitive Staphylococcus aureus. Infectious diseases specialists de-escalated antibiotic therapy by discontinuing linezolid and starting oxacillin 2 g IV every 4 hours. Five days after admission, replacement of the subatmospheric pressure system and debridement were proposed jointly by urology and general surgery. Urology performed a dorsal preputiotomy, resection of devitalized and ischemic tissue, proximal ligation of the dorsal penile complex with silk, and resection of a small devitalized area of the right testicular tunica vaginalis, with deep cultures obtained to exclude coinfecting microorganisms. General surgery replaced the device. Clearance of the microorganism was adequate, with negative follow-up cultures. Transthoracic echocardiography ruled out endocarditis and showed hypertrophic heart disease with a left ventricular ejection fraction (LVEF) of 40%. On hospital day 11, sepsis was considered controlled and the infectious source contained, allowing transfer to the ward. On hospital day 18, the subatmospheric pressure system was replaced again, with

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abundant granulation tissue and considerable improvement of the lesions. Following the final replacement, plastic surgery assessed the patient and performed V-Y flaps in the left gluteal and pubic regions, together with a split-thickness skin graft, until the coverage defect was resolved. Multidisciplinary management by nutrition, physical rehabilitation, psychology, general surgery, plastic surgery, and urology continued until discharge.

Figure 1 — Findings in the supine position on admission



Figure 1. An area of necrosis with purulent drainage is visible in the testicular region, with erythema extending to the surrounding areas.

Figure 2 — Findings in the standing position on admission



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Figure 2. Purulent discharge, a necrotic area at the testicular base, penile edema with blisters, and surrounding erythema are visible.

Figure 3 — Immediate postoperative period



Figure 3. After surgery, the patient was transferred to the intensive care unit. A subatmospheric pressure device connected to suction, a left-sided colostomy, and a midline laparotomy wound covered with a dressing are visible.

Discussion

This clinical case illustrates the rapid progression of Fournier's gangrene to sepsis with organ dysfunction, requiring urgent source control and a multidisciplinary approach from early recognition by the emergency physician, activation of the sepsis code, and initiation of broad-spectrum antibiotics. Urology initially performed surgery; however, an origin in the ischiorectal fossa was identified, requiring intraoperative intervention by general surgery. The entire surgical team should therefore be activated and remain alert to operative findings, including specialists in colorectal surgery, plastic surgery, gynecology, and other disciplines, given the multiple causes of Fournier's gangrene and the potential need for extensive debridement, subatmospheric pressure therapy, and prophylactic colostomy for source control. These measures have allowed surgery with greater tissue preservation, fewer orchiectomies, and more selective resection. Postoperative monitoring follows intensive care sepsis guidelines. The APACHE II score was used to estimate mortality in the unit; however, disease-specific scores, including LRINEC, have also been used as severity indices, although they have not yet been widely validated and adopted[3,4]. After sepsis control through multiple subatmospheric pressure dressing changes, antibiotic therapy guided by multiple cultures, and adequate recovery of healthy tissue, skin grafts and flaps were used, providing better

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reconstructive and aesthetic outcomes. Identified risk factors included class II obesity and type II diabetes mellitus, similar to the most common findings in different studies[2,3]. In this patient, difficulty accessing healthcare contributed to late admission with marked progression of infection, compounded by a lack of cardiovascular risk prevention and control in his medical history.

Conclusion

Fournier's gangrene should be regarded as a severe, time-sensitive necrotizing fasciitis requiring activation of the sepsis code, timely intervention, and multidisciplinary management. Treatment may include subatmospheric pressure therapy, prophylactic colostomy, multiple surgical irrigations, and antibiotic therapy guided by multiple cultures until source control is achieved in the intensive care unit. Once the infection has resolved, recovery is prolonged and requires flaps and grafts to restore baseline skin coverage. Knowledge of prognostic scores and specific institutional protocols remains limited because of the disease's low incidence, despite its persistently high mortality. Future research may clarify optimal care and prognosis for this patient population.

Conflict of interest

The authors declare no conflicts of interest.

Funding

The authors declare that they received no funding.

References

BOWEN, Daniel et al. Fournier's gangrene: a review of predictive scoring systems and practical guide for patient management. Therapeutic Advances in Infectious Disease, [s. l.], v. 11, p. 20499361241238521, 1 jan. 2024. DOI: https://doi.org/10.1177/20499361241238521.

FLORES-GALVÁN, Karla P.; QUINTERO, Claudia Alejandra Aceves; GUZMÁN-VALDIVIA, Gómez Gilberto. Gangrena de Fournier. Cirujano General, [s. l.], v. 43, n. 2, p. 107-114, 1 jan. 2021. DOI: https://doi.org/10.35366/106721

KOPECHEK, Kyle J.; PATEL, Hiren V.; KOCH, George E. Modern Management of Fournier's Gangrene. Current Urology Reports, [s. l.], v. 26, n. 1, p. 47, 2 jun. 2025. DOI: https://doi.org/10.1007/s11934-025-01275-3.

MÜSSGENS, Charlotte et al. Defining the Standard of Care in Fournier's Gangrene—An Umbrella Review. European Urology Open Science, [s. l.], v. 83, p. 64-71, 3 dez. 2025. DOI: https://doi.org/10.1016/j.euros.2025.11.009.

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