

# Management of a Patient With Fournier's Gangrene

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A 52-year-old man presented to the emergency room with a 4-day history of scrotal pain, edema, and the rapid development of black, foul-smelling, moist lesions on his scrotum and penis. Blood values revealed an increased white blood cell count and an increased creatine phosphokinase consistent with necrosis of muscle tissue. A urologist saw the patient and quickly made the diagnosis of Fournier's gangrene (FG).

An uncommon but life-threatening urologic emergency, FG is an infectious necrotizing fasciitis that involves the perineum, genitalia, and perineal areas.<sup>1</sup> The onset is caused by a polymicrobial infection of aerobic and anaerobic organisms. Historically, FG has been seen primarily as a condition that strikes men; however, more recent evidence suggests that women are at increased risk of rapid spread of the condition to the retro peritoneum with fatal outcomes.<sup>2</sup> Usually, local trauma or instrumentation creates a portal that allows the skin flora to enter the subcutaneous tissue, which results in infection.<sup>3</sup> Predisposing risk factors include diabetes mellitus, recent surgery, morbid obesity, trauma, HIV, Crohn's disease, malignancy, IV drug use, and chronic steroid use.<sup>3</sup> Reported mortality rate for FG varies widely from 4% to 75%.<sup>1</sup>

Patients with FG require a multidisciplinary team, including a urologist, general surgeon, internist, and wound care specialist. Multiple debridements in the operating room may be required to effectively remove all necrotic tissue. Large scrotal, perineal, penile, and abdominal wall skin defects may be present, requiring intensive wound care. Initially, dressing changes are performed frequently to assess the wound for further necrotic tissue and infection and drainage control. As the wound heals, granulation tissue increases and the risk for infection decreases so dressing change frequency can be decreased. As the patient becomes stable, wound care is usually continued in a tertiary facility or in the home health setting. ■

## References

1. Marynowski M, Aronson A. Fournier Gangrene: Follow Up. *eMedicine Emergency Medicine*. Available at: <http://emedicine.medscape.com/article/778866-followup>.
2. Czmek R, Frank P, Limmer S, et al. Fournier's gangrene: is the female gender at risk? *Langenbecks Surg*. 2010;395:173-180.
3. Ribo JC, Boucher B, Merwarth D, Olive J. Case report: implications for a patient diagnosed with Fournier's gangrene. *WOUNDS*. 2002;10(19):340-347.

## Commentary from Ferris Mfg. Corp.

Patients with necrotizing fasciitis often have considerable pain, itching, and burning during the healing process. PolyMem® QuadraFoam® dressings are an excellent choice when managing these types of wounds. When applied to either open or closed wounds, these multifunctional dressings support healing while helping relieve pain, itching, burning, edema, and inflammation.

In a representative case,<sup>1</sup> a 49-year-old man with a history of hypertension, type 2 diabetes, chronic obstructive pulmonary disease, and hypercholesterolemia underwent surgery to treat Fournier's gangrene. The wound measured 8.9 cm x 8.1 cm, with depth ranging from 0.4 to 5.5 cm. It extended from his left groin to the spermatic cord and from the left inner thigh to the raphe of the scrotum and to the perineum. The wound progressed appropriately for the first 10 days, but then was stalled for the next 7 weeks. During the stalled phase, the wound had uncontrollable drainage and the patient's pain level was "11" on a 0-10 scale. Hydrogels, enzymatic debriding agents, and calcium alginate dressings containing silver were used without success in attempts to "jump-start" the stalled wound.

Once the PolyMem dressings (PolyMem Wic® Silver cavity filler, PolyMem Max® Silver, and PolyMem Max) were initiated, the stalled wound went on to close in 9 weeks. The previously severe periwound erythema was eliminated in 3 days and the patient's persistent wound pain was reduced to 2 (0-10 scale) after 8 days, with complete elimination of pain by week 5. The patient's persistent itching and burning were also rapidly eliminated with the use of these drug-free dressings. Wound healing and the elimination of his pain, itching, and burning improved the patient's psychological state and allowed him to return to work as the wound healed.

## Reference

1. Barnes, L. Fournier's gangrene, a necrotizing fasciitis, managed to closure using polymeric membrane dressings after wound failed to progress with other topical approaches. Poster presented at the Clinical Symposium on Advances in Skin and Wound Care. San Antonio, TX. October 2009.

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