

## A case of Fournier's gangrene diagnosed with POCUS

Marco Badinella Martini, MD; Antonello Iacobucci, MD

Department of Emergency Medicine, Regina Montis Regalis Hospital, Mondovì, Italy

### Case

An 87-year-old man with a history of type 2 diabetes and severe Alzheimer disease was admitted to the emergency department with a lesion of the perineum for two days. The patient appeared agitated and not collaborating on the visit. His vital signs were normal. Physical examination revealed an edematous, suppurative, and foul-smelling perineal-scrotal lesion, with possible subcutaneous emphysema.

POCUS of the affected tissue was performed, revealing a heterogeneous hyperechoic area with irregular borders that suggested gas in the soft tissue of the scrotum and the perineum, a characteristic sign of a necrotizing fasciitis of perineum, known as Fournier's gangrene (FG; Figure 1; online video S1).

The most common clinical symptoms and signs of FG include severe pain, swelling, erythema, crepitus and bullae. Crepitus is a characteristic popping and crackling sound heard with palpation of the skin secondary to the presence of air in the subcutaneous tissue. FG constitutes a medical urgency with high mortality rates that commonly reach 30% and could increase when there is a delay in diagnosis. Rapid detection is essential to decreasing morbidity and mortality of this life-threatening disease [1]. Although the diagnosis of FG is clinical, this disease can sometimes difficult to diagnose, especially early in its presentation. For this reason patients with FG typically have a delayed diagnosis with several misidentifications such as simple cellulitis, pyoderma gangrenosum or hidradenitis suppurativa. POCUS might be a quick and early tool to confirm suspicion of subcutaneous air [2].

### Disclosures

The authors declare no conflicts of interest.

### Consent

The patient and his family gave their consent.

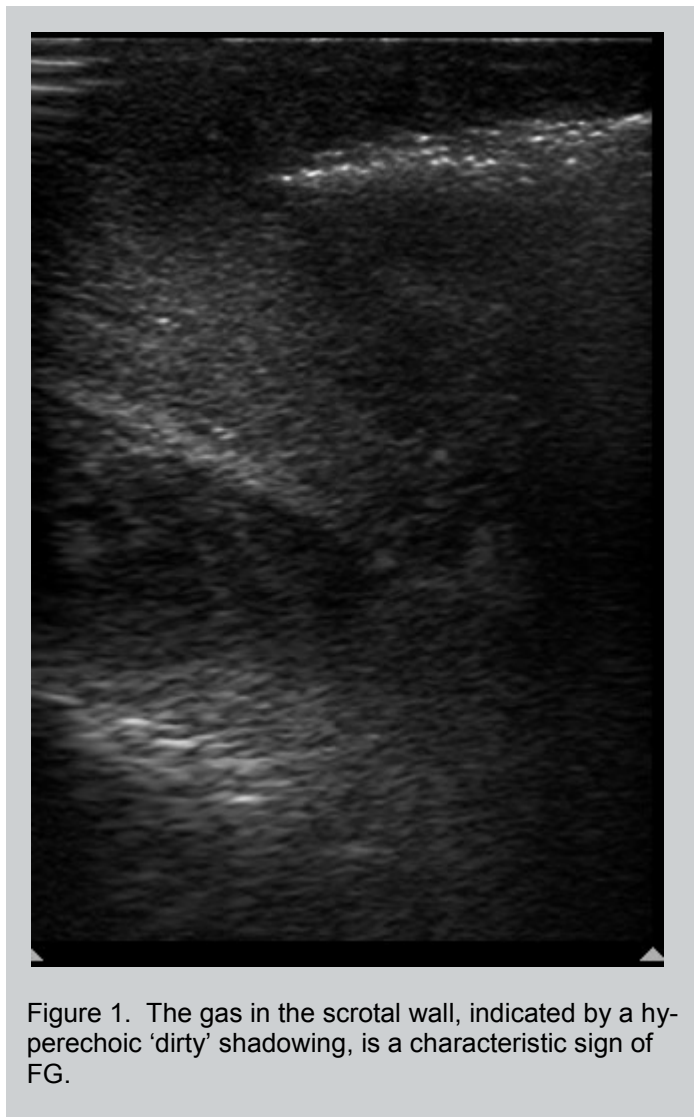


Figure 1. The gas in the scrotal wall, indicated by a hyperechoic 'dirty' shadowing, is a characteristic sign of FG.

### References

1. Eke N. Fournier's gangrene: a review of 1726 cases. *Br J Surg* 2000;87(6):718-28.
2. Morrison D, Blaivas M, Lyon M. Emergency diagnosis of Fournier's gangrene with bedside ultrasound. *Am J Emerg Med* 2005;23:544-47.