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Diagnosis of Fournier's Gangrene on Bedside Ultrasound

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A previously healthy 48 year-old male presented to the hospital with a 4-week history of “pimples” on his scrotum. This condition had progressively worsened, resulting in increased pain, swelling and redness to the genital region and buttocks. On physical examination, the patient was persistently tachycardic. The scrotum, penis, perineum and left buttock were erythematous, swollen and markedly tender to palpation. Furthermore, the patient's suprapubic region contained an area of necrotic tissue.

As part of the initial assessment, the patient received a bedside ultrasound (US) that demonstrated marked thickening of the scrotal fascia with edema, as well as discrete areas of subcutaneous gas (Video). Based on these ultrasound findings, in conjunction with the clinical evaluation, the patient was diagnosed with Fournier's Gangrene and intravenous antibiotics were started. He was then emergently transferred to the operating room without further advanced imaging, where he received aggressive surgical therapy with a good outcome.

Fournier's Gangrene is defined as “an infective necrotizing fasciitis of the perineal, genital or perianal regions”.¹ The bacterial etiology is typically a synergistic polymicrobial infection, defined as a form of type I necrotizing fasciitis.²⁻³ This case demonstrates that Fournier's Gangrene remains a clinical diagnosis and that while many patients receive confirmatory advanced imaging with computed tomography and magnetic resonance imaging, an expedited bedside US can allow for the diagnostic certainty to proceed rapidly with appropriate therapy.⁴⁻⁵

Video. Ultrasound of scrotum demonstrating thickening of scrotal fascia.

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