Life-threatening scrotal pain

Case report
A 33-year-old man with poorly controlled diabetes mellitus presented with scrotal pain for 3 days. He denied dysuria, urethral discharge or fever. On arrival, his vital signs were as follows: body temperature 37.2°C, heart rate 110 beats/min, respiratory rate 20 breaths/min and blood pressure 125/70 mmHg. Physical examination revealed a left red tender scrotal mass (Figure 1). Laboratory results showed an elevated white blood cell count (11 900/ mm³) with left shift. Urinalysis disclosed haematuria (red blood cells: 60–70/high power field) while radiography showed a radiolucent shadow over the left scrotum (Figure 2, arrow). Computed tomography scans revealed an abscess with an air-fluid level over the left scrotum (Figure 3), suggestive of Fournier’s gangrene (FG). The patient underwent surgery and was treated with Ceftriaxone (Rocephine). He was discharged asymptomatic after 14 days. Pus culture yielded Klebsiella pneumonia.

FG is a fulminant necrotizing fasciitis of the perineum first described by Fournier on 1883. FG is more common in males and the most common cause is anorectal infection, followed by urogenital infection and trauma. Diabetes and alcoholism are the most frequently associated underlying diseases, with 70% of FG patient being diabetic. FG bacteriology is usually polymicrobial, including Escherichia coli, Bacteroides, Streptococcus, Staphylococcus and Clostridium. Symptoms are varied, from non-specific abdominal pain and malaise to fever and scrotal pain and swelling. Patients may also present with signs of sepsis, such as tachycardia and elevated creatinine.

Delayed diagnosis may increase the mortality rate. Imaging by means of CT scanning can enable accurate diagnosis in suspected cases and may also show the extent of the disease and its point of origin. Radiography may demonstrate subcutaneous emphysema or air over the scrotum, although this is usually not present. Ultrasonography can demonstrate thickened scrotal wall or gas in the scrotum. FG treatment includes surgical debridement along with broad-spectrum antibiotic therapy. Multiple debridements may be need. Hyperbaric oxygen may provide some benefit but is still controversial.
Although the diagnosis and treatment of FG have improved, mortality rate remains about 20–40%. Acute renal failure, coagulopathy and severe sepsis are complications associated with high mortality hence the need for early diagnosis and prompt surgical debridement.

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References

Figure 3.