

RARE COMPLICATIONS OF EPIDIDYMITIS; A REPORT OF TWO CASES



Caring at its best

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Background

Epididymitis, an inflammation of the epididymis, is a common condition in the emergency department which presents as an acute onset of severe hemiscrotal pain. The aetiology is unclear. One theory is of an STI/ UTI organism, or bacteria from urine reflux into the ejaculatory ducts, migrating into the epididymis and testis (epididymo-orchitis) via the spermatic cord and epididymal tail. The severe complications of epididymitis are rare, they can include abscess formation and testicular necrosis. 1,2 Ultrasound (US) is the preferred imaging modality to confirm the diagnosis of epididymitis and to differentiate it from similarly presenting diseases like testicular torsion. While the latter is a surgical emergency, antibiotic therapy is mostly sufficient in treating epididymitis.² In the presence of acute scrotal pain, the US features of epididymitis would include swelling and hypervascularity of the epididymis. Colour and power Doppler imaging (CDI), and B-flow imaging are some of the tools available to evaluate (micro)vascularity on US.3 We present two cases of severe complications of epididymitis that were recently encountered in our department.

Case one

A 49-year old male presented with a sudden onset of severe pain, swelling, hardness, and tenderness in the left hemiscrotum, with a previous history of treated left epididymitis 13-months ago. The first ultrasound [Fig.1] on this 2nd visit revealed left epididymal hypervascularity, some reactive left hydrocoele and a normal-appearing left testis. The right hemiscrotal contents were normal.

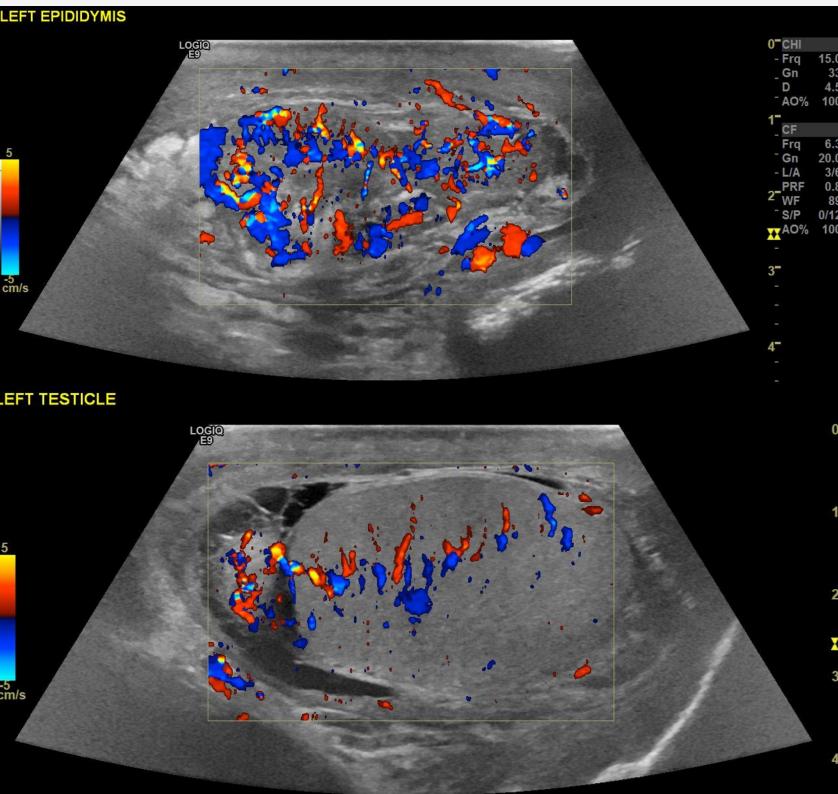


Fig. 1. Epididymitis. CDI showing left epididymal hypervascularity (top) and a normal left testicular parenchyma with some complex hydrocoele (bottom).

After eight days of ongoing antibiotic therapy, the patient presented with deteriorating symptoms. A 2nd ultrasound [Fig.2] revealed a new onset of avascular left testis with a preserved outline and echotexture.

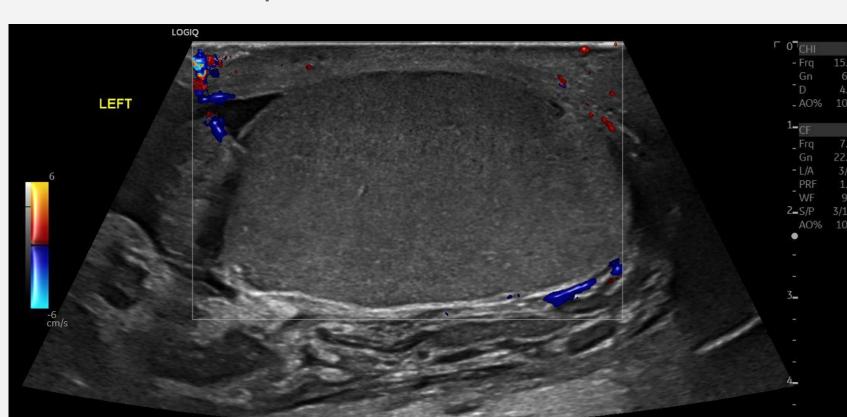


Fig. 2. CDI showing no vascularity within the left testis. Although the normal testicular parenchymal echotexture is preserved.

A third ultrasound [Fig.3] done twelve days later confirmed left testicular necrosis secondary to severe epididymitis. The patient had left orchidectomy and the ultrasound findings were confirmed histologically.

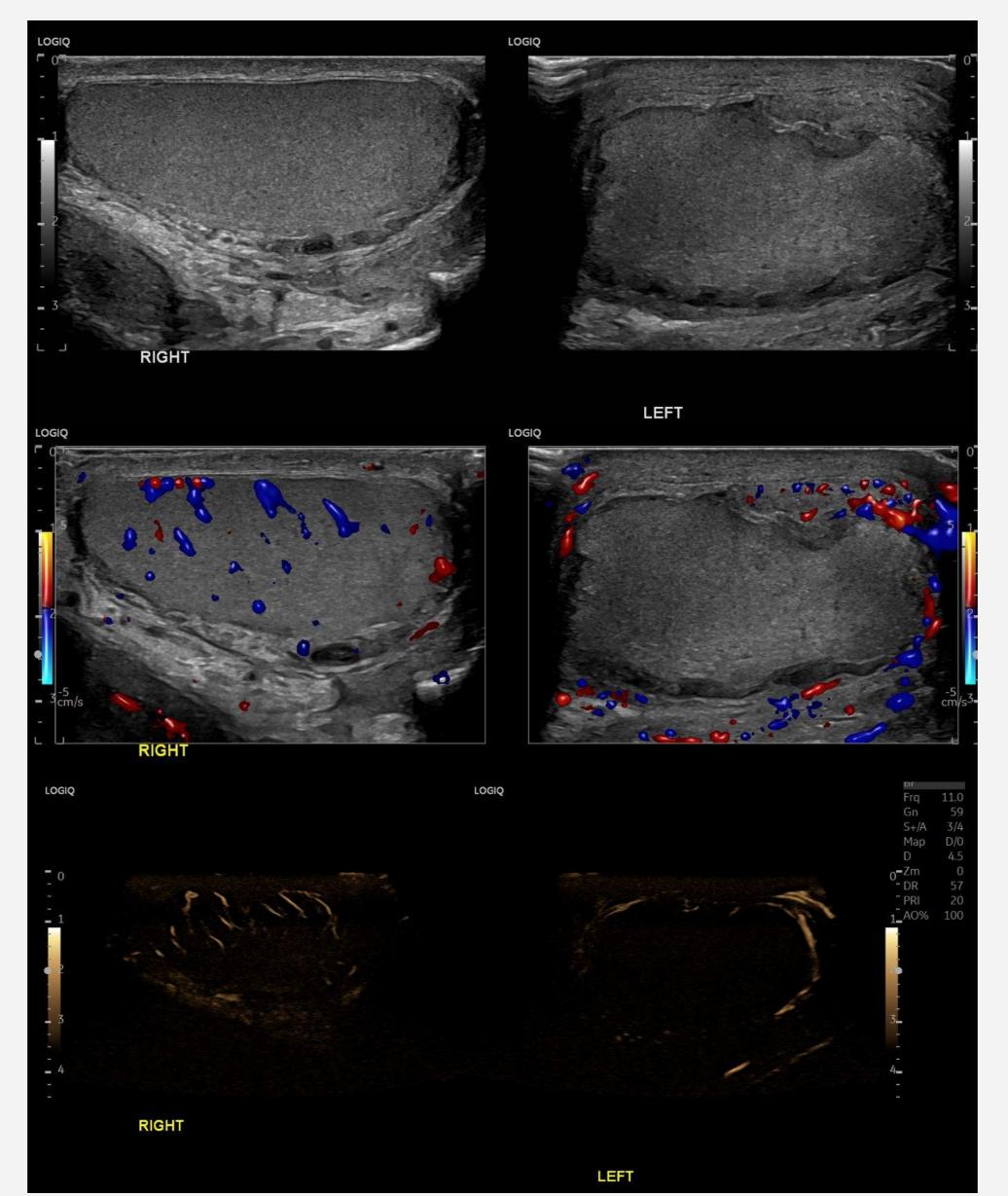


Fig. 3. Dual screen sonograms of the right and left testes. B-mode (top) showing an irregular left testicular outline and a heterogeneous parenchyma. CDI (middle) showing avascularity of the left testis. B-Flow (bottom) showing no microvascularity evidence within the left testis.

Case two

A 46-year old male presented with a swollen and significantly tender right hemiscrotum. An initial ultrasound [Fig.4] revealed a bulky, heterogeneous and hyperemic right epididymis with a normal right testicular vascularity. Ten days later, the patient presented with worsening right hemiscrotal symptoms despite commencing antibiotics therapy. A second ultrasound [Fig.5] revealed the ongoing right epididymitis with a heterogeneous and avascular right testis, however, no scrotal collection was seen.

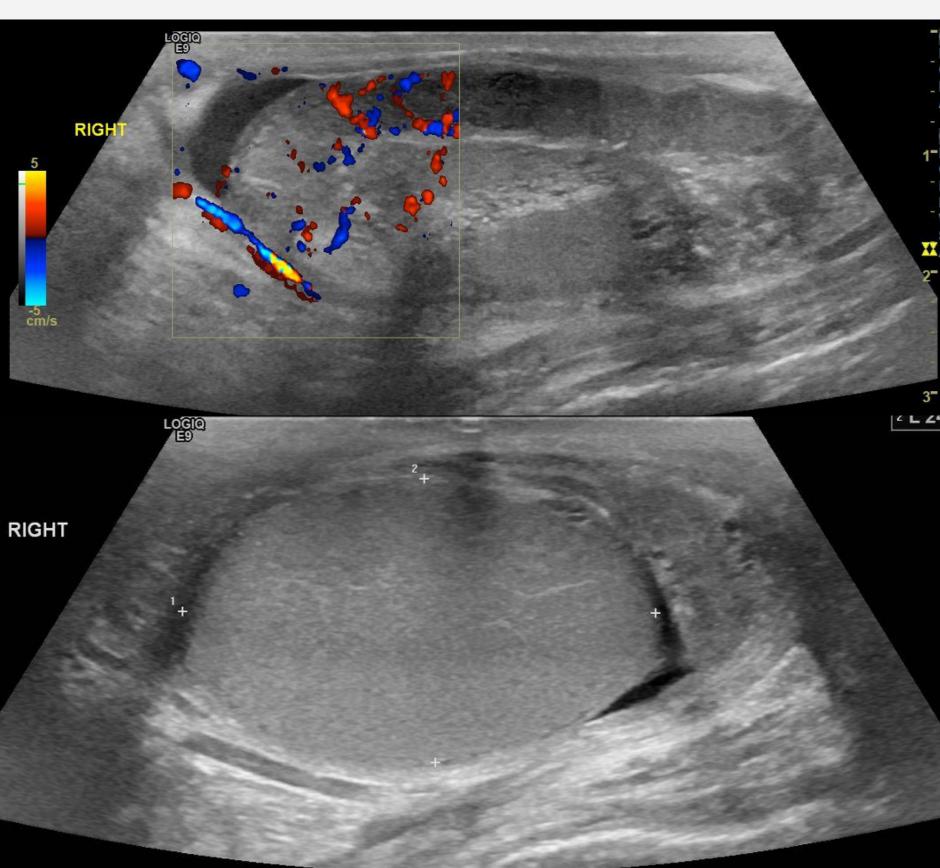


Fig. 4. Right epididymitis (top); a bulky epididymis with some evidence of hypervascularity on CDI. The right testis, however, appeared normal (bottom).

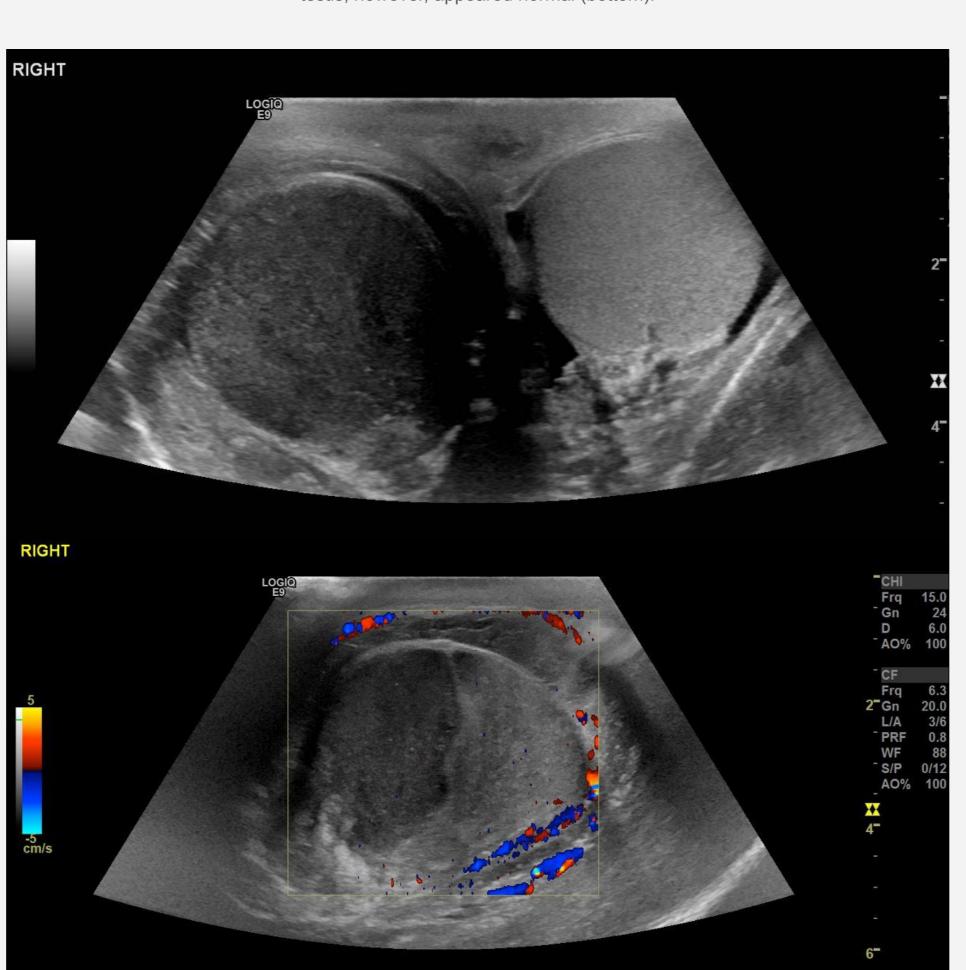


Fig. 5. B-mode (top) sonogram of the testes in axial orientation showing features of right testicular necrosis, a heterogeneous echotexture and absence of vascularity on low-flow colour Doppler interrogation (bottom).

A third ultrasound [Fig.6] was performed three weeks later which revealed the presence of a 38 mm x 25 mm x 30 mm (L x AP x T) cystic collection with some focal debris and thick-walled septations suggestive of an abscess.

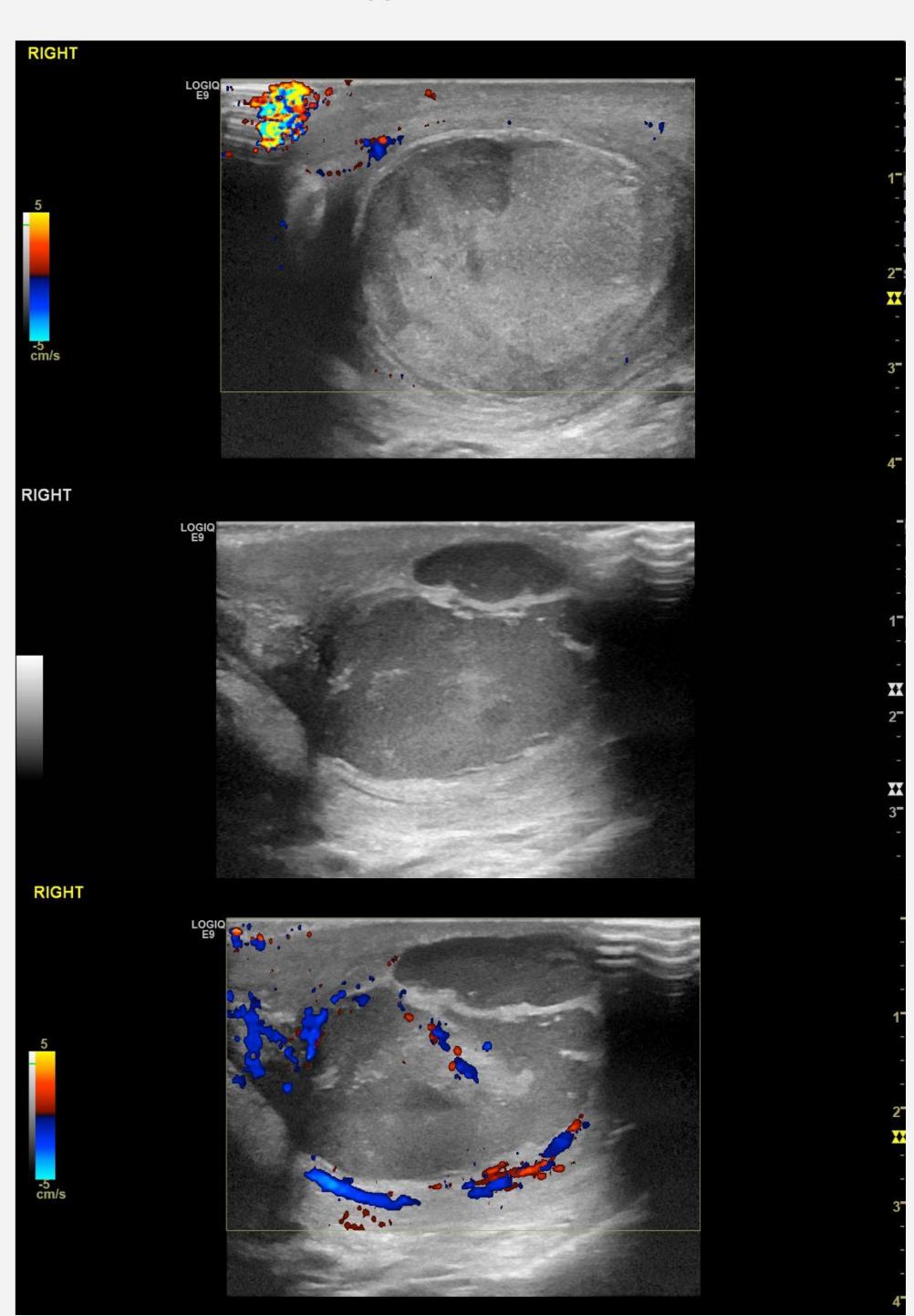


Fig. 6. Right testicular necrosis (top) secondary to epididymitis. A heterogeneous cystic collection containing some septations (middle) with no significant vascularity within it, apart from some tiny areas of CDI signal (bottom) within

Discussion and Conclusion

Ultrasound is an efficient diagnostic modality in examining the scrotum for epididymitis and its potential complications. Our cases reveal the progress of severe epididymitis in two adult males. Some postulate that the swelling caused by the inflammation could have had a veno-occlusive impact from compressing the spermatic cord, leading to infarction. Although some authors believe there are ultrasound (Doppler) features that might predict an impending testicular necrosis; reduced vascularity within the center of the testes, a negative diastolic flow or diastolic flow reversal, and increased resistive indices.⁴ However, these features are not evidence-based. One study⁵ provided some insights to the psychological impact of orchidectomy on a sample of 1173 men. Therefore, it might be beneficial to consider a routine US assessment of the scrotum post-treatment for epididymitis to predict its severe complications. There is need for further research in this area.

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