Testicular Pain: Navigating between the Differential Diagnoses

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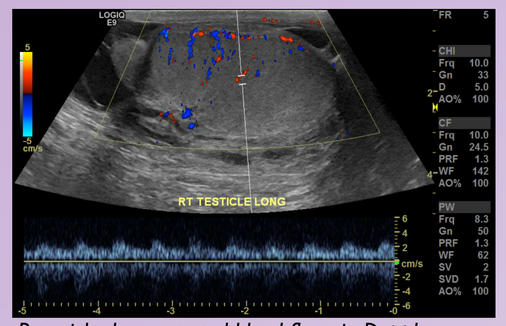
Abstract

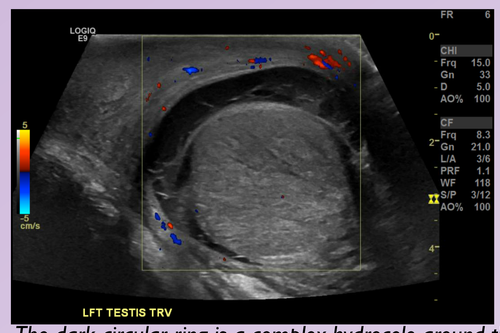
This was a case of a male in his 50s who initially presented to Christ Hospital with left scrotal pain and swelling and initial ultrasound showed left epididymitis and bilateral hydroceles. 2 days later, he developed worsening pain. H&P were not typical for torsion but repeat ultrasound showed decreased blood flow to the left testicle so he was emergently taken to the OR where surgical exploration involved left hydrocelectomy with no torsion found.This was a case in which a hydrocele had become significant enough to compromise blood vessels and present as findings concerning for torsion.This case will review US imaging of the patient which illustrate some common findings found in epididymitis, hydroceles and testicular torsions, all important differentials in unilateral scrotal pain

Our Patient

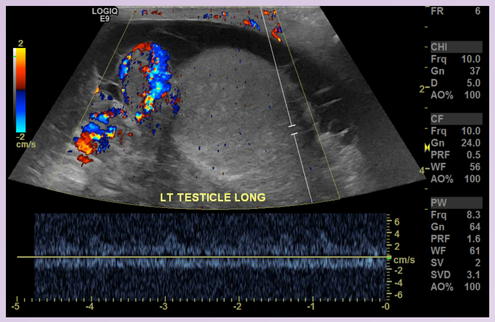
- *Our patient is a 51 yo M with HTN, HLD, OSA, cardiac transplant in 2018, previous history of bilateral epididymo-orchitis and urethral stricture s/p urethrotomy who presented to the ED with acute 1 day worsening on 4 days of left scrotal swelling and pain as well as nausea, vomiting, and PO intolerance.*
- *Physical exam was notable for a swollen and very tender to light palpation of left testicle, present cremasteric reflex bilaterally, no inguinal hernia was palpated, and there was no swelling or tenderness of the R testicle*
- *A stat ultrasound of scrotum and testicles was obtained in the ED*



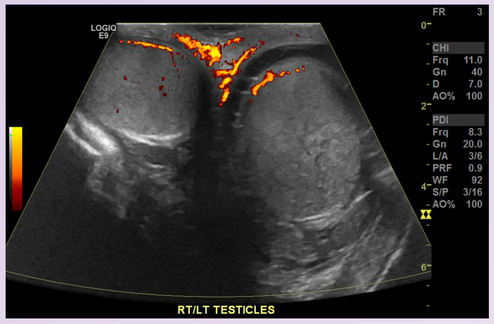
R testicle demonstrated blood flow via Doppler



The dark circular ring is a complex hydrocele around the left testicle, seen with differing echogenicity



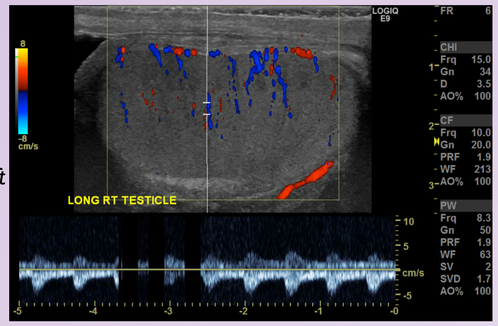
Increased blood flow is seen in the left epididymis on the left indicating hyperemia, most consistent with epididymitis.There is also blood flow visualized in the left testicle itself.



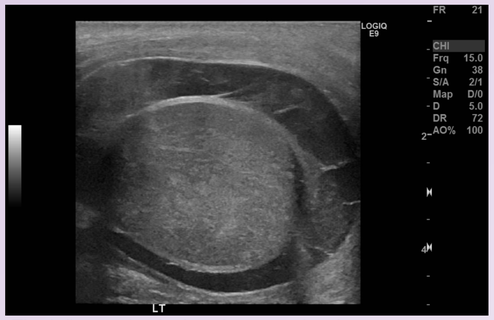
This is one of several ultrasound images that showed there was good blood flow through both the left and the right testicles.

ED US interpretation

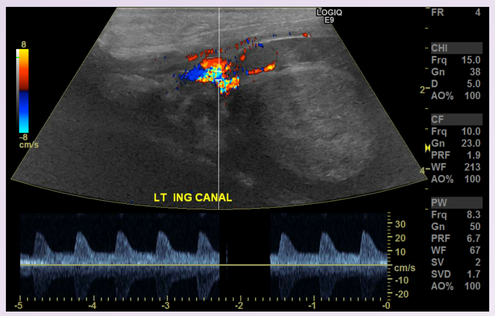
-US interpretation:"Findings compatible with left epididymitis. Bilateral septated and complex hydroceles."
-Patient was admitted to us, the family medicine team for further evaluation and management. He was started on IV antibiotics and IV pain control.
-Urology was consulted and deemed no surgical intervention indicated at this time.
-On the morning of Day 2 of admission, patient had sudden worsening of left scrotal pain.
-Repeat stat ultrasound was obtained



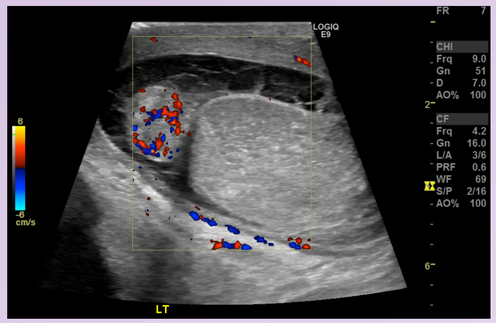
Again good blood flow to right testicle by Doppler



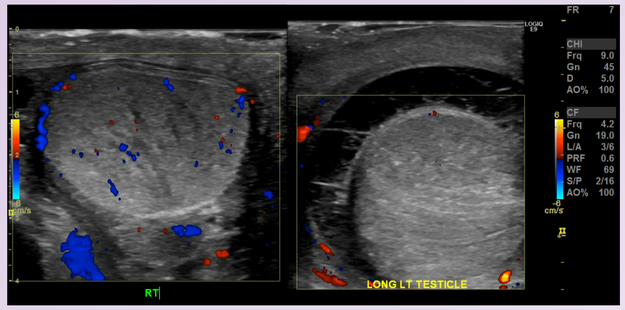
The left complex hydrocele is visualized again surrounding the left testicle



Good blood flow demonstrated to the distal left testicular artery, this is reassuring as this finding is normally inconsistent with testicular torsion



Redemonstrated hyperemia of the left epididymis but there doesn't appear to be any circulation to the left testicle



Comparing the testicles, there is no Doppler indicating no blood flow to the left testicle, this is a very concerning sign.

Conclusion

- *US interpretation:"There is no flow seen in the left testes as well as heterogeneous echotexture of the left testes concerning for left testicular torsion."*
- *Due to pain and US, patient taken to OR. Surgeons opened the L hydrocele and a large amount of fluid was removed, no torsion or necrosis seen, Doppler showed arterial pulsation of left testicle.*
- *Patient did well postop and sent home shortly after*
- *It is vital to rule out testicular torsion and if there is high suspicion for it, there should be low threshold for surgery. In the case of our patient, he had overlapping epididymitis and a hydrocele that was significant enough to cause compression of the vasculature around the testicle and thus impede blood flow to it. Although he did not end up having torsion, fortunately he was taken to the OR before the ischemia by the hydrocele and epididymitis caused necrosis of the testicle.*

References

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