

AMSER Case of the Month

September 2024

59 yo male presents with 4 days of groin pain and a swollen right testicle.

Clara Stoughton, MS4, Drexel University College of Medicine



Dr. Matthew Hartman, MD, Allegheny Health Network



Patient Presentation

- **HPI:** Patient presented to Express Care after 4 days of ongoing right groin pain unresponsive to NSAIDs and associated with right testicular swelling. Patient endorses regular weight-lifting and a 2 weeks of dysuria approximately 4 weeks ago. Denies recent trauma, current dysuria, hematuria, urinary changes, fever/chills, nausea/vomiting, abdominal pain, and concern for STI's.
- **PMHx:** Hypertension, hyperlipidemia, dribbling following urination, osteoarthritis, and binge drinking alcohol
- **Meds:** aspirin 81, atorvastatin 20 mg, lisinopril 10 mg
- **Allergies:** Erythromycin (rash)
- **Physical exam:** HR: 99 BP: 148/88, Right testes swollen and tender, Right epididymis inflamed and tender
- **Labs:** UA neg for nitrites, blood, leukocyte esterase



What Imaging Should We Order?



Select the applicable ACR Appropriateness Criteria

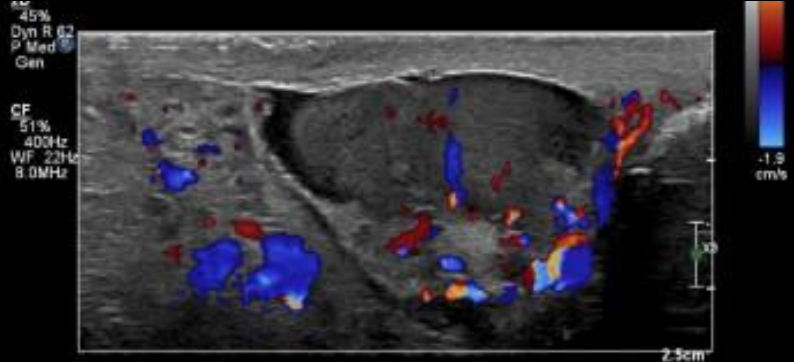
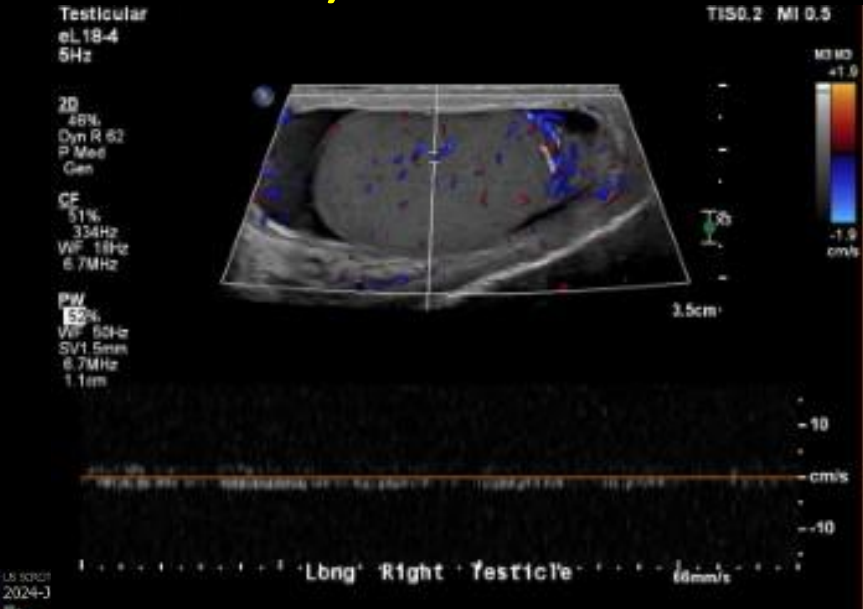
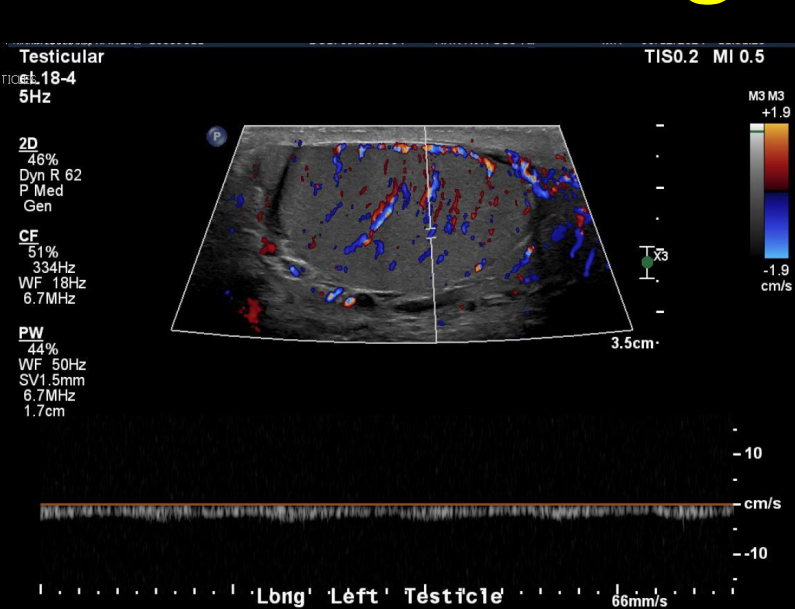
Variant 1: Adult or child. Acute onset of scrotal pain. Without trauma, without antecedent mass. Initial imaging.

Procedure	Appropriateness Category	Relative Radiation Level
US duplex Doppler scrotum	Usually Appropriate	0
US scrotum	Usually Appropriate	0
MRI pelvis (scrotum) without and with IV contrast	Usually Not Appropriate	0
MRI pelvis (scrotum) without IV contrast	Usually Not Appropriate	0
CT pelvis with IV contrast	Usually Not Appropriate	⚠⚠⚠
CT pelvis without IV contrast	Usually Not Appropriate	⚠⚠⚠
Nuclear medicine scan scrotum	Usually Not Appropriate	⚠⚠⚠
CT pelvis without and with IV contrast	Usually Not Appropriate	⚠⚠⚠⚠

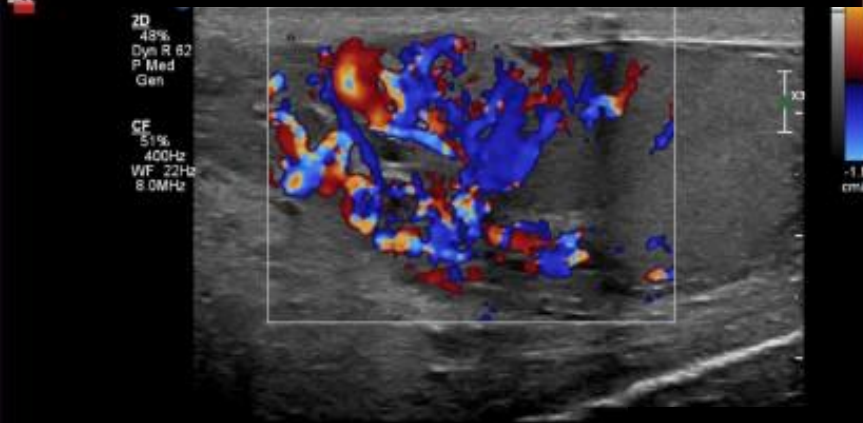
This imaging modality was ordered



Findings (unlabeled)



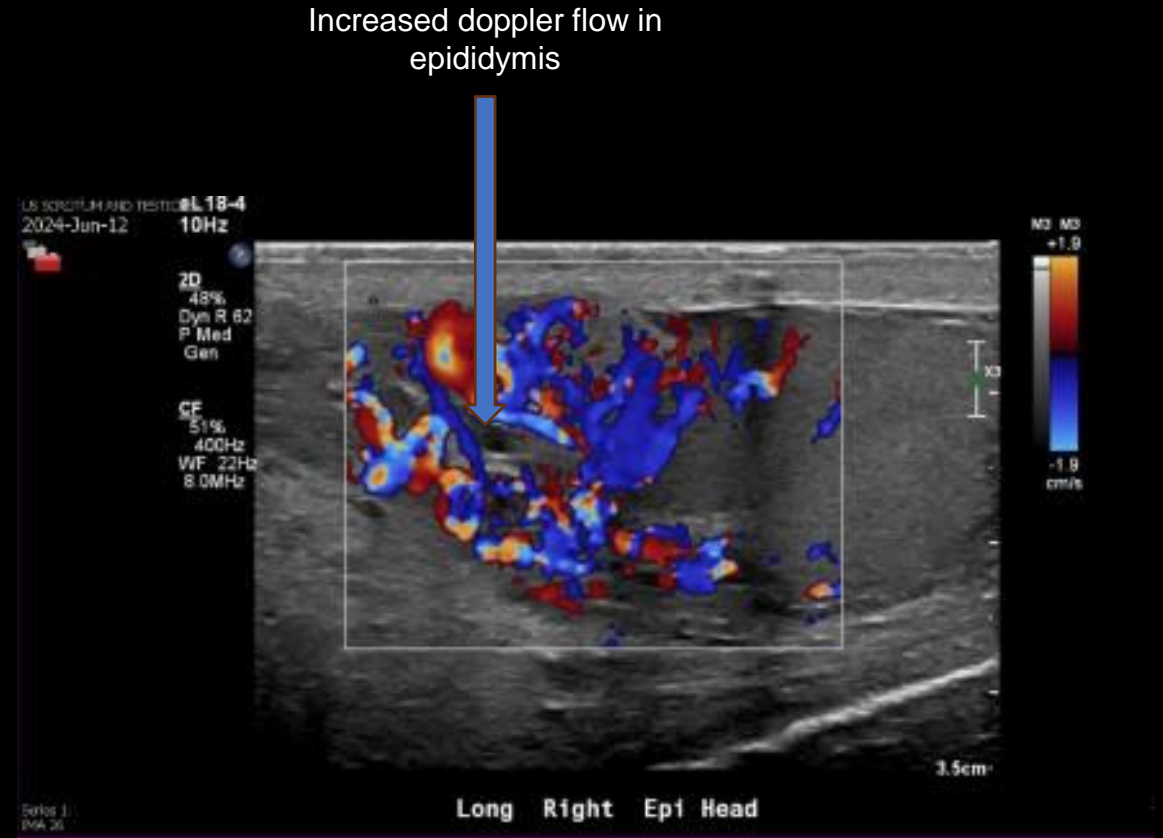
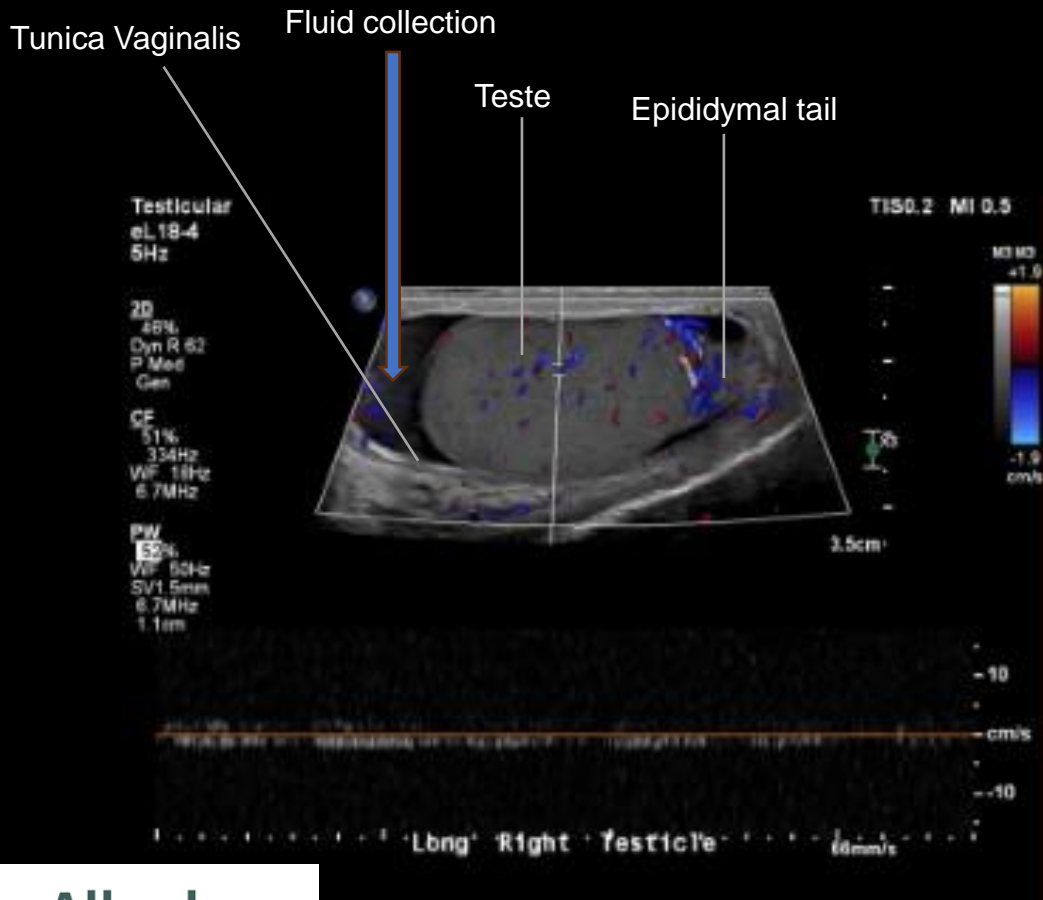
Long Left Epi Head



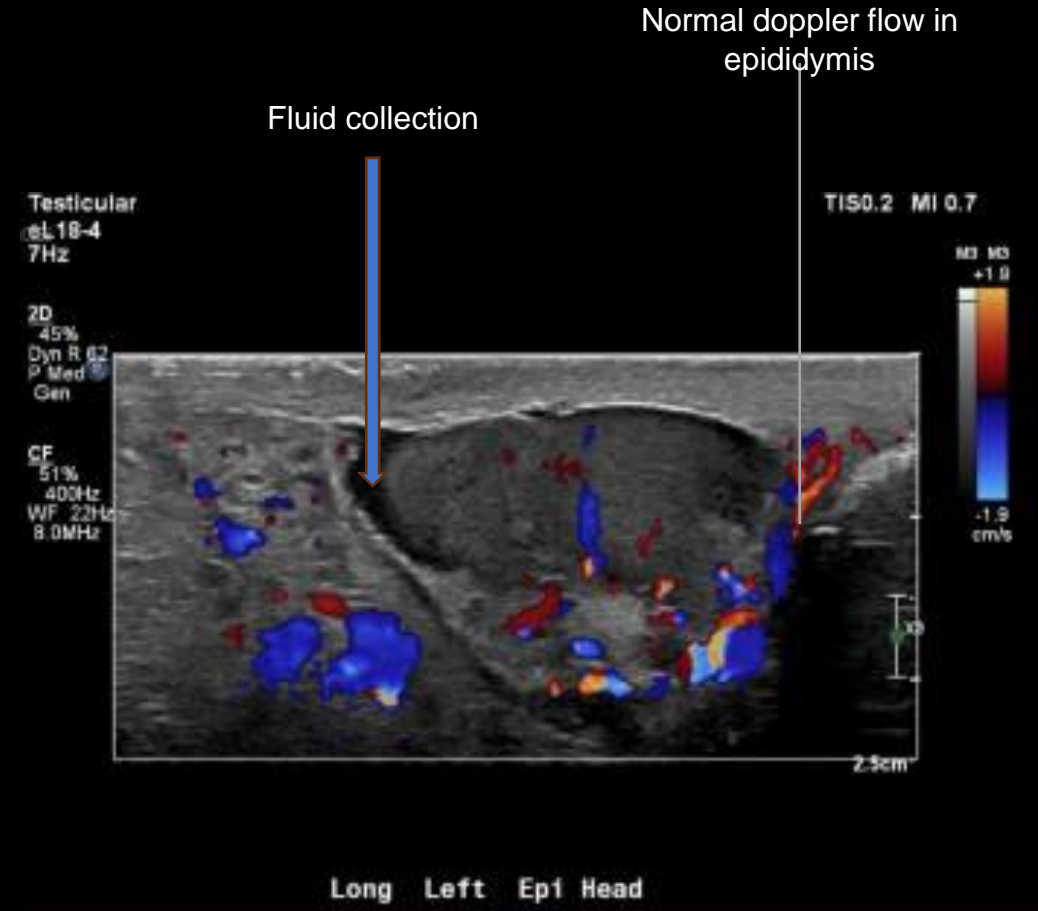
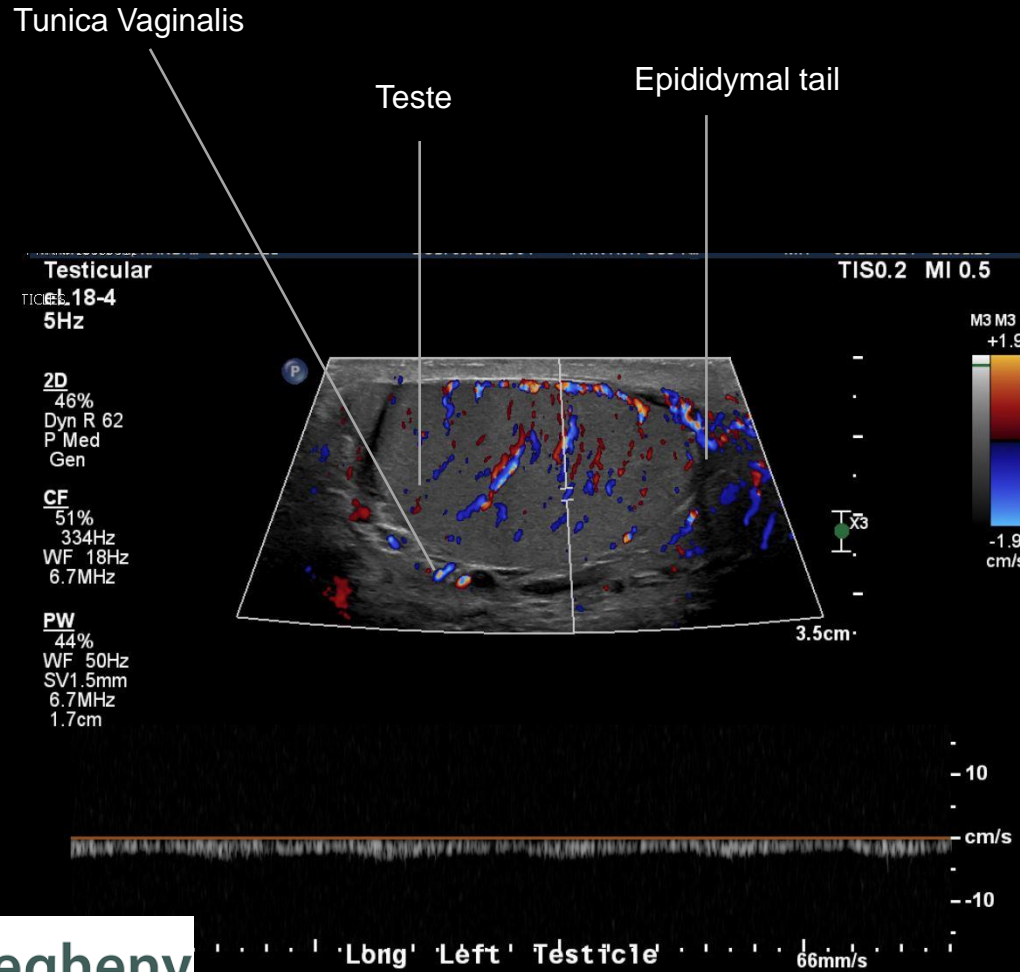
Long Right Epi Head



Ultrasound Findings of Right Teste



Ultrasound Findings of Left Teste



Final Dx:

Right Epididymitis
Bilateral hydroceles



Case Discussion

- **Etiology:** Bacterial infection of the epididymis commonly due to *C. trichomonas*, *N. gonorrhoea*, or *E. coli*.
- **Pathophysiology:** Bacterial invasion of the epididymis causes a local inflammatory response that causes increased blood flow to the infected area via immune response. Infection normally starts at the epididymal tail and can then spread to the rest of the epididymis and testicle.

Case Discussion

- **Epidemiology:** A majority of cases are in men 20-39 years old, with STIs being the most common cause. At age 40+, E. coli is the most common cause. Epididymitis can also be caused by medications such as amiodorone and viruses such as Mumps.
- **Clinical presentation:** Gradual onset testicular pain and swelling, usually unilateral. There may also be associated urethral discharge and/or urinary symptoms.
- **Differential of unilateral groin pain:** Epididymitis, Malignancy, Orchitis, Testicular Torsion, Trauma

Case Discussion

- **Imaging:** Ultrasound with doppler is the study of choice to show increased blood flow and inflammation of the epididymis. It can also be used to rule out the other differential possibilities.
- **Management:** Antibiotics and pain relief
 - Caused by STI: ceftriaxone + doxycycline or azithromycin
 - E. coli: fluoroquinolone
 - Ice, NSAIDs



References:

Rupp TJ, Leslie SW. Epididymitis. [Updated 2023 Jul 17]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan.

McConaghy JR, Panchal B. Epididymitis: An Overview. Am Fam Physician. 2016 Nov 1;94(9):723-726. PMID: 27929243.

