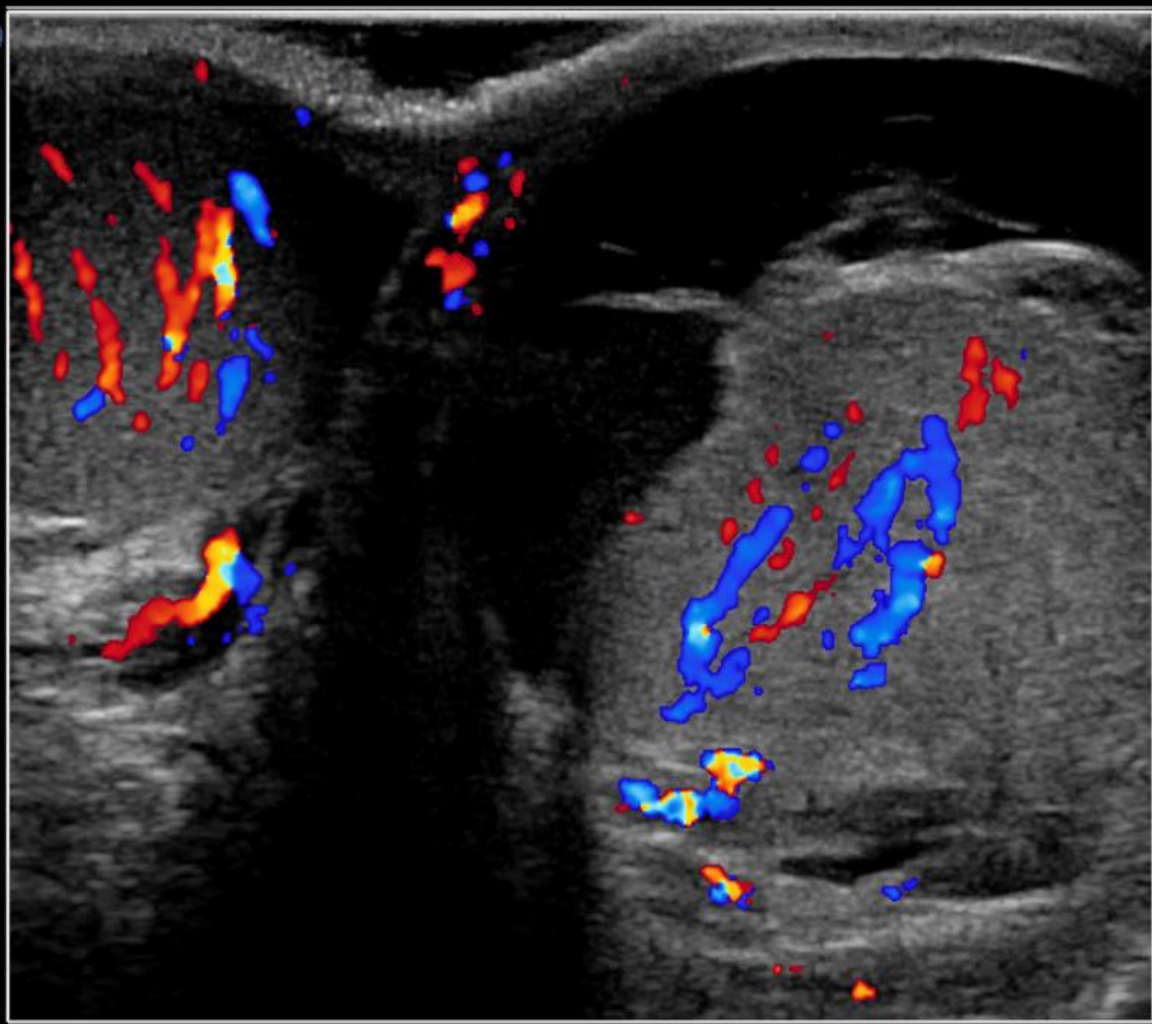


19 year-old male presents 24  
hours after scrotal trauma from a  
baseball.

Ryan P. Joyce, MD

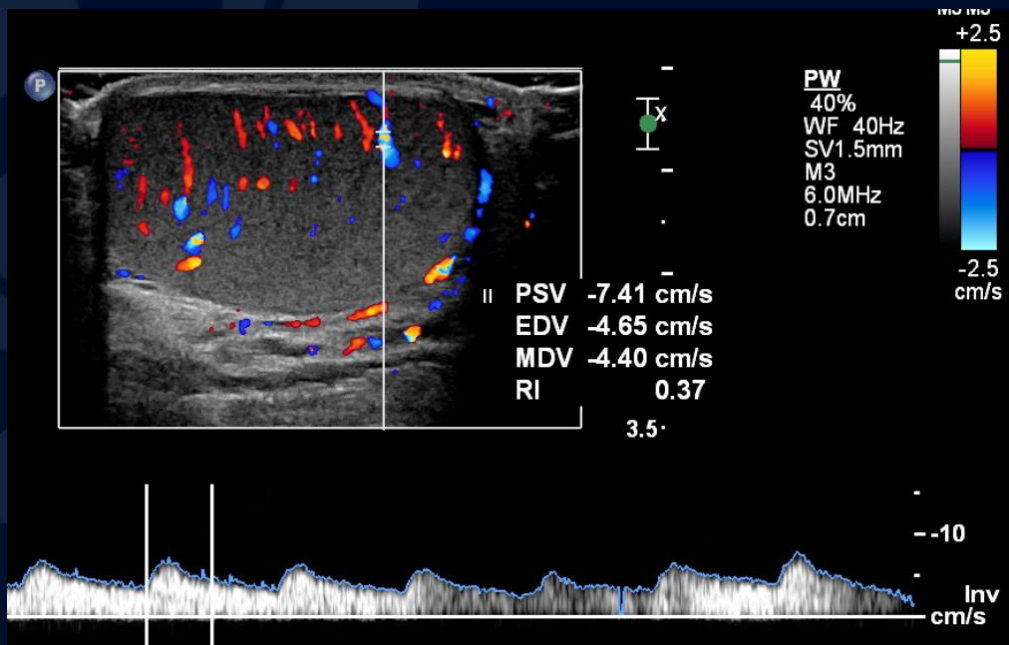
P



x

4.5

Trans. TESTICLES





Trans Lt Testicle Mid





FR 4Hz

R1  
Z 0.8

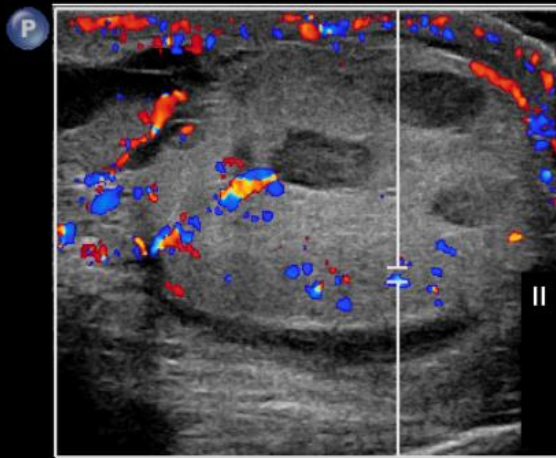
2D

89%  
C 60  
P Med  
Res  
TAC2

CF

77%  
487Hz  
WF 26Hz  
Low

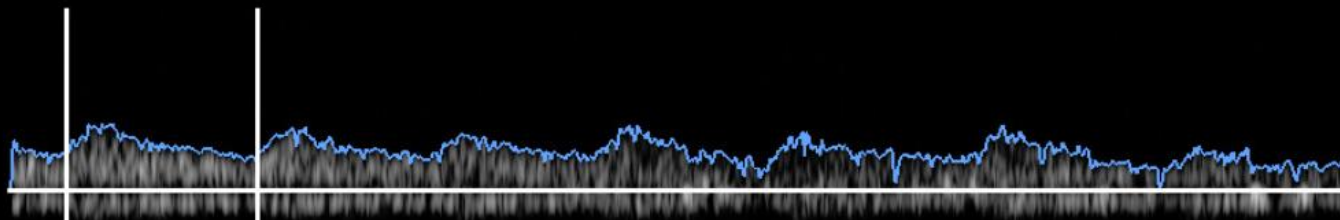
M3 M5  
+2.5



PW

40%  
WF 40Hz  
SV 1.5mm  
M3  
6.0MHz  
2.7cm

|| PSV 6.03 cm/s  
EDV 1.76 cm/s  
MDV 2.39 cm/s  
RI 0.71  
4.5



Long, Lt Testicle, Mid

6.6sec

**UNN**  
**HEALTH**

RADIOLOGY



A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. It features detailed vein patterns and a lobed edge.

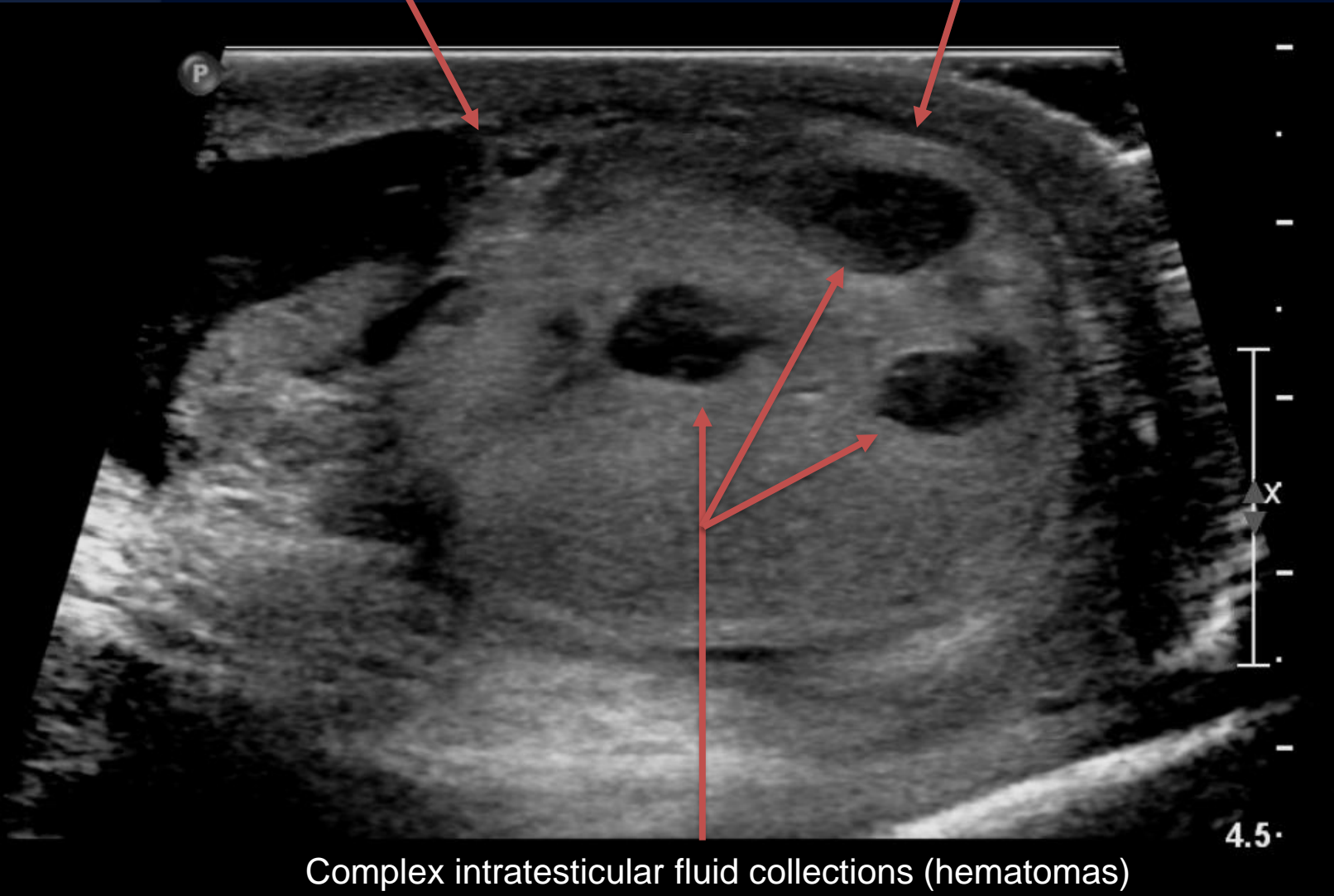
?



# Traumatic Testicular Rupture

Discontinuous tunica albuginea

Tunica albuginea



Complex intratesticular fluid collections (hematomas)

# Traumatic Testicular Rupture

**Testicular rupture:** Disruption of tunica albuginea, often with extrusion of testicular parenchyma

- $\geq 2$  of following consistent with testicular rupture
  - Parenchymal heterogeneity
  - Discontinuity of tunica albuginea (normally continuous echogenic line around testis)
  - Contour abnormality (from parenchymal extrusion)
  - Focal or diffuse absence of normal vascularity (due to rupture of tunica vasculosa)

Testicular trauma can result in a range of findings from hydrocele, hematocele, and hematoma, to fracture and/or rupture.

Fracture is defined as linear disruption of testicular parenchyma and does not require tunica albuginea disruption.

Most important to evaluate testicular parenchymal echotexture, tunica albuginea integrity, and color doppler signal throughout the testicle.

# Traumatic Testicular Rupture

- Traumatic injury to scrotal contents overall rare because of several protective features
  - Mobility, laxity, & elasticity of scrotal sac
  - Suspension of testis by spermatic cord
  - Fluid between tunica albuginea & tunica vaginalis allows excellent mobility of testes
  - Tunica albuginea among strongest fasciae in body
- Physical exam has poor correlation to degree of injury, therefore US important to guide management (conservative vs. surgical repair or debridement)
- Fracture & rupture = urologic emergency
  - Some support conservative management for select cases of rupture; long-term results not clear
  - Penetrating injuries may go straight to operating room
- Salvage rate for rupture: 90% → 45% after 72 hours
- Testis can usually be repaired to avoid orchiectomy
  - Completely shattered/infarcted testis may require orchiectomy
- Large hematocele or hematoma may require evacuation


# References

<http://pubs.rsna.org/doi/pdf/10.1148/rg.286085507>

## Role of US in Testicular and Scrotal Trauma<sup>1</sup>

**CME FEATURE**

*See accompanying*

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