This week: management of testicular torsion

Torsion is one of those high-risk diagnoses that you may not see much on the adult side but should always be kept in mind with any complaint of lower abdominal, scrotal, or upper thigh pain. Pain may be intermittent and associated with nausea and vomiting, similar to ovarian torsion. It is most commonly seen in <1 yo and at puberty. It is rare in adults >30 yo.

Consider using the TWIST (Testicular Workup for Ischemia and Suspected Torsion) score to determine need for immediate urologic consultation:

Exam finding	Points
Testicular swelling	2
Hard testicle	2
Absent cremasteric reflex	1
Nausea or vomiting	1
High riding testicle	1
5+ points – immediate urologic consult (PPV 93.5%) 2-5 points – scrotal ultrasound with doppler <2 points – consider alternative diagnosis (NPV 100%)	

Make sure the room is warm when checking for the cremasteric reflex; it you may not have any motion if the scrotum is cold (a falsely positive test). As a quick remainder – cremasteric reflex is the elevation of the testicle when the inner thigh is scratched or rubbed. In torsion, there will not be any movement.

Time is testicle: if flow is restored within 6 hours of initial vascular compression time, there is close to 100% testicular survival rate.

Manual detorsion should not be delayed while waiting for urology as this could be an organ saving maneuver. The procedure itself has a 30-70% success rate.

Indications:

- Twist score >5
- Evidence of absent/decreased flow on US
- SHOULD be done even if urology planning to operate – can return flow sooner to reduce ischemic time

Considerations with consent:

- This is obviously a procedure involving a sensitive area, so a very clear conversation with the patient/parent with clear discussion of every step is essential.
- Always have a chaperone present for the procedure

Heidi Alvey, MD, MPH
Indiana University Emergency Medicine
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- Document, document, document

Risks:

- Failure of procedure, pain, damage to structures including vasculature, epididymis, vas deferens, impaired future fertility

Alternatives:

- Surgical management (can prolong ischemic time)

What you need:

- Consent and a chaperone
- Analgesia
- A stretcher for the patient
- Your hands

- If you are doing a block
  - Lidocaine 1% WITHOUT epi – don't make the ischemia worse
  - 10 ml syringe (for adults), smaller for kids
  - 27 ga needle
  - Chlorhexidine to clean the skin

How to Do It:

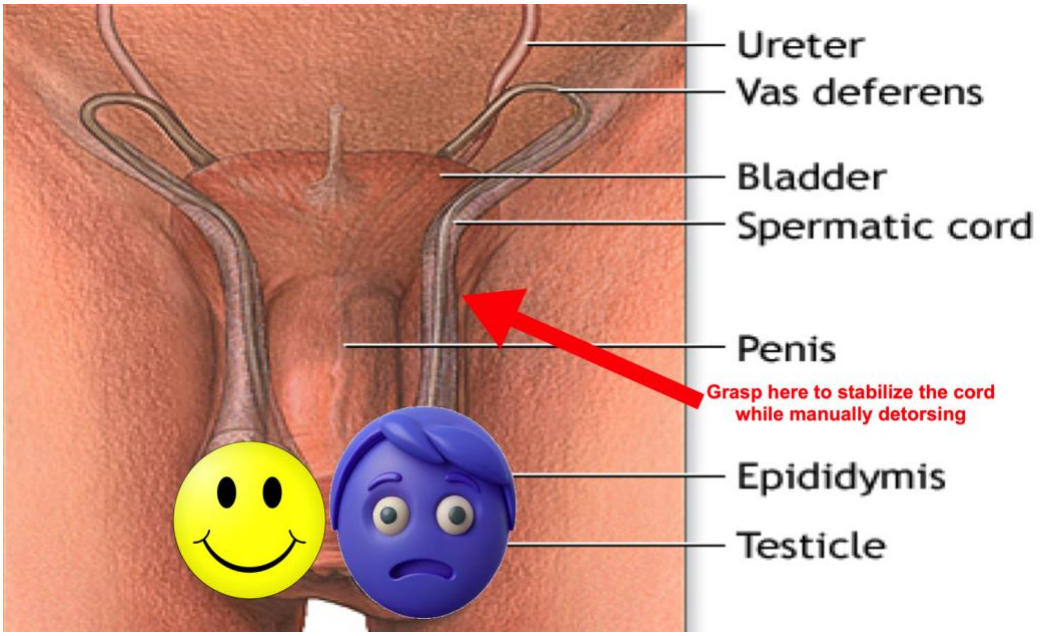
- Pain control prior to procedure – consider using a spermatic cord block



B. Spermatic cord block. Grasp the spermatic cord between your thumb and index finger. Use a 30-gauge needle to infiltrate the entire cross section of the spermatic cord and its surrounding rim with anesthetic. This will cause visual ballooning of the grasped segment of the cord. Gently massage this bulge to disperse the anesthetic. Usually about 10 mL is required.

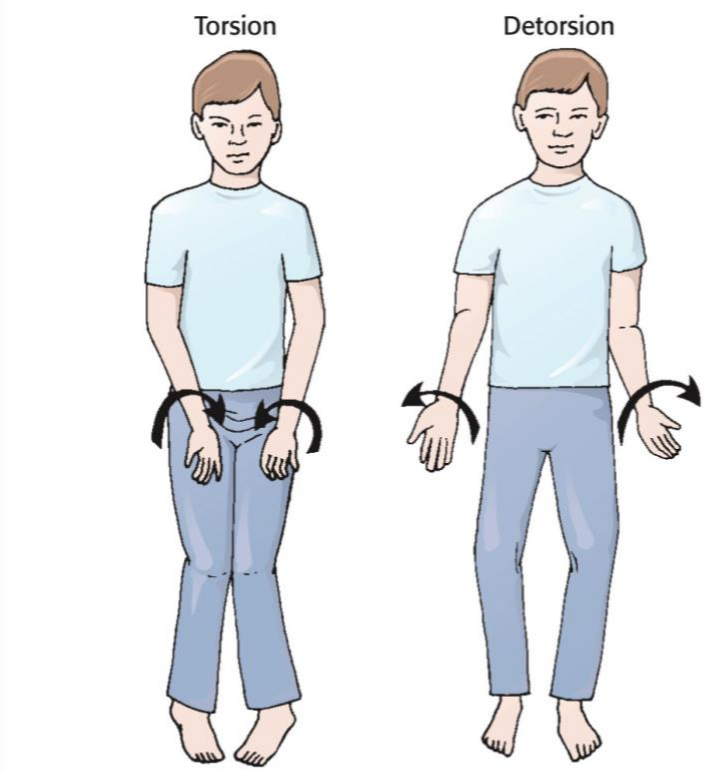
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    - Block can be done with 1% lidocaine – for an adult use 10 ml, for peds use weight appropriate dose. Draw up and inject with a 27 ga needle into the area around the spermatic cord
- Once adequate anesthesia/pain control obtained, position patient on the stretcher. Supine/reclined is ideal.
- Grasp the scrotum at the base on the affected side – you want to try to stabilize the spermatic cord structures to help untwist the blood supply



-About 2/3 of torsion is caused by the testicle rotating medially – to de-torse, turn the testicle the opposite way. This means rotating the testicle toward the thigh from medial to lateral, as if you were opening a book.

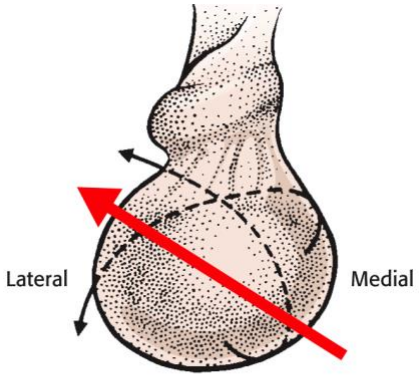
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C. Testicular torsion more commonly occurs in a medial direction. Initially attempt detorsion by rotating the testis outward toward the thigh. This is most successful if attempted within the first few hours of torsion, before the onset of significant scrotal swelling.

- Rotate the testicle at least 180 degrees, it may take 2-3 full rotations to fully de torse
- STOP if you are having difficulty rotating the testicle or if the pain increases
    - If this occurs, the patient may be in the 1/3 of cases where the testicle is laterally torsed. Continue holding the base of the scrotum and twist the opposite direction (lateral to medial) as if you were closing a book.
- Depending on the anatomy, you may need to rotate slightly cephalad and medially to release the muscle

Heidi Alvey, MD, MPH
Indiana University Emergency Medicine
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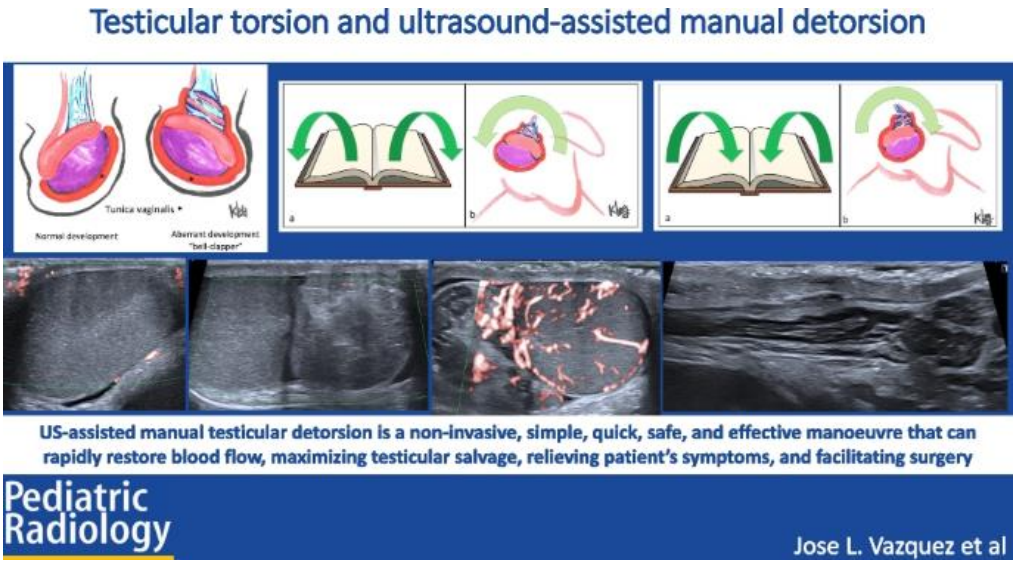


D. Detorsion maneuver. Detorsion of the testicle may require testicular rotation through two planes. To release the cremasteric muscle, rotate the testis in a caudal-to-cranial direction simultaneously with medial-to-lateral rotation. The right testis is shown.

Tips for success:

- Adequate analgesia always makes any procedure much easier
- The procedure may be more difficult when there is testicular edema present – earlier detorsion minimizes the edema and will make the procedure easier
- There is a technique that involves placing some downward traction on the testicle – best seen in the videos below.
- Consider use of US during the procedure.
    - Use the linear probe with color flow in the transverse plane of the testicles. Both testicles should be in view – you should be able to see one testicle with blood flow in the testicular parenchyma and one without.
    - Attempt detorsion as above. Repeat US to assess for return of blood flow. If no blood flow, continue rotating testicle until blood flow returns

Heidi Alvey, MD, MPH
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References:

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- Mellick LB. Testicular torsion. In: Roberts JR, Custalow CB, Thomsen TW, eds. *Roberts and Hedges' Clinical Procedures in Emergency Medicine and Acute Care*. 8th ed. Elsevier; 2024.
- https://www.emdocs.net/em3am-testicular-torsion/
- https://www.acep.org/emultrasound/newsroom/october-2025/rapid-recognition-of-testicular-torsion-on-bedside-pocus
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Videos:

- https://www.youtube.com/watch?v=rDq8dlHM_Mo – also demonstrates the "torsed testicle traction technique"

- https://www.youtube.com/watch?v=g5V4Z6nUk8U – another video of the traction technique

- https://www.youtube.com/watch?v=IQ5pUWIu6mI – ultrasound demo of a torsed testicle – talks about the use of doppler to ensure flow

- https://sjrhem.ca/rcp-the-acute-scrotum/ - talks about some mimics and their management

Heidi Alvey, MD, MPH
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