

# Acute Groin Pain Following Trauma

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# A Cup Half-full

## Acute Groin Pain Following Trauma

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# Case History

- A healthy 20 year-old male professional hockey player presented with worsening **pain** and **swelling** of his **left testicle** 3 days after sustaining a groin injury.
  - Took a puck to the groin during 1<sup>st</sup> period of an away game.
  - **Was not wearing protective equipment.**
  - Evaluated by ATC and team physician of opposing team during intermission.
    - **Swelling** and **bruising** of left testicle on exam
    - No suspicion of necrosis, but difficult to determine with amount of swelling

# Case History

- Allowed to return to play, instructed on when to seek further evaluation.
- Skated 3 shifts in 2<sup>nd</sup> period, then sat out remainder of game due to **worsening groin pain**.
- After the game, went to emergency dept.
  - On exam, tender left testicle, approximately 2x the size of contralateral side.
  - Ultrasound with Doppler:
    - Normal right testicle
    - Left testicle: **subcapsular hematoma, hemorrhagic hydrocele**, and **no flow** to lower ½ of testicle

# Case History

- Urology consulted by emergency dept.
  - Recommended no surgical intervention
  - Admitted overnight, discharged following day
  - Conservative management
  - Follow-up with urology at home
- Day 3 post-injury, after returning home, athlete underwent a follow-up evaluation by urologist.

# Physical Exam

- Vital signs normal
- Gen: Well-developed Caucasian male in no distress
- HEENT, CV, respiratory, neurologic, abdominal, musculoskeletal, and skin exams normal
- GU:
  - Penis: No lesions, tenderness, curvature, or plaques. No phimosis or paraphimosis. Meatus is orthotropic without discharge.
  - Groin: No palpable inguinal hernia. No adenopathy.
  - Testes: Descended bilaterally. **Left testis is very tender, unable to fully examine due to discomfort.** Scrotal skin is normal without erythema. Right testis is normal without palpable mass. No hydroceles.

# Differential Diagnosis

- Testicular rupture
- Testicular torsion
- Torsion of a testicular appendage
- Epididymitis
- Inguinal hernia
- Hydrocele
- Testicular infarction

# Questions?



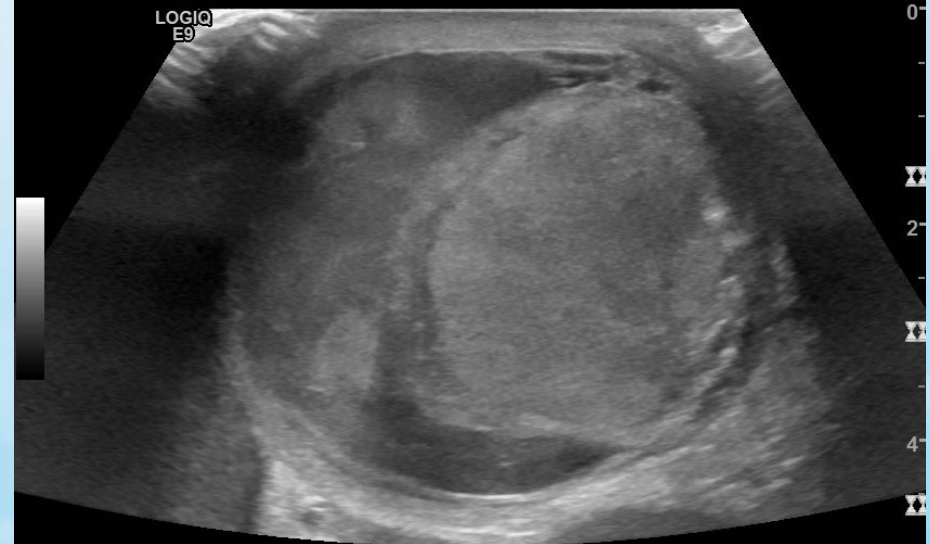
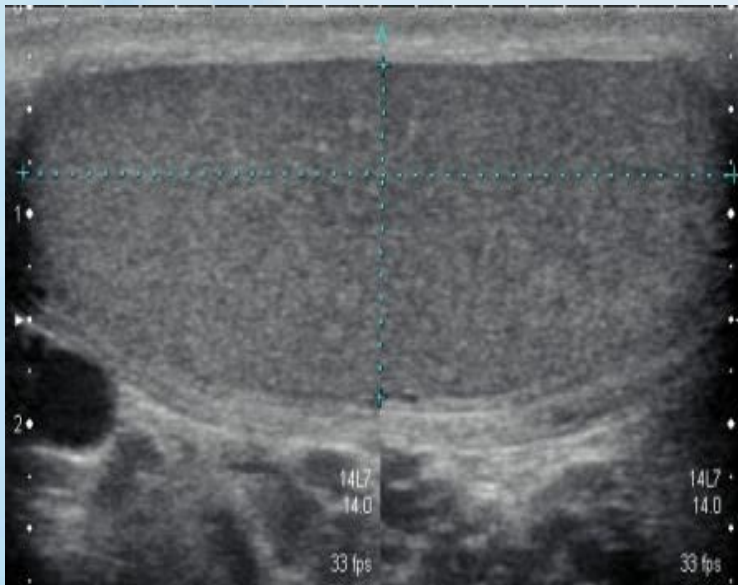


# Work-up

- Automated urine dipstick analysis: normal
  - (-) RBCs, WBCs, nitrites, protein, glucose, ketones
- Ultrasound with Doppler
  - Right testis: normal
  - Left testis:
    - **Large hematoma** surrounding left testis
    - **Diffusely heterogenous echotexture** and **irregular medial contour**, suggestive of parenchymal edema and contusion with likely disruption of the medial testicular capsule
    - **No discernible blood flow**, with only a small amount of blood flow at periphery of inferior pole

# Work-up: Ultrasound

## Normal testis



# Course of Treatment

- Diagnosis: ruptured testicle
- Based on elapsed time and repeat U/S results (essentially no flow and large hematoma), the **likelihood of salvageable testicular tissue was low.**
- Athlete was offered 2 options:
  - Conservative treatment: usually prolonged course of inflammation, pain, and increased risk of infection.
  - Surgical exploration with possible repair or orchiectomy.
  - Athlete opted for surgery.

# Course of Treatment

- Surgical exploration:
  - Hematocele
  - Rupture of tunica albuginea
  - Absent arterial flow in the left testicle and spermatic cord
- Due to absence of blood flow, urologist performed orchiectomy rather than debride and attempt closure.
- Surgical pathology:
  - Left fractured testicle
  - Infarction of the seminiferous tubules
  - Intertubular hemorrhage
  - Defects in the tunica vaginalis and albuginea

# Return to Play

- Athlete resumed skating and non-contact activities on post-operative day 5.
- Full contact on post-operative day 10.
- Counseled on importance of wearing genital protection now that he has solitary testis.

# Acknowledgements

- Dr. Neil Mathews, program director
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# Questions?

