

Traumatic Abdominal Wall Injuries: A Primer for Radiologists

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- **Disclosures:**

- Scott D. Steenburg:
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- All other authors have nothing to disclose

- **Goals and Objectives:**

- Review the imaging spectrum and clinical relevance of traumatic abdominal wall injuries as seen on multi-detector CT.
- Discuss the associated injuries and imaging features that are important to patient management.
- **Target Audience:** medical students, radiology trainees, radiologists, trauma surgeons



Background

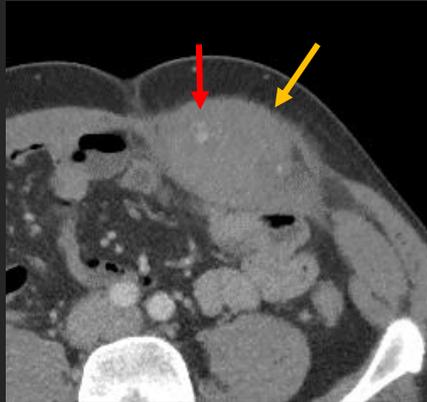
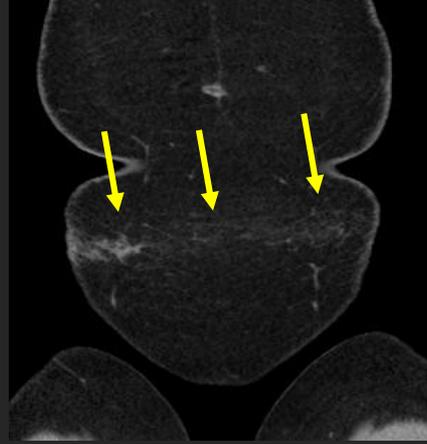
- Abdominal wall injury
 - ~9% of blunt trauma patients
 - Most commonly abdominal wall contusion, muscle strain, tear, or hematoma
- Traumatic abdominal wall hernia (TAWH)
 - <1% of blunt trauma patients
 - Most severe form
 - Traumatic lumbar hernia most common
- Typically require immediate surgical correction = Identification at the time of presentation is important

Clinical Significance

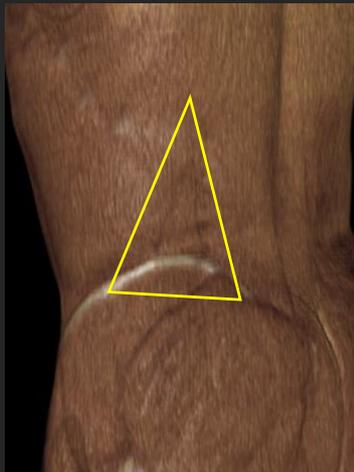
- Significant force is needed to rupture abdominal wall
- Strongly associated with other severe intra-abdominal injuries which may require immediate repair.
- Failure to diagnose can result in significant M & M.
 - Up to 25% complication rate = delayed bowel incarceration and strangulation.
- Physical exam has low sensitivity for the detection of traumatic abdominal wall rupture
- Emphasizes the importance of CT

Imaging Spectrum of Traumatic Abdominal Wall Injuries

- Abdominal wall contusion / hematoma
 - aka “**Seat belt sign**”
 - Approximately 10-15% will have associated bowel injury
- Abdominal muscle tear / strain
- Rectus sheath hematoma
 - May contain **active bleeding**
- Traumatic abdominal wall hernia (next slide)

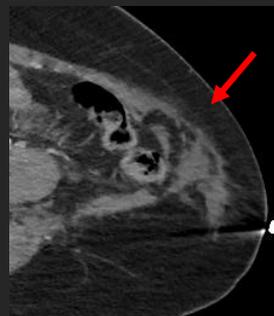
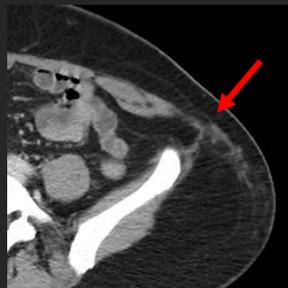


Traumatic Abdominal Wall Injuries: Hernia / Rupture



Traumatic abdominal wall rupture / hernia

- Inferior lumbar triangle most common location
- Nearly half will have associated bowel injury!



Two patients with **traumatic lumbar hernias.**



Most common location for **TAWH.**



Three patients with abdominal wall rupture and bowel perforation.

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