



Eastern Association for the Surgery of Trauma

27th Annual Scientific Assembly

Sunrise Session 15

**Practical Application of Radiographic Images to
Trauma Clinical Care: EAST/STN Case Presentations**

January 17, 2014

**Waldorf Astoria Naples
Naples, Florida**

Radiographic Case Reports in Trauma



Martin D. Zielinski, MD
EAST/STN AP Sunrise Session
January 17, 2014



Radiographic Case Reports in Trauma

- Case Series
- Questions
- Audience participation requested



REQUIRED!

26 Female MVC

- Highway speeds
- No L
- Hypo
- CXR
- Head



26 Female MVC

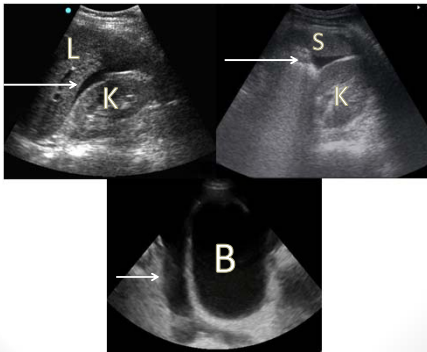
- IS FAST indicated?

- YES

- NO

Why?

26 Female MVC



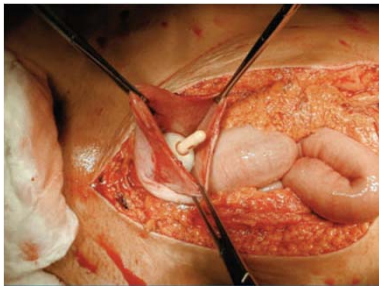
26 Female MVC

- What is the most likely diagnosis?

Extraperitoneal Bladder Rupture



Intraperitoneal Bladder Rupture



Intraperitoneal Bladder Rupture

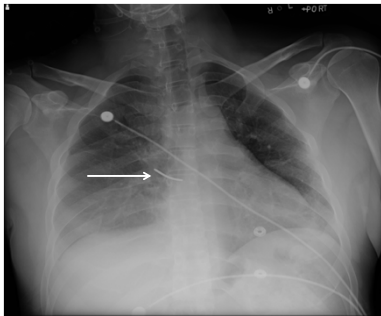
- Highly associated with pelvic fractures
- >66% gross hematuria
- 99% microscopic hematuria
- Extraperitoneal
 - Nonoperative Rx
- Intraperitoneal
 - Operative Rx

65 Male Tractor “Mosquito Bite”

- Posterior Thorax
- 2 cm laceration lateral to spine
- Hypotension
- Tachycardia
- Diaphoresis
- Diminished right breath sounds



65 Male Tractor “Mosquito Bite”



65 Male Tractor “Mosquito Bite”



65 Male Tractor "Mosquito Bite"

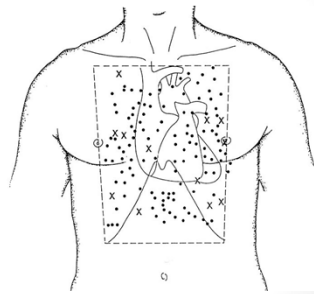
- Which anatomic structures are at risk?

- Right Lung
- Liver
- Heart
- Stomach
- Pancreas

Trajectory determination equals injury identification

65 Male Tractor "Mosquito Bite"

- Box of Death



65 Male Tractor "Mosquito Bite"

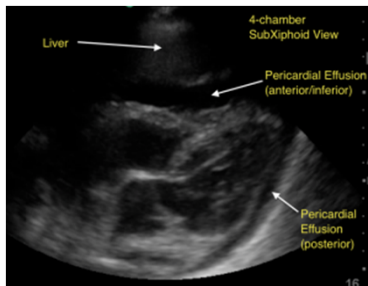
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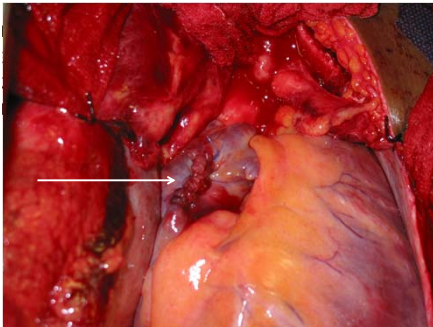
- NO

Why?

65 Male Tractor "Mosquito Bite"



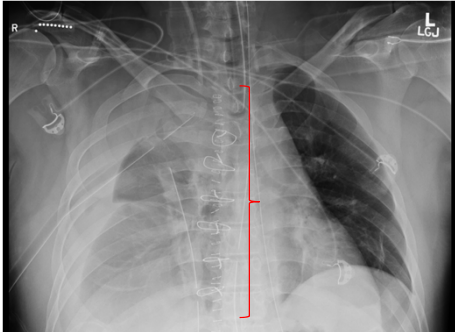
Penetrating Cardiac Laceration



Penetrating Cardiac Laceration



Penetrating Cardiac Laceration



Penetrating Cardiac Laceration

- Almost exclusively penetrating
- 33% survival
 - Stab 65%
 - GSW 16%
- 68% resuscitative thoracotomy

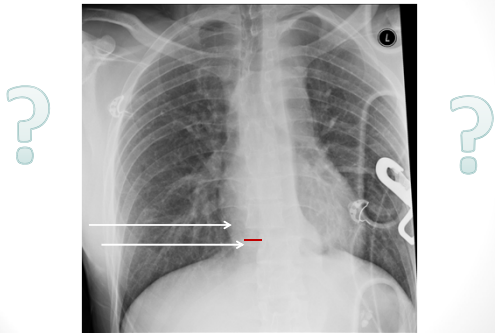


25 Male Motocross Crash

- Bike landed on his back
- Normal vitals
- Insensate below umbilicus
- No motor function of lower extremities
- Weak bilateral femoral, popliteal, posterior tibial and dorsalis pedis



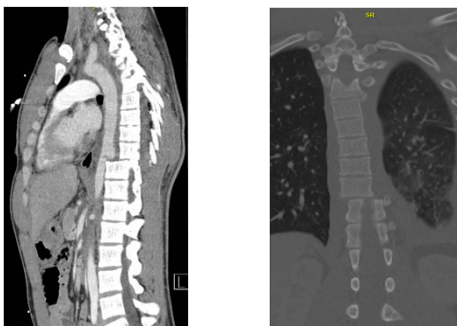
25 Male Motocross Crash



25 Male Motocross Crash



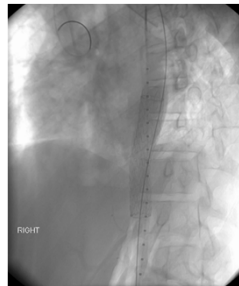
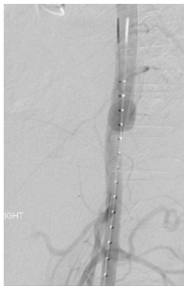
Thoracic Aorta Transection



Thoracic Aorta Transection

- Treatment Options?
 - Anterolateral Thoracotomy
 - Median Sternotomy
 - Spine Stabilization
 - Endovascular Stent
 - Non-operative Management

Thoracic Aorta Transection



Thoracic Aorta Transection



Thoracic Aorta Transection

- Affects 2% of blunt trauma patients
- #2 cause of immediate death
- 20% survive to be treated
- > 80% with associated injuries
- "Osseous Pinch"

73 Male Fall from Standing

- Family heard a "thump"
- + LOC
- Central Cyanosis
- Hx of DVT
- Recent Left Knee Arthroplasty
- Extreme WOB → Intubation

73 Male Fall from Standing



Any Traumatic Injuries Noted?

73 Male Fall from Standing

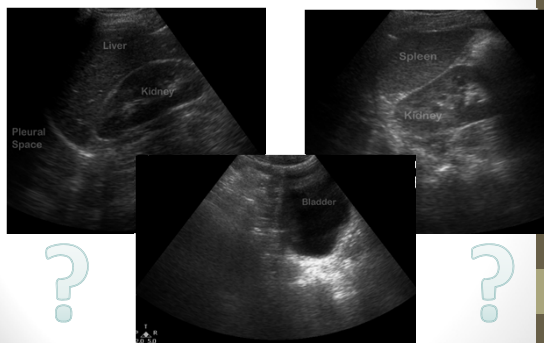
• IS FAST indicated?

- YES

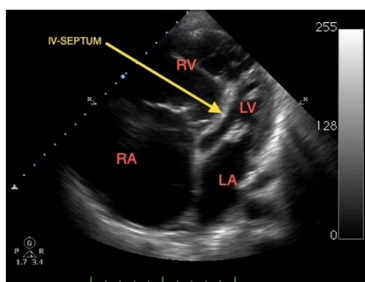
- NO

Why?

73 Male Fall from Standing

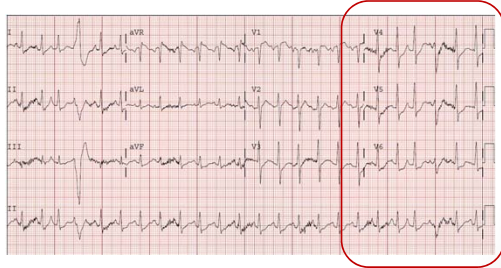


73 Male Fall from Standing



Findings?

73 Male Fall from Standing



73 Male Fall from Standing

- Right Heart Strain
- Cyanotic
- Increased WOB
- Hx of DVT
- Recent orthopedic operation?

Diagnosis?

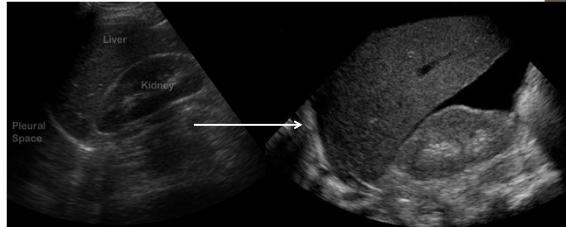
Treatment?

73 Male Fall from Standing

- PEA Arrest
- CPR performed x 2
- Persistent hypotension
- 10 minutes later...
 - Increase abdominal distension...

What's next?

73 Male Fall from Standing



CPR-Induced Hepatic Laceration

- 2.9% incidence post-mortem
- Children at greater risk
- Ante-mortem diagnosis is case-reportable