eFAST
Extended Focused Assessment with Sonography in Trauma

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Introduction

- e-FAST (Extended - Focused Assessment with Sonography for Trauma)
  - Extended = evaluation of the thoracic cavity in trauma
  - Indication: blunt and penetrating thoracic trauma
eFAST

Four main areas are evaluated on the FAST exam for free fluid, plus thoracic cavity

- RUQ (Right pleural space, Morrison’s Pouch)
- LUQ (Left pleural space, Subphrenic and Splenorenal fossa)
- Suprapubic (Males rectovesicular pouch, Females pouch of douglas)
- Subxyphoid (Pericardium)

eFAST - thoracic ultrasound (pleural effusion, pneumothorax)
Objective: to detect free fluid (hemorrhage) in the intrathoracic cavity and to detect pneumothorax.
eFAST Technique

- Pneumothorax
- Pericardial and Pleural Effusion
eFAST Technique

- Subxyphoid - pericardial fluid
- RUQ and LUQ views above the diaphragm - pleural fluid
- Mid-clavicle chest - pneumothorax
Subxyphoid views

- Subxyphoid four chamber view
- Transverse, marker to right, angle beam to left shoulder
Subxyphoid views

- Evaluate for free fluid in pericardial space.
- Inferior and posterior aspect.
Subxyphoid views

- Evaluate for free fluid in pericardial space.
- Inferior and posterior aspect.
Parasternal Long view

- Pericardial effusion
- Descending aorta
Parasternal Long view

- Pericardial effusion
- Descending aorta
Tamponade

- RV collapse in diastole
Tamponade
Tamponade
Pleural Effusion

- Longitudinal view in RUQ and LUQ, above the diaphragm
- Can be done while doing the FAST RUQ and LUQ views
RUQ views
Pleural Effusion
LUQ views
Pleural Effusion
Thoracic Ultrasound

- Lung Ultrasound is 92-100% sensitive for PTX
Thoracic US

- Observe lung sliding = “ants marching”
- M-mode to improve sensitivity
- Repeat in 3-6 intercostal spaces
Thoracic US

- Comet Tail Artifact - normal lung interface
Seashore Sign

- Normal pleural sliding - M-mode
Seashore Sign
Stratosphere Sign

Lack of lung sliding - Stratosphere Sign.
Stratosphere Sign
Pitfalls

Pericardium artifact
Lung Point Sign

- Interface between pneumothorax and sliding lung
- Highly specific for pneumothorax
Lung Point Sign
eFAST Review

- Subxyphoid - pericardial fluid
- RUQ and LUQ views above the diaphragm - pleural fluid
- Mid-clavicle chest - pneumothorax
Thank You!!

QUESTIONS??