Tension Hemothorax in Decompensated Alcoholic Cirrhosis

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Introduction

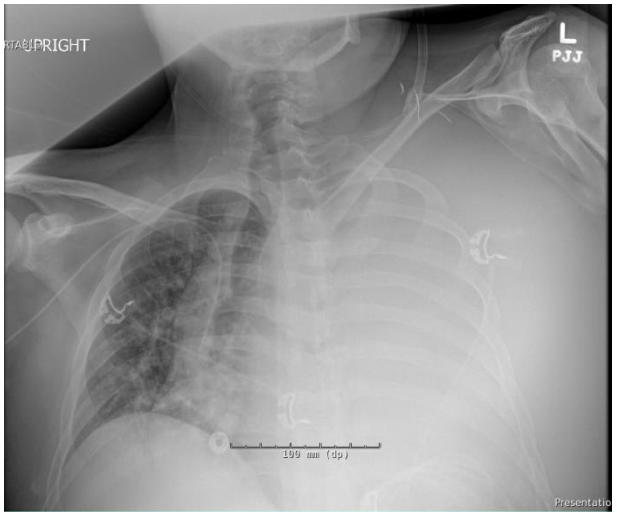
- Obstructive shock: final stage of mechanical impedance of venous return to the heart.
- Heralded by cardiovascular collapse, or *tension physiology*
- Commonly caused by tension pneumothorax (TP).
- Hemothorax rarely cause of tension physiology

Case Presentation

- 38 Y/O M w/ alcoholic cirrhosis (MELD 18). Jaundiced, left shoulder/chest pain, SOB
- CT identified chest wall hematoma
- Underwent embolization of two left thryocervical arterial trunk branches
- Hematoma advanced into left thorax despite embolization

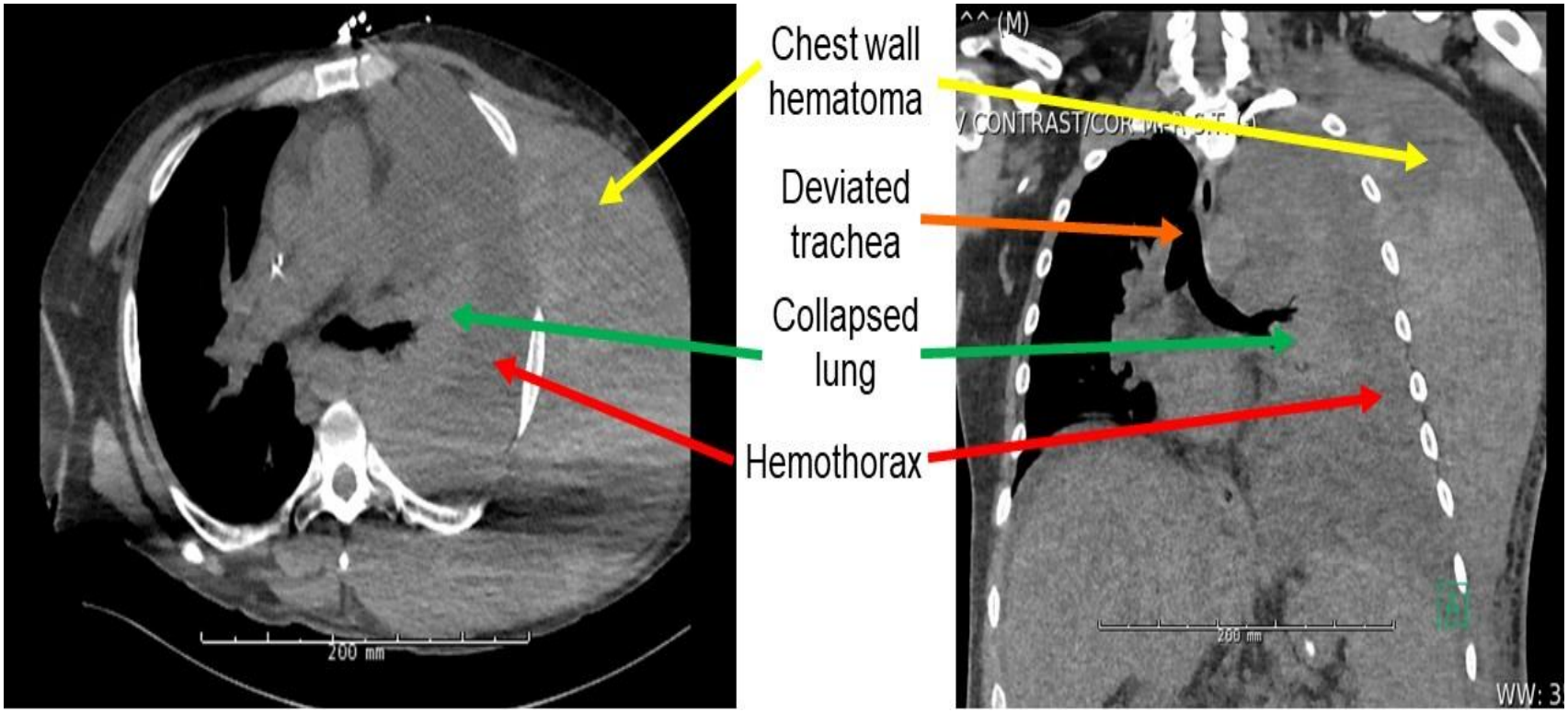
Case Presentation

- Arrived to our hospital tachypneic, absent left lung sounds, tracheal deviation to right
- MELD score now 38 (Na 127 mmol/L, Cr 1.9 mg/dL, total bilirubin 72 mg/dL, AST 85 U/L, ALT 27 U/L, INR 2.0, lactic acid 1.7 mmol/L)
- Initial CXR



Case Presentation

- Initial CT Scan

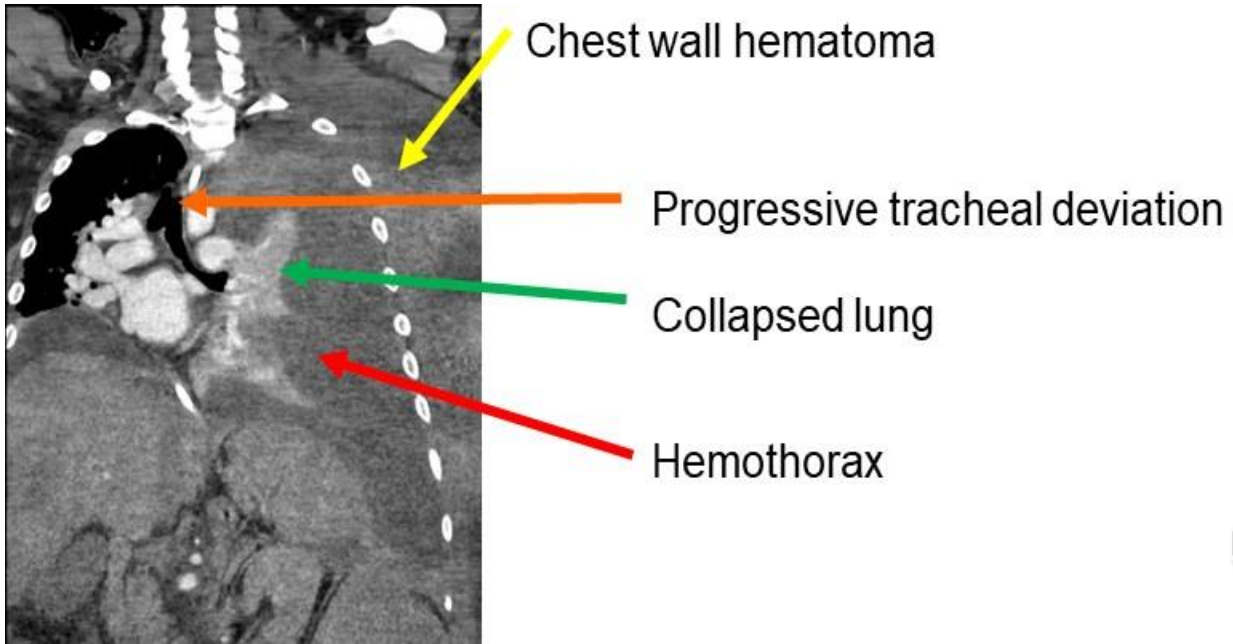


Case Presentation

- Diagnoses:
  - decompensated cirrhosis with worsening encephalopathy
  - coagulopathy
  - acute renal failure
  - acute respiratory failure
- Treatments
  - Balanced transfusion
  - Dialysis
  - Mechanical ventilation

Case Presentation

- Developed spontaneous retroperitoneal hematoma causing hemorrhagic shock
- Worsening obstructive shock due to abdominal compartment syndrome and tension hemothorax
- Repeat CT



Case Presentation

- Became bradycardic and suffered PEA arrest despite appropriate transfusional resuscitation
  - Hemoglobin 8g/dL, platelets 75 K/uL, INR 1.6, lactic acid 9 mmol/L
- Transiently responded to chest compressions and code drugs
- Bedside echocardiogram: diffuse hypokinesis, adequate heart filling, dilated inferior vena cava

Discussion & Conclusion

RUSH

- Identify tension physiology early
  - Commonly from pneumothorax
  - Hemothorax should be in differential
- Decompensated cirrhotics with hemothorax difficult to manage
  - Coagulopathy and poor surgical candidacy
  - Hemothorax can progress to tension physiology if bleeding source unable to be controlled
  - May ultimately need liver transplant or will succumb to tension hemothorax

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