89 yo involved in a MVA as a passenger
Pneumorrachis associated with bilateral pneumothoraces

- Gas within the spinal canal
- Either intra- or extradural
- Rare phenomenon
Pneumorrachis

• Traumatic
  – Traumatic pneumothorax
  – Blunt chest trauma
  – Skull fracture
• Iatrogenic
  • Epidural anesthesia
  • Thoracic surgery
Pneumorrachis

• Non-traumatic
  – Spontaneous pneumomediastinum
  – Regional necrotizing fasciitis
  – Marijuana smoking
  – Cocaine snorting

• Ddx:
  – Consider intraspinal gas from degenerative disease
Pneumorrachis

• In any event...
• If you see pneumorrachis but no good etiology, consider looking elsewhere for gas collection
• Pneumorrachis can be the initial sign of potentially associated, hidden, and severe injuries
Pathophysiology

• May be secondary to dissection through fascial planes, usually through posterior mediastinum
• There are no fascial barriers between posterior mediastinum or retropharyngeal space to epidural space
• Air communicates freely via neural foraminal
Symptomatology

• Usually asymptomatic
• Usually does not migrate
• Usually resorbs spontaneously
• Rarely can cause neurologic symptoms if becomes entrapped
  – Discomfort/pain
  – Headaches
  – Sensory deficits (less common)
  – Motor deficits (even less common)
Treatment

• Conservative
  – Observation
  – Monitor

• If symptomatic
  – ? Dexamethasone
  – ? Hyperbaric oxygen
  – Decompression with percutaneous catheter
  – Surgical decompression
Take home

• Pneumorrachis is scary looking
• In most cases is not a big deal, and will resolve spontaneously when other pathologic conditions resolve
• BUT report it to ER/trauma because immediate evaluation by trauma/neurosurgery is necessary, and patient will need monitoring
• If you don’t see a good source, start looking elsewhere
References


4. Weerakkody, Y. Pneumorrhachis. Radiopedia.org/articles/pneumorrhachis