32M AMS, SOB

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Pneumomediastinum
Radiographic findings on CXR

- Air ant/post to heart
- Air surrounds/outlines mediastinal structures
- Air dissects superiorly into neck SQ tissue and inferiorly into retroperitoneum
- Lateral view more sensitive than frontal radiograph (and CT more sensitive than radiography).
- Decubitus radiography – air does NOT shift to nondependent positions
Signs of Pneumomediastinum

• SubQ air in neck/chest well (70% will have this)
• Interstitial air - double bronchial wall - air on both sides of airway wall.
• Ring around artery sign – air surrounding artery/vein seen en face
• Tubular artery sign – air surrounding vessels along its length
• Continuous diaphragm sign – air outlining inferior aspect of heart above diaphragm
• Naclerio V sign – paravertebral air adjacent to left hemidiaphragm and descending aorta (suspicious for esophageal tear).
• “Spinnaker Sail sign”- elevation of thymic lobes in peds
Presentation

- Chest and/or neck pain (50-90%)
- Cough and/or dyspnea
- SubQ air – palpable crepitus
- Dysphagia
- Rhinolalia
- Hoarseness/neck swelling
- Hamman Sign – “crunching” sound timed with the cardiac cycle, diminished heart sounds
- Decreased cardiac output possible in tension pneumomediastinum/pneumopericardium.
• Demographics:
  – Rare: ER 1/44,500; natural birth 1/100,000
  – peak incidence 20-40yo
  – Male>female
• Course:
  – Benign course usually resolves in 7 days (4-41 days)
    • Typically the case. Clinical hx needed to exclude occult condition.
  – Mortality >50% in Boerhaave syndrome
• Next step in management:
  – Spontaneous – observe for tension ptx
  – If esophageal or airway injury suspected – esophagram/bronchoscopy
References

- Statdx
- Radiopaedia
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4332083
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