Mediastinitis

- Acute descending necrotizing mediastinitis (ADNM)
- Acute mediastinitis: Potentially life-threatening focal or diffuse mediastinal inflammation usually caused by infection
- 90% of acute mediastinitis is secondary to esophageal perforation or rupture
- Median sternotomy also important etiology

Mediastinitis

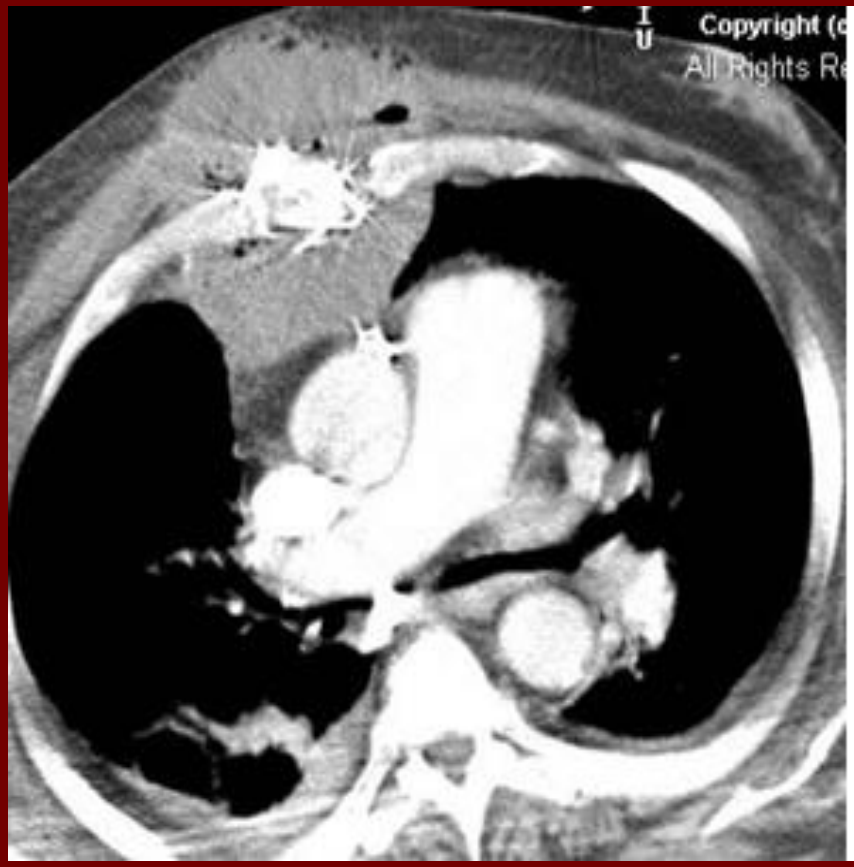
- Increased attenuation of mediastinal fat
- Localized fluid collection ± peripheral enhancement
- Free gas bubbles, pneumomediastinum
- Pericardial effusion
- Pleural effusion

Post op Seroma

- Difficult to distinguish from mediastinitis within 2-3 weeks post surgery
- Must correlate imaging findings with clinical scenario

Axial CECT shows stranding of mediastinal fat, a right paratracheal fluid collection (white open arrow), and extensive mediastinal air pockets (white solid arrow), consistent with ADNM. The radiographic finding of widened mediastinum in the clinical setting of fever and chest pain should prompt consideration of mediastinitis.

Mediastinitis with sternal dehiscence



Fibrosing mediastinitis

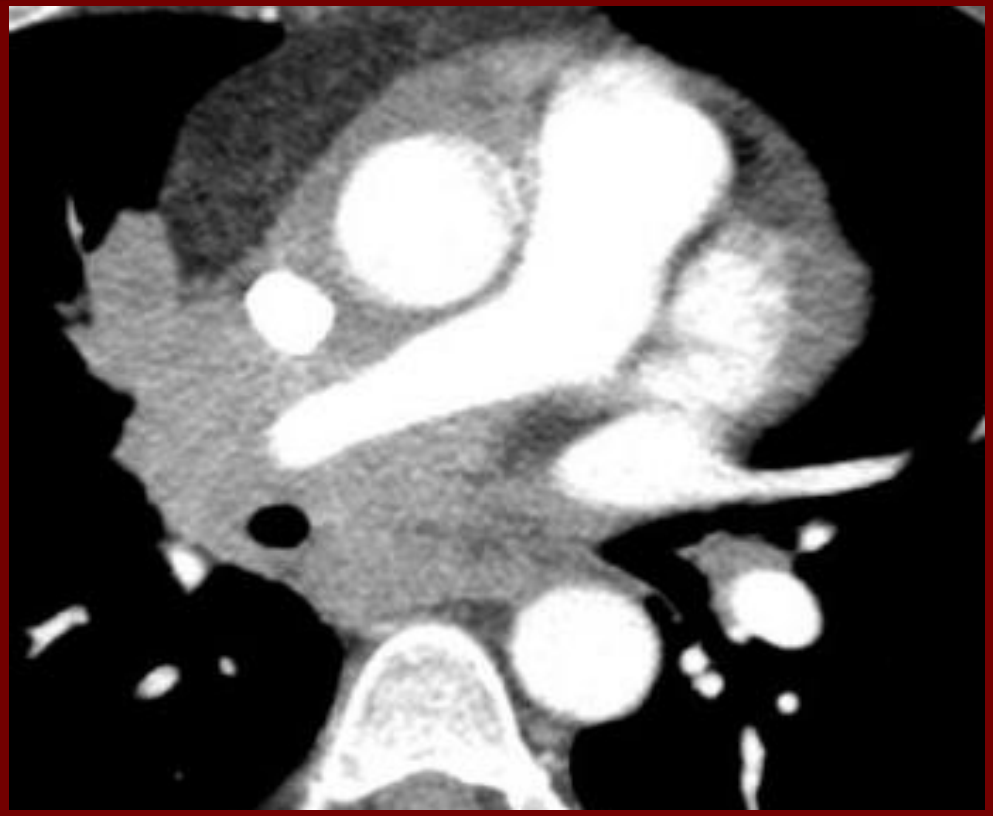
- Benign condition characterized by proliferation of dense fibrous tissue in mediastinum.
- Infiltrative mediastinal soft tissue & calcification
- Surrounds, invades, obstructs structures
- Focal (calcified) & diffuse (noncalcified) types

- Consider mediastinal fibrosis in young patients with obstructive mediastinal soft tissue & calcification

Clinical issues

- Etiology: *H. capsulatum*, other fungi, tuberculosis
- Symptoms: Cough, dyspnea, infection, hemoptysis, chest pain
- Prognosis: Unpredictable course, 30% mortality
- Treatment
  - Medical: Systemic antifungals & corticosteroids
  - Surgical resection
  - Endobronchial & endovascular stent placement

Fibrosing mediastinitis



- **Top Differential Diagnoses**
  - Lymphoma
  - Mediastinal carcinomas
  - Elastofibroma and fibromatosis

Axial CECT of the same patient demonstrates mediastinal widening and infiltrative soft tissue within the mediastinal fat (white solid arrow). A metallic stent (white curved arrow) has been placed within the occluded SVC to treat SVC obstruction secondary to mediastinal fibrosis, which can obstruct vessels and airways.