Delayed Presentation of Tracheal Chondronecrosis After Chest Radiation

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Introduction

- Necrosis of the distal tracheal is one of the rarest documented complication occurring after radiation treatment.

Case Presentation

- 68-year-old man with past medical history of type 2 diabetes mellitus, tobacco use, metastatic right lung cancer to the adrenal gland status post chemoradiation 15 years prior, presented with cough and hemoptysis.
- CT chest demonstrated a paratracheal soft tissue mass.
- Flexible bronchoscopy with biopsy, YAG laser ablation, and 20mm x 80mm Merit Medical airway stent placement was performed.
- Pathology yielded non-malignant, devitalized areas of acute and chronic inflammation and necrosis.
- Patient was safely discharged home on post-procedure day three.

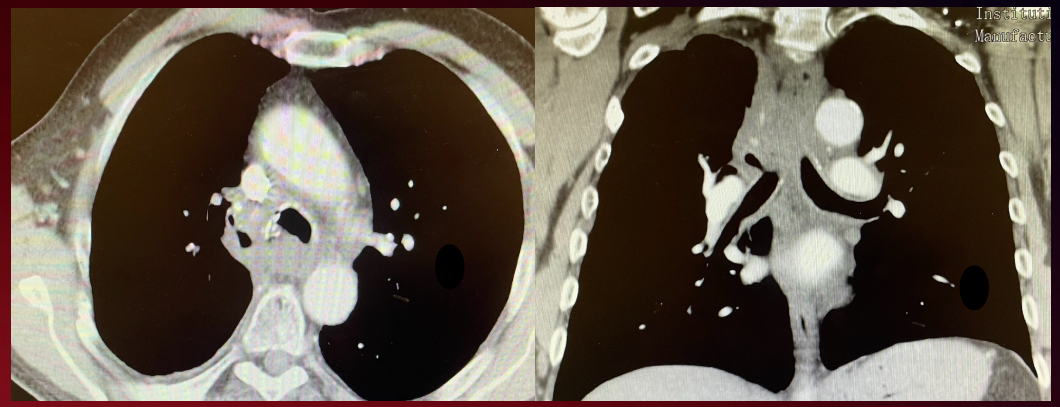

Figure 1. Axial view, coronal view - paratracheal mass

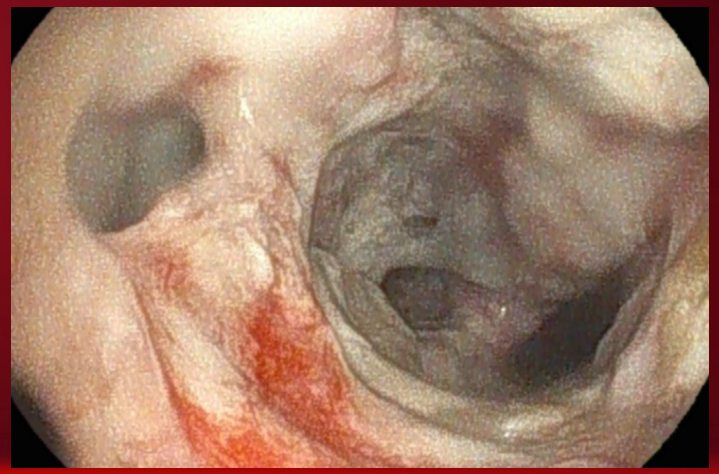

Figure 2. Flexible bronchoscopy, thoracic trachea necrosis

Discussion

- Tracheal necrosis is a rare life-threatening complication of therapeutic radiation exposure.
- Patients may present with productive cough and hemoptysis.

Learning Points:

- Common Causes: prolonged intubation, overinflation of tracheostomy cuff, radiation for chest and mediastinal tumors, and thyroid surgery.
- Diagnosis of tracheal necrosis involves bronchoscopy with biopsy.
- Treatment: antibiotics, hyperbaric oxygen therapy, laser, balloon bronchial dilatation with or without stent placement, or surgery