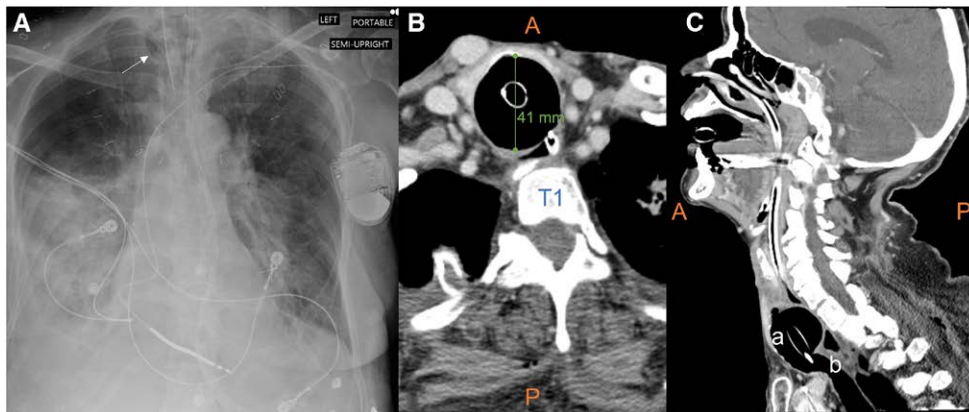


Segmental Tracheomalacia in a Patient with a Persistent Air Leak

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Anesthesiology was consulted on an intubated 61-yr-old woman for difficulty ventilating secondary to a progressive air leak. A chest x-ray film that day (panel A) showed a circular area of lower density proximal to the endotracheal tube (ETT) tip. Computed tomographic scan revealed tracheal dilation of 4.1 cm in the axial plane (panel B) and its segmental nature in the sagittal plane (panel C) with (a) the ETT *in situ* at the level of the cuff and (b) the distal trachea measuring 1.5 cm. After the ETT cuff was deflated and advanced past the area of dilation, the air leak subsided. She later underwent a tracheostomy. Primary, or congenital, causes of tracheal dilation include polychondritis, idiopathic, and Mounier-Kuhn syndrome. Secondary, or acquired, causes are more common and include trauma, emphysema, chronic inflammation, chronic external compression of the trachea, and vascular rings.¹ Tracheal dilation due to prolonged intubation is typically segmental and less than 3.0 cm, and tracheal mucosal changes are common.² Chest x-ray film can be used for the diagnosis of static dilation, especially in a mechanically ventilated patient where the area of dilation may exist at the level of the endotracheal tube cuff. Tracheobronchoscopy through the ETT *in situ* may not reveal the tracheal dilation and mucosal changes because the tip of the ETT is distal to the segment of dilated trachea. A prompt computed tomographic scan

would be valuable to guide management and can aid in the detection of dynamic airway collapse, tracheocele, or tracheal diverticula.³ This image shows an extreme case of tracheal dilation that exceeds 3.0 cm.

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Competing Interests

The authors declare no competing interests

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