

IMAGES IN EMERGENCY MEDICINE

Pulmonary

A woman with wheezing and stridor

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1 | CASE PRESENTATION

A 39-year-old woman presented to the emergency department with acute dyspnea for 2 days. On arrival, her respiratory rate was 30 breaths/min with expiratory wheezing and minimal expiratory stridor without the use of accessory muscle. Bronchodilators were immediately administered, but the symptoms were not improved. Two hours after the presentation, she developed acute shortness of breath. Her respiratory rate increased to 50 breaths/min with markedly expiratory stridor and the use of accessory muscle. The pre-intubation chest radiographs revealed an increased opacity at right upper lobe (Figure 1). An otolaryngologist was urgently consulted and a fiber optic laryngoscope was done. We suspected some extraluminal lesions around the subglottic area. The patient was immediately intubated without rapid sequence intubation, because we anticipated the difficult airway if we failed to intubate her with rapid sequence intubation technique. Unfortunately, we did not successfully intubate her because we could not pass the tube into the proper position (Supporting Information Video S1). As a result, the patient was sent to the operating room for emergency tracheostomy to achieve definite airway management. Computed tomography (CT) of the chest and neck was performed 1 day later to evaluate the tracheal pathology (Figures 2 and 3).

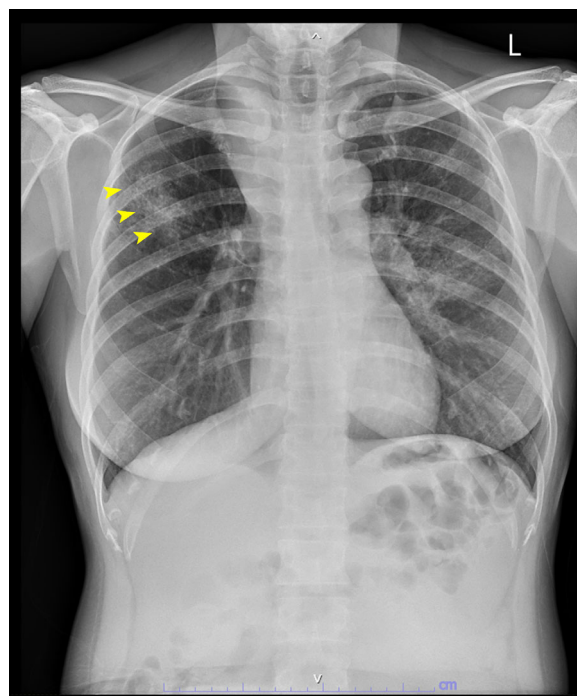


FIGURE 1 Pre-intubation chest radiograph (posteroanterior view) showing right upper lobe infiltrations (arrowheads)

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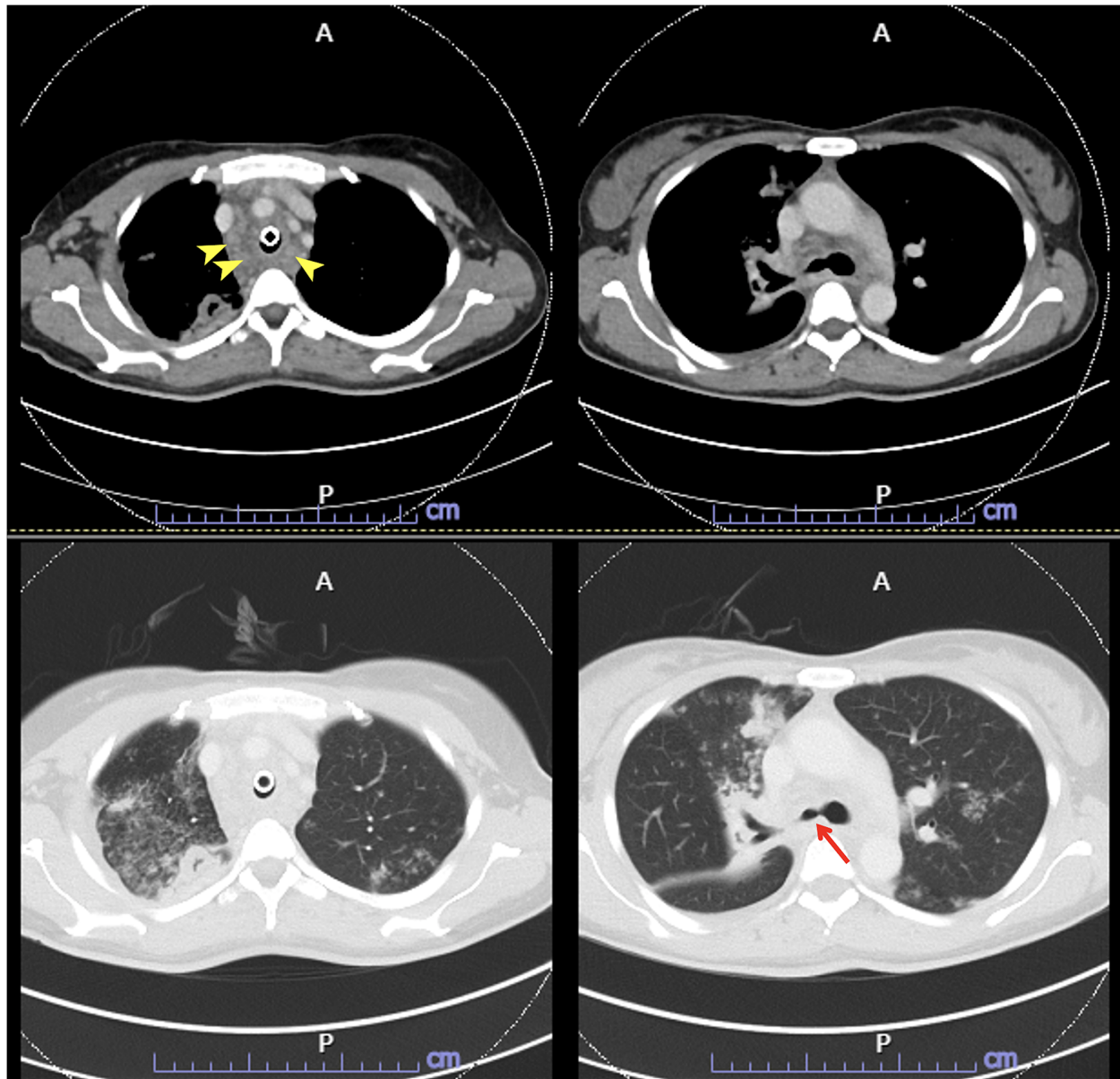


FIGURE 2 CT of the chest and neck (axial view) showing a segment of tracheal narrowing (arrow) with enhancing soft tissue and multiple lymph nodes surrounding distal trachea down to the right main bronchus (arrowheads)

2 | DIAGNOSIS

2.1 | Tuberculous tracheobronchitis

The chest and neck CT showed a long segmental circumferential wall thickening with an irregular border of the intrathoracic trachea down to the right main bronchus with multiple subcentimeter lymph nodes surrounding the narrowest part of the trachea.

2.2 | Pulmonary tuberculous infection

Sputum for acid-fast bacilli was negative 3 consecutive days. Sputum for Gene Xpert MTB/RIF was positive for *Mycobacterium tuberculosis*.

3 | DISCUSSION

Tuberculous tracheobronchitis is defined as a tuberculous infection involving the tracheobronchial tree with microbial and histopathological evidence.¹ Tuberculous tracheobronchitis has been reported in around 5%–10% of all patients with pulmonary tuberculosis.^{1–3} Patients usually present with cough, fever, and hemoptysis.^{1,3,4} Complications of tuberculous tracheobronchitis include tracheal stenosis and stricture and may develop in up to two-thirds of patients, despite adequate and timely treatment.¹ Patients can also develop acute severe airway obstruction and respiratory failure if the larger airways are involved. Patients with upper airway obstruction and acute respiratory failure should be intubated immediately. Early diagnosis

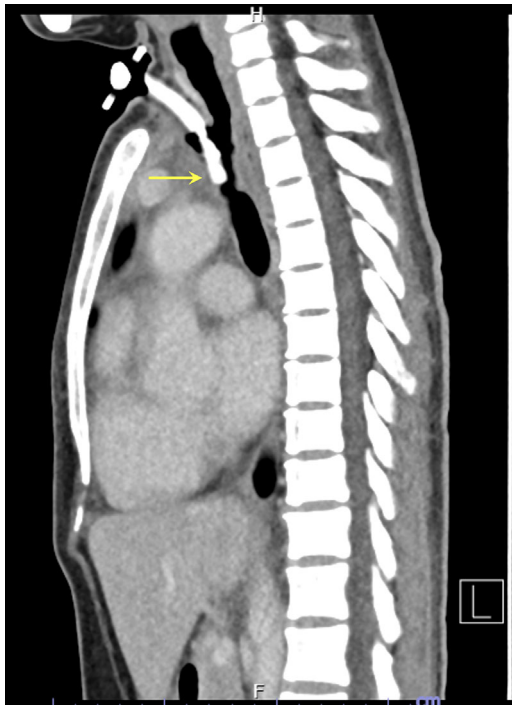


FIGURE 3 CT of the chest and neck (sagittal view) showing the narrowest luminal portion of the distal trachea that is located at the T4–T6 level (arrow)

and prompt management with anti-tuberculous medications are necessary to prevent complications.¹

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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