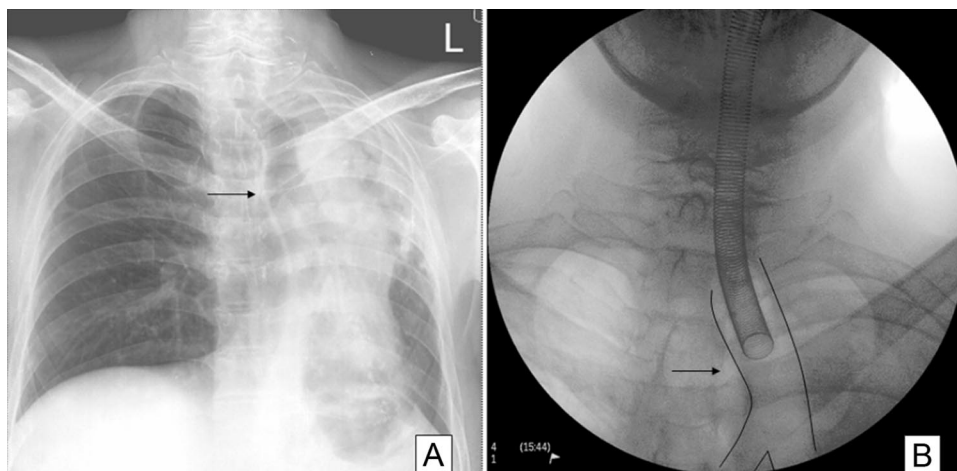


Tracheal Shift Causing Difficulty in Air Entry Confirmation after Tracheal Intubation

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A 40-YR-OLD man presented for excision of recurrent pituitary adenoma. Medical history included pulmonary tuberculosis. On chest auscultation, diminished air entry in the left axillary and supra-/infraclavicular areas were observed. Chest radiogram demonstrated evidence of collapse and/or fibrosis of most of the left lung and significant ipsilateral tracheal and mediastinal shift (fig. A).

After tracheal intubation, chest auscultation revealed reduced air entry on the left side of the chest with peak airway pressure at 28 cm H₂O. Because of reduced breath sounds preexisting on the left side and increased airway pressure postintubation, we could not exclude right endobronchial intubation. Because the fiber optic bronchoscope was not immediately available, confirming optimal tube position was difficult. Mobile c-arm fluoroscopic x-ray equipment, which was available for use during surgery, was used to visualize tubal position and confirm its location in the trachea above the carina (fig. B).

Conventionally, endobronchial intubation is suspected if pulse oximetry, capnography, and/or airway pressure values are abnormal and air entry is heard unilaterally on lung auscultation. However, when endobronchial intubation cannot be either conclusively confirmed or ruled out, as occurred with our patient, additional methods like flexible fiber-optic scope, fluoroscopy, or ultrasonography can be used for confirmation of optimal tube position.¹⁻³ In the current case, fluoroscopic examination satisfactorily confirmed endotracheal tube positioning when routine methods were ambiguous because of preexisting lung pathology.

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