



CLINICAL IMAGES

Tracheal bronchus: implications for lung isolation

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A tracheal bronchus is an anomalous or accessory bronchus that arises directly from the supracarinal tracheal wall. When the tracheal bronchus supplies the entire right-upper-lobe, it is referred to as *bronchus-suis* (pig-bronchus). This tracheobronchial arrangement, commonly found in pigs, is rare in humans with a reported incidence of 0.2%.¹ The accompanying images demonstrate this anatomical variation of the tracheobronchial tree (Fig. 1: Panel A and B) and are from a patient who needed right lung isolation during an esophagectomy.

Achieving satisfactory right lung isolation in patients with bronchus-suis morphology may be challenging. As the right-upper-lobe does not arise from the right-mainstem-bronchus, a right-sided double-lumen-tube would only facilitate isolation of the right-middle and lower-lobes. Consequently, bronchoscopy guided placement of left-sided double-lumen-tube is preferred. With the bronchial-cuff positioned just below the carina, right lung isolation is achievable when the tracheal-bronchus's opening remains distal to the tube's tracheal-cuff. If the tracheal-bronchus is situated proximal to or at the level

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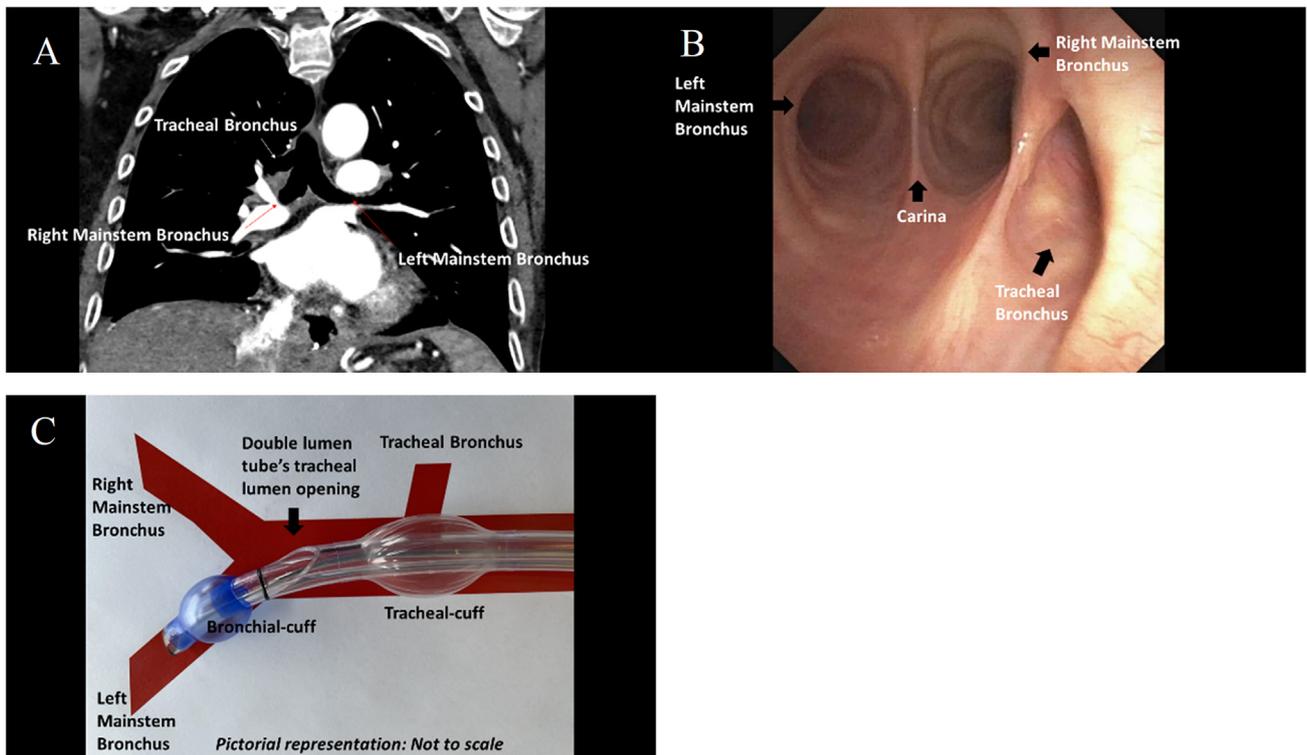


Figure 1 Radiographic imaging (Panel A) and bronchoscopy (Panel B) demonstrate carinal bifurcation into left mainstem bronchus and right mainstem bronchus and presence of a supracarinal tracheal bronchus originating from the right tracheal wall. When establishing right lung isolation with a left-sided double-lumen-tube, the aberrant tracheal bronchus is at risk of being obstructed by the left-double-lumen-tube's tracheal cuff, especially if its opening lies proximal to or at the level of the tube's tracheal lumen opening, as seen in the pictorial representation (Panel C).

of the tube's tracheal-cuff, obstruction of its opening by the inflated tracheal-cuff, may hinder right-upper-lobe collapse (Fig. 1: Panel C). In such circumstances, it may be necessary to place a single-lumen-tube and guide individual bronchial blockers into the right-mainstem-bronchus and tracheal-bronchus to achieve right lung isolation.^{2,3}

Declaration of Competing Interest

The author declares no conflicts of interest.

References

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