Left main bronchial rupture: bronchoscopy and chest CT

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A 72-year-old woman presented to our clinic with chronic cough. A chest CT scan showed an extrapleural lesion in the left upper lobe, suggestive of intercostal nerve schwannoma (Figure 1A). The patient was admitted for tumor resection by left video-assisted thoracoscopy. Intubation with a left-sided double-lumen endobronchial tube was required. The patient was admitted to the ICU and was successfully extubated. Twenty-four hours later she presented with subcutaneous emphysema in the neck, and a chest CT scan showed pneumomediastinum (Figure 1B). An emergency bronchoscopy was performed, showing a 3-cm rupture of the left main bronchus (Figures 1C and 1D). Given the clinical stability of the patient, muscle relaxants, oxygen therapy, and cough suppressants were prescribed, and a decision was made for conservative management with close monitoring. Four months later, a bronchoscopy was performed, showing scar tissue and resolution of the rupture (Figure 1E). Bronchial rupture after intubation with a double-lumen endobronchial tube has rarely been reported,[1] and mortality can be as high as 23%. Although bronchoscopy is the gold standard, chest CT can aid in locating the injury.[2] Mild symptoms and small ruptures can be managed with conservative treatment.[1]

AUTHOR CONTRIBUTIONS

All of the authors equally contributed to the writing and reviewing of the manuscript.

CONFLICTS OF INTEREST

None declared.

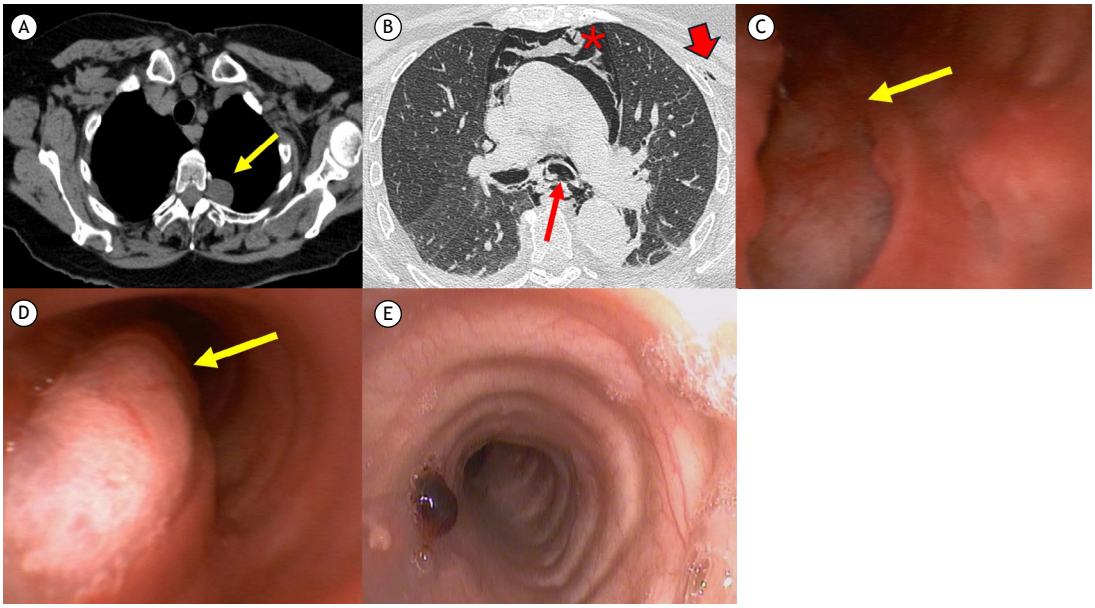

Figure 1. In A, axial unenhanced chest CT scan showing a left apical extrapleural lesion (arrow) arising from the intervertebral foramen, suggestive of a peripheral nerve sheath tumor (schwannoma). The diagnosis was confirmed after resection. In B, postoperative axial chest CT scan with lung window settings, showing a laceration of the posterior wall of the main bronchus (thin arrow). Note pneumomediastinum (asterisk) and mild subcutaneous emphysema (thick arrow). In C and D, bronchoscopic images showing the laceration during inhalation (arrow in C) and the lung protruding into the bronchial lumen during exhalation (arrow in D). In E, a bronchoscopy performed after four months of conservative treatment shows a small amount of granulation tissue on the posterior wall of the left main bronchus, with almost complete closure of the laceration.

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