

Clinical Image

Tracheobronchial Laceration After Blunt Chest Trauma^{z.star};

Laceración traqueobronquial tras traumatismo torácico cerrado

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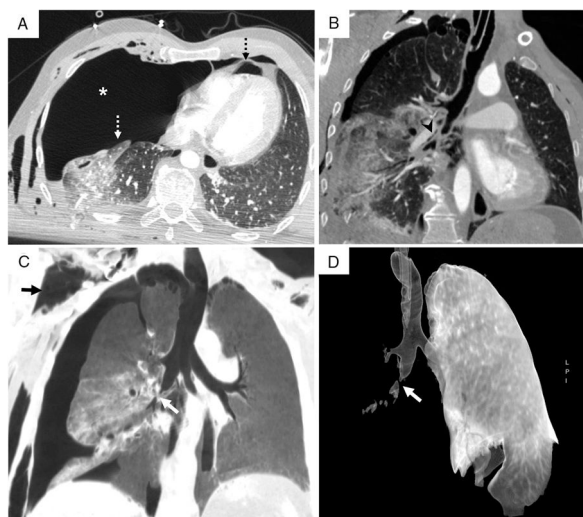


Fig. 1. Chest CT with intravenous contrast agent: (A) Axial plane, lung window. Fallen lung sign (dashed white arrow) due to collapse and displacement of the pulmonary hilum toward the lower segments. Right tension pneumothorax (white asterisk) is also observed, causing contralateral mediastinal displacement and pneumopericardium (dashed black arrow). (B) Coronal reconstruction, lung window. Pneumomediastinum with air surrounding the bronchi and pulmonary vessels lying in parallel to bronchi in the pulmonary hilum (black arrowhead). (C) Multiplanar reconstruction with minimum intensity projection, coronal plane, lung window showing subcutaneous emphysema (solid black arrow) and airway discontinuity (white arrow). (D) Three-D volume rendering, anteroposterior projection with suppression of right lung. Laceration of the intermediate bronchus with bronchial amputation and discontinuity of the airway (white arrow).

Our patient was a 50-year-old man with multiple injuries. Chest CT with intravenous contrast agent identified laceration of the intermediate bronchus (Fig. 1).

Tracheobronchial laceration is uncommon in clinical practice (0.2%–8% of closed thoracic trauma) because 81% of patients die

at the scene from other causes.^{1,2} Diagnosis is usually late, as it is masked by other traumatic injuries.

Bronchial ruptures are typically parallel to the cartilaginous rings, less than 2.5 cm from the carinal angle, and are slightly more predominant in the right side.^{1,2} Indirect signs, such as pneumomediastinum and cervical emphysema, can be seen on imaging tests. Persistent pneumothorax, refractory to drainage tube placement, occurs if the lesion reaches the pleural space. CT has a fundamental role, allowing direct identification of airway discontinuity, angulation, and bronchial defect or amputation. If the rupture is complete, the lung can collapse and fall away from the hilum toward the lower segments (“fallen lung sign”).¹

Multiplanar reconstructions CT images with minimal intensity projection are useful if tracheobronchial injury is suspected. Bronchoscopy can confirm the diagnosis and assess its extension. Early surgery should be performed to attempt primary repair.^{1,2}

References

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2. Cheaito A, Tillou A, Lewis C, Cryer H. Traumatic bronchial injury. *Int J Surg Case Rep*. 2016;27:172–5.

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