

Case	(151) Lung torsion after surgery. radiographic findings
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## CASE PRESENTATION

75-year-old man with adenocarcinoma of lung on right upper lobe. It was treated with surgery, performing a superior right lobectomy and mediastinal lymphadenectomy of the hilar, paratracheal and subcarinic groups by VATS (video assisted thoracic surgery), without incidents or immediate complications. 48 hours after the intervention, the patient presented important subcutaneous emphysema, chest X-ray it was also identified atelectasis of the middle lobe, not present in postoperative one.

It was suspicion of torsion of the middle lobe by the findings of the radiograph, and chest CT angiography is performed, where the diagnosis is confirmed, and the patient was operated on urgently for detorsion.

## DISCUSSION

Lung torsion is the rotation of lung or lung lobe about its bronchovascular pedicle. It is a rare disease, that it presents a incidence of 0.09-0.4%. It can occur under three sets of circumstances: spontaneously, usually in association with some other pulmonary abnormality, following traumatic pneumothorax, most often it occurs in the setting of lobectomy.

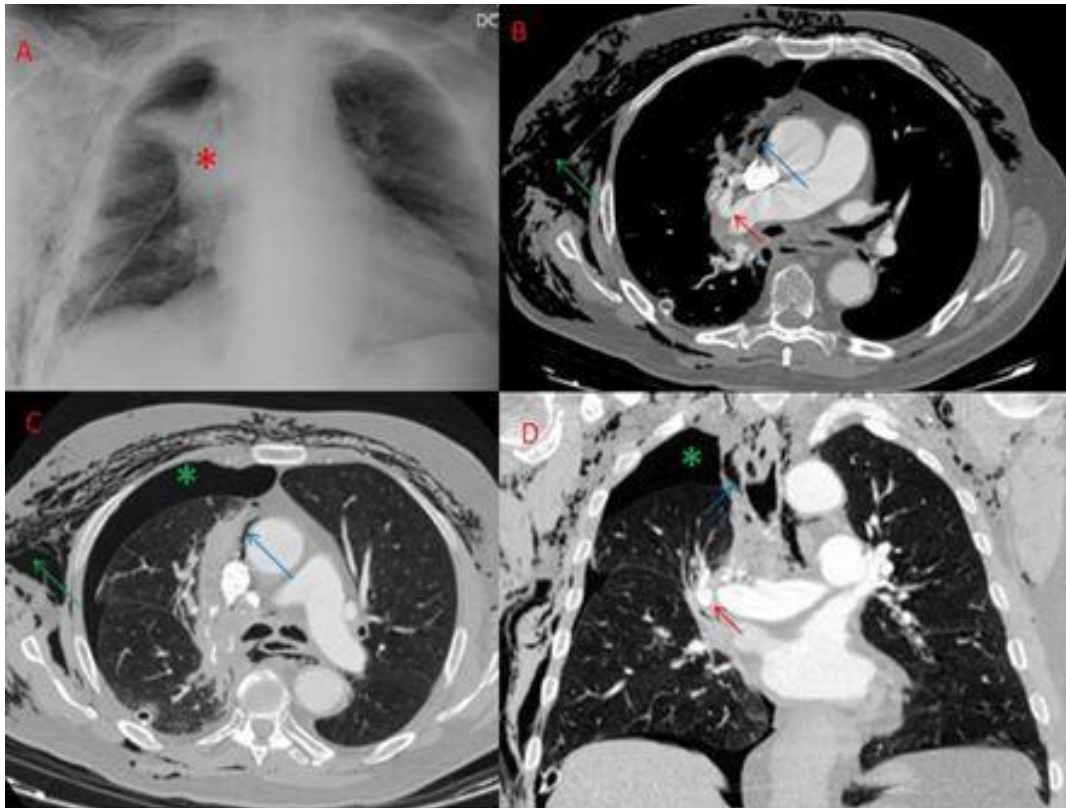
The degree of pedicle rotation is variable, generally 180°, but on occasion from 90° to 360°. It is an emergency, and it produces compromise of the airway, arterial blood supply that leads to lung ischemia, often shows hemorrhagic infarction or necrosis, and venous-lymphatic drainage resulting in interstitial edema and alveolar exudation.

Radiographic features include at plain radiograph collapse or consolidated lobe, with an unusual position, and CT findings include tapered obliteration of the proximal pulmonary artery and accompanying bronchus of the involved lobe and amorphous soft-tissue attenuation at the hilum, with poorly enhancing consolidation of the lung and ground-glass attenuation.

CT angiography with a automated bolus detection system (SmartPrep) in main pulmonary artery could be used. Treatment is surgical fixation, and mortality rate is very high if the torsion goes unrecognized.

## CONCLUSION

Pulmonary torsion is a rare disease and a rare complication of thoracic surgeries, but it is a medical emergency with a high mortality rate, which is why we must know it, in order to diagnose it, because early recognition is vital, and CT angiography may be helpful in making an early confirmatory diagnosis



Pulmonary lobar torsion after lobectomy. (A) Postoperative anteroposterior chest radiograph shows predominantly atelectasia (\*) and opacification on middle lobe of the right lung, which appeared to have progressed since the previous postoperative radiographic study. (B) Transverse chest CT angiography image obtained with soft-tissue (B) and lung (C) window settings shows truncation and rare disposition of the middle-lobe artery (red arrow), important subcutaneous emphysema (green arrow), pneumomediastinum (blue arrow) and right pneumothorax (\*). Coronal reformatted (D) CT show torsion of the middle artery and bronchus (red arrow).

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