A case report: spontaneous lung torsion

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Indroduction

The incidence of lobar torsion following lung surgery is estimated to be around 0.09-0.4% [2], following lung transplantation only 8 cases are reported [3, 4]. However, the incidence of a spontaneous segmental pulmonary torsion in combination with a concomitant separate lobe is extremely rare.

Case Report

A 90 year-old male presented to the emergency department with a history of dyspnea over the last few days. Initial chest x-ray revealed a pneumothorax with a completely collapsed left lung. A chest tube was inserted and subsequent chest x-rays showed an incomplete re-expansion of the left lung. The chest CT scan demonstrated a malpositioned chest tube (red circle) with the tip located in the chest wall and a residual pneumothorax.

Additionally a segment of the left upper lobe exhibited air-trapping with a dense area more centrally towards the left hilum (Figure 1). The follow-up CT scan 2 days later showed persistence of the hyper-inflated segment separated from the remainder of the now collapsed left lung by bronchopulmonary bundles converging into a focal dense area at the base of the segment (Figure 2, red circle).

The following CT features suggested a segmental torsion: leading edges of ventilated lung segments pointing away from each other (Figure 1A); local air-trapping confined to one segment (Figure 1B,C; Figure 2A,B); convergence of bronchopulmonary structures into a single location at the base of the segment (Figure 1A,C; Figure 2A,B). In general, CT may show torsion of the pulmonary vein, consolidation of the affected lobe or segment, and upward orientation of the pulmonary vessels compared to the other side. [1]

An emergency thoracoscopy revealed 270-360° torsion of the non-viable lingula at its base. The resected lingula was separated by fissures from the remainder of the upper lobe. In the following course the patient recovered completely and was discharged after 12 days.

Discussion

In cases of a persistent not expanded lung a CT-scan is necessary to evaluate the causality. There are radiological signs that can indicate a lung torsion as above mentioned [1]. If a lung torsion is suspected immediate VATS is mandatory to evaluate the vitality of the lung tissue. If there is a concern of lung affection, a resection should be considered.

References