



IMAGES IN THORAX

An unfortunate surgical twist?

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A 48-year-old man was admitted to the intensive care unit (ICU) for massive haemoptysis and acute respiratory failure 24 hours after left lower lobectomy for lung adenocarcinoma. Chest X-ray performed in the postoperative room immediately after surgery showed a normal expansion of the remaining left upper lobe (figure 1, panel A), while chest X-ray performed at ICU admission revealed a sudden opacification of the previously expanded left upper lobe with abnormal presence of air in the left costophrenic angle (figure 1, panel B, white arrow heads). After tracheal intubation, chest CT scan revealed ground glass opacities with alveolar consolidation and volume loss of the remaining left upper lobe (figure 2, panel A) together with interlobular septal thickening (figure 2, panel B, white arrow heads). Contrast enhancement revealed a complete interruption of the left main pulmonary artery (panel C, white arrow heads) with a marked stenosis at the distal extremity of the left main bronchus (figure 2, panel D, black arrow heads). Bronchoscopy confirmed an almost complete obstruction at the distal extremity of the left main bronchus from extrinsic compression, together with abundant haemorrhagic bronchial secretions. Left upper lobe torsion was suspected. Prompt thoracotomy confirmed the diagnosis and revealed a non-viable haemorrhagic infarction of the remaining lobe (figure 3) leading to completion pneumonectomy. The patient was eventually discharged to the wards after a 35-day ICU stay.

Lobar torsion, a fortiori left lobar torsion, is a rare (0.089%–0.3% of patients after lobectomy) and difficult diagnosis in the early postoperative period after pulmonary resection.¹ Lobar torsion usually presents with non-specific clinical signs (tachypnoea, tachycardia, fever, hypoxaemia and haemoptysis). First radiological signs are related to pulmonary vein torsion responsible for venous hypertension with interlobular septal thickening followed by alveolar haemorrhage.² Bronchoscopy is of paramount

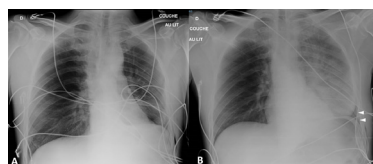


Figure 1 Chest X-ray performed in the postoperative room immediately after surgery (panel A) showed a normal expansion of the remaining left upper lobe, while chest X-ray performed at ICU admission (panel B) revealed a sudden opacification of the previously expanded left upper lobe with abnormal presence of air in the left costophrenic angle (white arrow heads) probably related to left upper lobe mispositioning.



Figure 2 Chest CT scan depicting ground glass opacities with alveolar consolidation and volume loss of the left upper lobe (panel A), together with interlobular septal thickening (panel B, white arrow heads) related to venous congestion due to left upper pulmonary vein torsion. Contrast enhancement revealed a complete interruption of the left main pulmonary artery (panel C, white arrow heads). A marked stenosis was noticed at the distal extremity of the left main bronchus (panel D, black arrow heads).

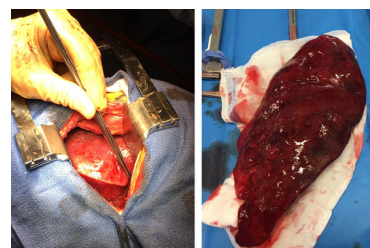


Figure 3 Surgical view of the non-viable haemorrhagic infarction of the twisted left upper lobe.

importance by showing airway obstruction from extrinsic compression. Mortality is high in absence of prompt recognition and surgical lobectomy.¹

Contributors RC and DC were responsible for drafting the manuscript. AK was responsible for imaging interpretation and evoked first the diagnosis of lobar torsion. RZ and PM performed the surgical intervention. All the authors took care of the patients. All authors read, critically reviewed and approved the final manuscript. DC takes responsibility for the paper as a whole.

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