Case report

Images in clinical medicine
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Spontaneous Intraparenchymal Lung Haematoma with Active Bleeding, Associated with *S. Aureus*

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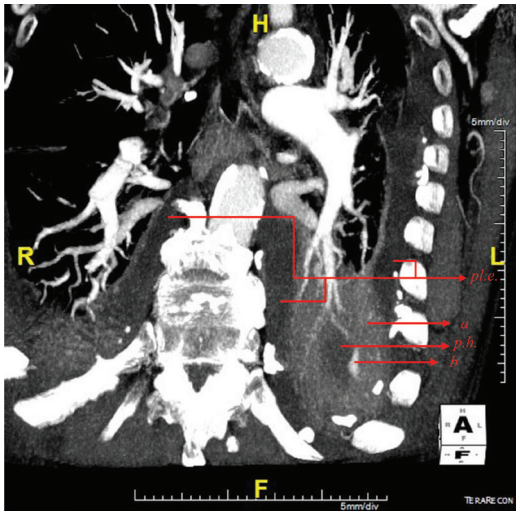

Figure 1. Oblique inferior coronal projection. a=Atelectasis; b=Active bleeding; p.h.=Pulmonary hematoma; pl.e.=Pleural effusion.

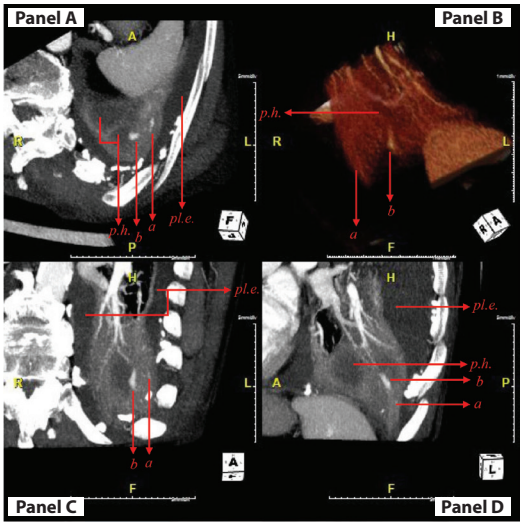

Figure 2. Comparison of oblique projections. Panel A: oblique left posterior transverse planes; Panel B: oblique right inferior coronal plane. 3D-volume-rendered vascular distribution in left lower lobe CT-angiography; Panel C: oblique inferior coronal projection. Lower left lobe detail; Panel D: oblique anterior superior left sagittal plane.

A 91-year-old patient with hypertension and chronic kidney impairment was evaluated for dyspnoea and haemoptysis in a peripheral hospital. The patient appeared pale, dyspnoeic, and tachycardic, but normotensive, presenting with a vesicular murmur reduction in the lower left pulmonary field, normocytic anaemia (haemoglobin 8.6 g/dL), white blood cell count: 5.68x10^3/µL, C-reactive protein: 26.4 mg/L, moderate renal impairment and normal coagulation tests (INR 1.15, APTT 27.9 s). A left lower lobe pulmonary hematoma (4.8 cm) with active bleeding (Figure 1) and pleural effusion with partial atelectasis were found on the chest CT-angiography (Figure 2). Further, some enlarged mediastinal lymph nodes were evident, as well as diffuse emphysema [not shown, *A/N*]. The patient was transfused and sent to a hospital with inter-

ventional radiology; however neither embolization nor thoracic surgery were attempted because of the peripheral localization of the bleeding and the patient's clinical features. Conservative treatment and antibiotics permitted clinical and laboratory improvement. Quantiferon and the Venereal Disease Research Laboratory excluded tuberculosis or *T. pallidum* infection; a bronchoscopy with bronchoalveolar lavage and transbronchial needle aspiration was performed, showing no evidence of malignancy; neutrophils and positive culture tests suggested acute *S. aureus* respiratory infection. The diagnosis of spontaneous pulmonary hematoma with intraparenchymal haemorrhage was made, as no history of trauma was reported and we could not find any known risk factors. Parenchymal lung hematomas presenting with haemorrhage are rare, life-threatening conditions, associated with trauma, chest surgery, cancer, tuberculosis, vascular malformations and anticoagulation. Only a few cases of spontaneous idiopathic pulmonary hematomas have been reported, all showing parenchymal lung disorders, such as chronic obstructive pulmonary disease (1), isolated bronchiectasis (2) or emphysema (3), suggesting that primary lung diseases may underlie spontaneous pulmonary haemorrhage. However, all these patients had some possible risk factors, such as the use of platelet aggregation inhibition therapy or steroid drugs. None of these conditions was present in our patient. Probably the precipitating factor in our case of parenchymal lung haemorrhage was bronchitis, although it has never been reported as an isolated risk factor for spontaneous intraparenchymal lung hematoma with haemorrhage.

Key words: Lung haemorrhage ▪ Lung bleeding ▪ Haemoptysis.

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