Diagnosis of Acute Pulmonary Embolism by Endobronchial Ultrasound as an Incidental Finding

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A 64-year-old male smoker visited his general practitioner complaining of persistent cough. A chest radiograph showed a mass in the left lower lobe. A computed tomography (CT) scan confirmed the finding and also showed mediastinal nodal enlargement. After the CT scan, the patient suffered a rash and dyspnoea, which were assumed to be the result of allergy to the iodine-containing contrast medium. Fiberoptic bronchoscopy

detected a tumour obstructing the apical segmental bronchus of the left lower lobe. The tumour was biopsied and identified as undifferentiated large cell carcinoma. The patient was referred to the regional hospital for scheduling of endobronchial ultrasound with real-time transbronchial needle aspiration (EBUS-rt-TBNA) for staging.

The following week, the patient suffered a brief syncope episode. He was seen at the emergency department of

Fig. 1. Appearance of the thrombus in left pulmonary artery by EBUS.

Fig. 2. Thrombus in right pulmonary artery on pulmonary magnetic resonance angiography.

his local hospital and fully recovered. Blood tests, electrocardiogram and a cranial CT scan were carried out at that time; a right zygomatic arch fracture was identified. No additional CT scans or nuclear scintigraphs were performed.

Two days later, EBUS demonstrated two hyperechoic areas inside both pulmonary arteries (fig. 1; online suppl. video 1, www.karger.com/doi/10.1159/000319700). Acute pulmonary embolism was suspected and TBNA was adjourned. Pulmonary magnetic resonance angiography confirmed a thrombus in both pulmonary arteries (fig. 2).

Video

Lung cancer is a well-known risk factor for pulmonary embolism. When EBUS-rt-TBNA is used for staging of lung cancer, great vessels should also be examined for the presence of thrombi.

Reference

- 1 Aumiller J, Herth FJ, Krasnik M, Eberhardt R: Endobronchial ultrasound for detecting central pulmonary emboli: a pilot study. *Respiration* 2009;71:298–302.