Role of endobronchial ultrasound scan in the diagnosis and management of intrapulmonary bronchogenic cyst misdiagnosed by low-dose CT scan of the chest as lung mass

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DESCRIPTION

A 57-year-old man was referred to the pulmonology clinic for a 3.4 cm right hilar mass seen in a low-dose CT scan performed for lung cancer screening (figure 1). It was reported as a possible enlarged lymph node or lung mass or vascular abnormality. The patient underwent endobronchial ultrasound scanning, which showed a cystic structure at the right upper lobe and bronchus intermedius bifurcation (figure 2). Endobronchial ultrasound-guided aspiration of the cyst was performed and 14 mL of clear yellowish fluid was aspirated and sent for cytological examination. The postaspiration image revealed a small cyst with residual debris material (figure 3). The fluid was negative for malignant cells. As the patient remains asymptomatic and has multiple comorbidities, a decision was made for conservative management rather than surgical removal of the residual cyst.

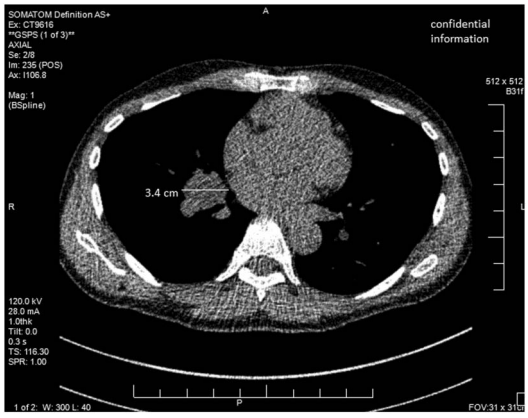

Figure 1 Axial view of low-dose CT of the chest showing 3.4 cm right hilar density.

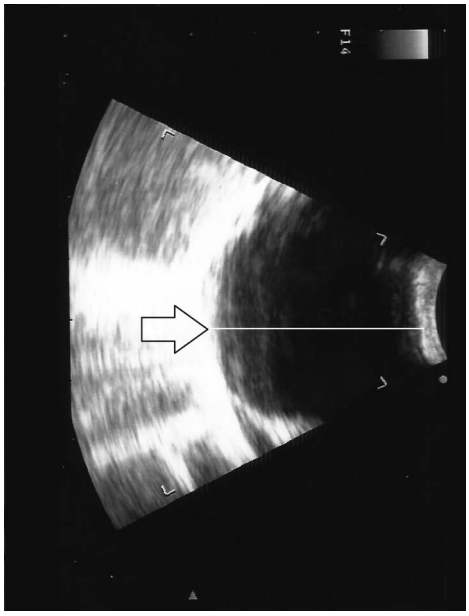

Figure 2 Endobronchial ultrasound scan showing intrapulmonary bronchogenic cyst pre-aspiration.

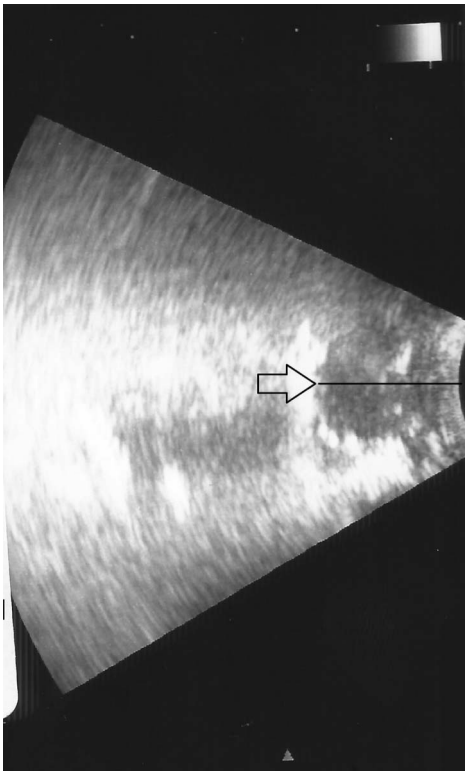

Figure 3 Endobronchial ultrasound scan showing residual debris of the bronchogenic cyst postaspiration.

Bronchogenic cyst is a rare congenital lesion derived from primitive foregut.[1–3] In contrast to our case, most bronchogenic cysts are mediastinal rather than intrapulmonary.[1]

CT scan of the chest usually shows fluid in the cyst with zero density (Hounsfield units), but in some cases density could be higher making the diagnosis more challenging.[2 3] In our case, fluid density was 20, which favoured other differential diagnosis. Surgical resection of the cyst is the recommended treatment because of the risk of recurrence.[3]

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The utility of endobronchial ultrasound scan helps with diagnosis of bronchogenic cyst, and obtaining fluid for analysis and possible treatment.

Learning points

- Low-dose CT has its limitation when it comes to differentiating between solid versus cystic lung lesions. Clinicians and radiologists should be aware of bronchogenic cysts in the differential diagnosis of abnormalities seen during lung cancer screening.
- Endobronchial ultrasound can be used for diagnosing bronchogenic cyst and obtaining a specimen for further evaluation.
- Endobronchial ultrasound scan is more sensitive and specific than low-dose CT in detecting bronchogenic cyst.

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Competing interests None declared.

Patient consent Obtained.

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