Clinical picture

A node or not a node; that is the question?

Case history

A 40-year-old woman was referred to the respiratory assessment clinic with a history of sudden onset, right-sided, posterior chest pain. The pain was noted to be exacerbated by respiratory excursion. She had a history of well-controlled asthma and seronegative arthritis for which she was being treated with methotrexate and depomedrone. No specific abnormal examination findings were found, vital signs were normal and a D-dimer was noted to be negative. A chest radiograph (CXR) suggested abnormal soft tissue in the right paratracheal area. Computed tomography (CT) pulmonary angiogram showed no evidence of pulmonary embolism but confirmed an ovoid right paratracheal lesion.

Figure 1. CT (mediastinal window settings) showing right paratracheal mass.

Figures 2. MRI of right paratracheal mass (arrowed). Low signal on both (A) T1-weighted fat-suppressed images and (B) T1-weighted images following intravenous gadolinium but high signal on (C) T2 weighted. These findings are characteristic of a simple cyst.
with an average density of 20 Hounsfield units measuring $16 \times 28 \, \text{mm}$ in keeping with an abnormal node (Figure 1). An endobronchial ultrasound (EBUS) was performed with a view to EBUS-guided transbronchial needle aspiration; however, a node was not visible, instead a hypoechoic area, more in keeping with a cyst, was found. Because of the suspicion of a cyst, magnetic resonance imaging (MRI) of the thorax was undertaken before any surgical procedure, which subsequently showed that the paratracheal lesion was in fact cystic rather than a lymph node (Figure 2A–C).

As serial CXR review revealed that the lesion had been enlarging, and because of possible local symptoms related to it, surgical excision was advised. Using a right-sided three-port thoracoscopic approach, a cystic mass was identified in the right paratracheal space, immediately above the azygous vein. It was surrounded by mediastinal fat, with no obvious connection to the airways. It was completely excised using a Harmonic Scalpel™ (Ethicon Endo-Surgery, Cincinnati, OH, USA). Histology confirmed this to be a benign foregut cyst (Figure 3). The patient is now well.

The case demonstrates the complementary utility of thoracic MRI with thoracic CT in clarifying the nature of mediastinal lesions. Mediastinal cysts are uncommon and represent 12–30% of all primary mediastinal masses. Foregut cysts are believed to occur as a result of anomalous budding of the laryngotracheal groove during embryogenesis. Early detection of cysts allows for early surgical thoracoscopic intervention to establish a definitive histological diagnosis and to reduce the risk of future symptoms and complications.1,3,4

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References