Rare cause of a posterior mediastinal mass diagnosed at endobronchial ultrasound

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DESCRIPTION
A 67-year-old woman was referred for respiratory assessment with a history of chronic cough. There were no other associated symptoms and spirometry was normal. The initial chest radiograph was unremarkable, and a decision was made to further investigate with high-resolution CT of the chest. A posterior mediastinal mass was detected and a subsequent contrast CT of the thorax revealed a 3 cm hypodense posterior mediastinal mass (figure 1). Endobronchial ultrasound (EBUS) was then performed using an ultrasound bronchoscope with a linear scanning transducer (Pentax EB-1970UK; Pentax Medical, Hamburg, Germany). EBUS revealed a mass lesion posterior to the right main bronchus with internal flow confirmed by Doppler (figure 2A,B). On further rotation of the scope along the posterior and lateral wall of the right main bronchus, the lesion was confirmed to communicate with the azygos vein. A diagnosis of an azygos vein aneurysm was made based on EBUS and anatomical features. This was confirmed by MRI scan with contrast (figure 2C,D).

An azygos vein aneurysm is rare. It is mostly detected incidentally on a chest radiograph and is often asymptomatic but can be complications can arise.1 It can mimic other more sinister causes of a mediastinal mass. This is the first case in the literature where the diagnosis of azygos vein aneurysm was made at EBUS highlighting the importance of this investigation in the diagnosis and detailed assessment of this condition.

Learning points

► The most common cause of mediastinal lesions is lymphadenopathy but other aetiologies need to be considered.
► Endobronchial ultrasound is the investigation of choice for assessment of mediastinal lesions close to the tracheobronchial tree.
► Azygos vein aneurysms are rare entities but should be considered in the differential diagnosis of posterior mediastinal masses before any needle sampling is attempted.

ContributionSC, MA, JB and DB were involved in manuscript preparation and submission. MA, DB and JB were involved in the patients clinical care. All authors have evaluated the case in detail and have approved the submission of the final manuscript.

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