

## Scientific letter

### Mediastinal Hamartoma Diagnosed by Endobronchial Ultrasound Guided Transbronchial Needle Aspiration



#### Diagnóstico de hamartoma mediastínico mediante punción-aspiración transbronquial ecoguiada

Dear Editor:

Pulmonary hamartomas (PH) are benign neoplasms developed from peribronchial mesenchyme representing 8% of all pulmonary neoplasms.<sup>1</sup> Hamartoma occurring in the mediastinum is extremely rare and only few cases have been reported.<sup>1,2</sup> They typically present in middle-aged males, are usually asymptomatic, and radiologically and histologically heterogeneous.<sup>1,3</sup> Mediastinal hamartomas are generally large and show a broad radiological differential diagnosis, which include malignancies, so histopathological examination should be performed<sup>2</sup> and needle aspiration can be appropriate in determining the diagnosis.<sup>1-5</sup>

We present a rare case of mediastinal hamartoma diagnosed by endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA). A 71-year-old man, former smoker, presented a posterior subcarinal mediastinal mass on a routine abdominal computed tomography (CT). Chest CT (Fig. 1A) confirmed the presence of a heterogenous soft-tissue density well circumscribed 3.6 cm mass with punctate central calcifications. Due to its location, it was presumed to be an enlarged adenopathy, a mediastinal or pulmonary tumor, or a bronchogenic cyst. EBUS-TBNA revealed an

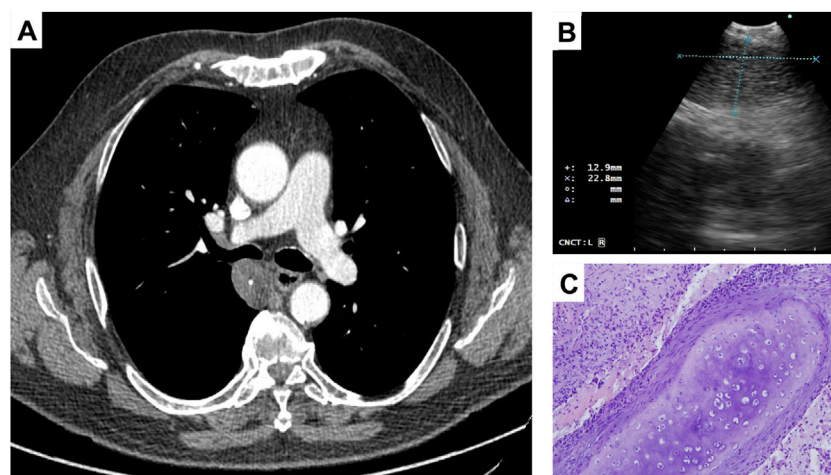
heterogenous mass in the subcarinal region which was punctured five times (Fig. 1B). Several smears and cell blocks were obtained and cytologic diagnosis was hamartoma, with no evidence of malignancy (Fig. 1C). The patient was followed up for one year with a chest CT that did not show significant changes and he remained asymptomatic.

Mediastinal lesions located adjacent to the trachea, bronchus, or esophagus, are sometimes difficult to reach using conventional bronchoscopic biopsy or CT-guided transthoracic needle aspiration biopsy.<sup>5</sup> At present, EBUS-TBNA and endoscopic ultrasound guided fine needle aspiration using a convex probe endoscopic ultrasound (EUS-B-FNA) have proven to be an effective, accurate and safe techniques to access mediastinal lesions, and which have been used indistinctly and complementary for diagnosis.<sup>4,5</sup>

Certainty diagnosis of mediastinal hamartoma is based on recognition of the characteristic fibromyxoid stroma or chondroid material with variable amounts of ciliated and nonciliated epithelium, fat tissue and muscle, associated with the appropriate imaging findings.<sup>4</sup> In our case, EBUS-TBNA was able to provide enough material for diagnosis, avoiding the need of a surgical intervention.

This diagnostic tool allowed us to exclude malignant mediastinal lesion and diagnose a benign condition requiring no further invasive treatment and without complications.<sup>4,5</sup>

In conclusion, EBUS-TBNA and EUS-B-FNA allows to locate mediastinal undiagnosed lesions and perform a targeted needle aspiration, in a less invasive way, that can provide enough material for a certainty diagnosis in mediastinal hamartoma disease



**Fig. 1.** (A) Chest computed tomography confirmed the presence of a mass in the right posterior mediastinum with heterogeneous soft tissue density with punctate central calcifications in the subcarinal region. (B) Endobronchial ultrasound revealed a heterogenous mass in the subcarinal region. (C) Disordered but mature hyaline cartilage, fibrous tissue and vessels (cell block, hematoxylin-eosine, 1000 $\times$ ).

## Informed consent

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

## Conflict of interest

The authors declare to have no conflict of interest directly or indirectly related to the manuscript contents.

## Authors' contribution

All authors have contributed significantly to the research and preparation, revision and final production of the manuscript and approve its submission.

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