

Unusual case of a stage I thymoma of the posterior mediastinum: endoscopic ultrasound-guided fine needle aspiration alone clinches the diagnosis

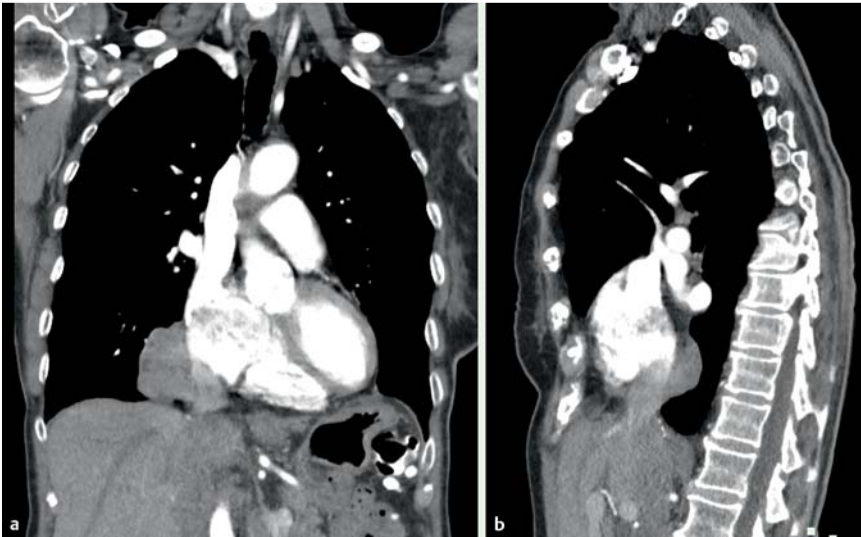


Fig. 1 Computed tomography (CT) scan of the chest showing a solid mass measuring $6.1 \times 3.5 \times 4.6$ cm that was abutting the right atrium and inferior vena cava: **a** in coronal view; **b** in sagittal view.

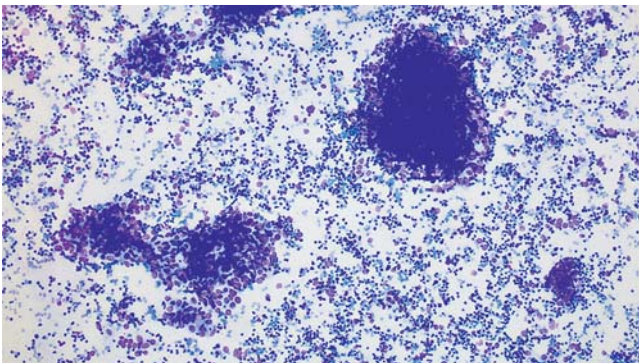


Fig. 2 Cytologic appearance of the aspirated material showing groups of benign-appearing epithelial cells surrounded by numerous lymphocytes (Diff-Quik stain; magnification $\times 100$).

Whilst recurrent mediastinal thymoma is not unusual, particularly if the neoplasm was malignant and invasive, there have been few reports confirming tissue acquisition endoscopically, and these have required either core biopsy needles or “special” maneuvers [1,2]. We present a rare case of recurrent stage I thymoma arising from the posterior mediastinum that was diagnosed on endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) alone, substantiating the role of EUS-FNA in the diagnosis of mediastinal lesions.

A 73-year-old woman with a history of myasthenia gravis and thymoma who had undergone thymectomy 32 years previously presented with an incidental finding on a computed tomography (CT) scan

of a 6.1-cm lobulated mass along the right heart border (► **Fig. 1**). EUS using a linear echoendoscope (UCT180; Olympus America, Center Valley, Pennsylvania, USA) identified a hypoechoic mass with ill-defined borders (► **Video 1**). A transesophageal FNA, without suction, using a 22G needle (Expect; Boston Scientific, Natick, Massachusetts, USA) yielded diagnostic

Video 1

Examination with a linear echoendoscope showing a large posterior mediastinal mass and a diagnostic tissue aspirate being obtained without suction using a 22G fine needle aspiration (FNA) needle.

material on the first pass. Onsite cytology showed mixed neoplastic epithelial cells and reactive lymphocytes, consistent with a stage I thymoma (► **Fig. 2**). Two additional passes were performed for preparation of a cell block, which later confirmed the onsite diagnosis.

The tumor is believed to have arisen from residual thymic tissue. This case is unique because: thymomas of the posterior mediastinum are uncommon; noninvasive thymomas rarely recur, particularly so late after resection; and diagnosis was obtained on EUS-FNA alone [3,4]. The patient's predicted long-term survival is excellent and radiotherapy was not recommended [5].

EUS-FNA is a novel modality in diagnosing posterior mediastinal lesions, which may prove to be as accurate as traditional diagnostic modalities [6–8]. Unusual and unexpected lesions often require additional tissue for ancillary testing, which can be provided by EUS, thereby avoiding the need for methods such as CT-guided biopsy, which can degrade sample quality and interpretation [9]. This case exemplifies how EUS-FNA using a standard FNA needle is a highly useful, minimally invasive technique with multiple applications.

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