

Pleural thymoma: our first case

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Thymoma is not a very rare disease; many cases have been diagnosed all over the world. However, it was the first time to diagnose pleural thymoma in our department, and was diagnosed by means of medical thoracoscope. It is not usual for a pulmonologist to expect pleural thymoma; thus, it was the main challenge for us and for the pathologist to diagnose it.

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Introduction

Many tumors are of epithelial origin; thymoma is one of these tumors, and it arises from the epithelium of thymus gland. The incidence of thymic malignancies is 2.5–3.2/10 000 population [1]. Thymoma comprises 20–25% of all mediastinal tumors and is the most common anterior mediastinal tumor [1]. It is rare to see this tumor in children; its peak age of occurrence is between 40 and 60 years, with equal sex predilection [2].

Ectopic thymic tumors have been described, accounting only for 4% of all thymomas [3]. Among ectopic thymoma; intrathoracic thymic tumors (especially of pleural origin) are rather rare [4].

Case history

A 40-year-old nonsmoker man was referred from another hospital with 1 month history of dyspepsia, dyspnea, and right-sided infrascapular chest pain.

He was examined and investigated for liver and kidney functions and was subjected to abdominal ultrasound. He was diagnosed as having hepatitis C virus and right-sided pleural effusion.

Pleural fluid was confirmed radiographically, aspirated, and investigated and revealed exudative effusion with normal level of LDH and ADA. It was also negative for malignant cells.

He received treatment in the form of antibiotics and analgesics.

The patient clinically improved; the amount of effusion decreased, and the patient was discharged. However, after 15 days he returned again with more effusion.

Computed tomography of the chest with contrast was performed and showed right-sided pleural effusion with underlying lobulated mass (Fig. 1a and b).

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Ultrasound-guided FNA of pleura was performed, which revealed lymphocytic proliferations mixed with atypical mesothelial cells.

The patient was referred to our hospital for thoracoscopic pleural biopsy.

On arrival, his vital signs were in normal range. No jaundice, organomegaly, or lymphadenopathy was seen, and chest examination was consistent with right-sided pleural effusion.

He was subjected to medical thoracoscopy, which showed lobulated vascular mass originating from costal and extending to diaphragmatic pleura and was soft during biopsy (Fig. 2a–d).

Multithoracoscopic pleural biopsies were taken and sent for histopathologic examination.

The case was diagnosed as B3 pleural thymoma because there was a lobular pattern of growth with sheets of epithelial cells having squamoid differentiation with mild-to-moderate atypia surrounded by lymphocytes and prominent perivascular spaces (Figs. 3 and 4).

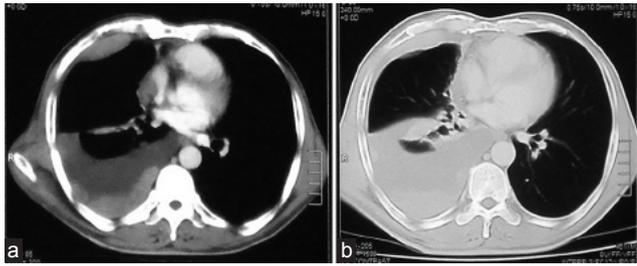
He was referred to the oncology department where he was fully investigated and decision was taken to begin chemotherapy to decrease the tumor size before surgical resection.

Discussion

Ectopic thymoma is a rare tumor affecting adults, especially in age 40–60 years, with male predominance.

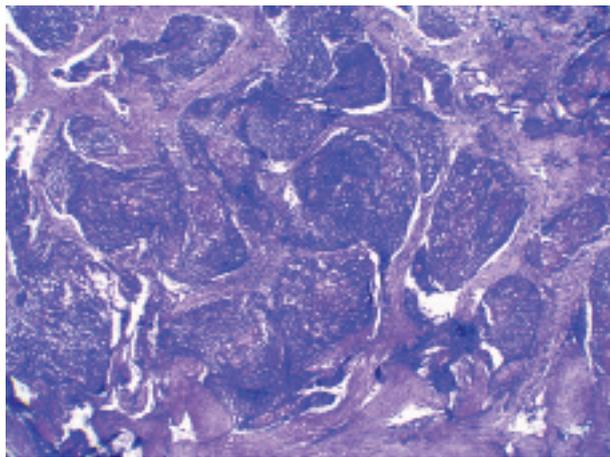
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Fig. 1



(a) Computed tomography (CT) of the chest mediastinal view showing right-sided free pleural effusion with pleural-based mass with partial underlying lung collapse. (b) CT of the chest pulmonary window showing right-sided free pleural effusion with partial underlying lung collapse.

Fig. 3



Prominent lobular architecture of neoplastic proliferation of mixture of epithelial cells and lymphocytes surrounded by fibrous tissue (H and E $\times 100$).

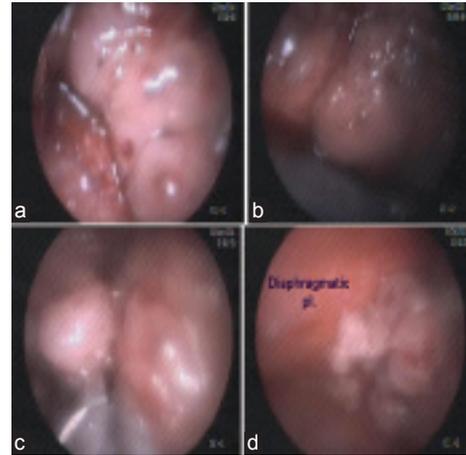
Although the vast majority of thymomas are located in the anterior mediastinum (90%), there have been many sites of ectopic localization of thymomas described. Ectopic thymomas have been found in the middle and the posterior mediastinum, the neck, the base of the skull, the pericardium, the lung parenchyma, and the pleural cavity [5].

In this case, the mass was lobulated and encircling most of the lung and extended even to the mediastinal pleura.

When an ectopic thymoma originates from the pleura, its most common radiological appearance is an anterior intrathoracic mass. It must be differentiated from other more common intrathoracic neoplasms, which may include solitary fibrous tumors of the pleura, sarcomas of the chest wall, malignant pleural mesotheliomas, or other metastatic tumors [6].

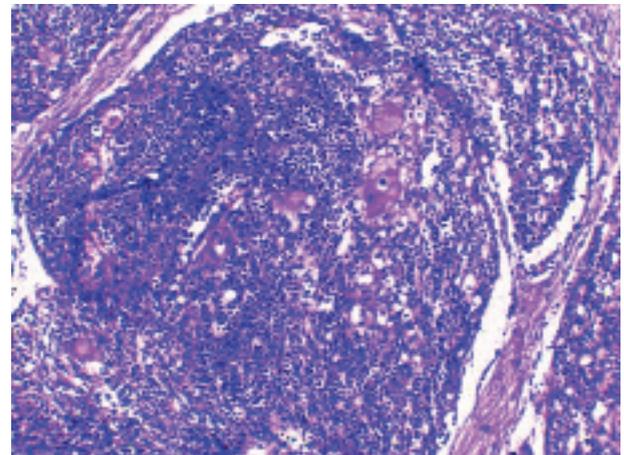
Our patient was assessed clinically and was subjected to laboratory investigations for most of the associated

Fig. 2



(a–d) Thoracoscopic pictures of lobulated, whitish, and vascular mass originating from the costal pleura.

Fig. 4



Higher magnification showing suamoid epithelial cells surrounded by lymphocytes and surrounded by fibrous tissue and perivascular spaces (H and E $\times 200$).

diseases, but his examination and investigations were negative for any associated disease symptoms.

These tumors are frequently asymptomatic [7]. Although only one-third of patients with localized disease are symptomatic, most patients with disseminated disease have significant complaints, such as chest pain, chest discomfort, dyspnea, and superior vena cava syndrome [8]. Patients may present with local symptoms related to the tumor encroaching on surrounding structures, such as cough, chest pain, superior vena cava syndrome, dysphagia, and hoarseness of voice. An overall 30–40% of patients with thymoma experience symptoms of myasthenia gravis. An additional 5% of patients have other systemic syndromes, including red cell aplasia, dermatomyositis, systemic lupus erythematosus, Cushing syndrome, and syndrome of inappropriate antidiuretic hormone secretion.

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Conflicts of interest

There are no conflicts of interest.

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