Cystic Thymoma In Visceral Mediastinum: A Case Report

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Citation

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Abstract

We present a rare case of thymoma that developed entirely in the visceral mediastinum. A 50-year-old man was referred to our hospital with a mediastinal mass. The mass was located in the visceral compartment of Shields' mediastinal classification. Intraoperative pathologic evaluation revealed as cystic thymoma. Total thymectomy was performed. The postoperative course was uncomplicated and the patient received no postoperative adjuvant radiotherapy.

INTRODUCTION

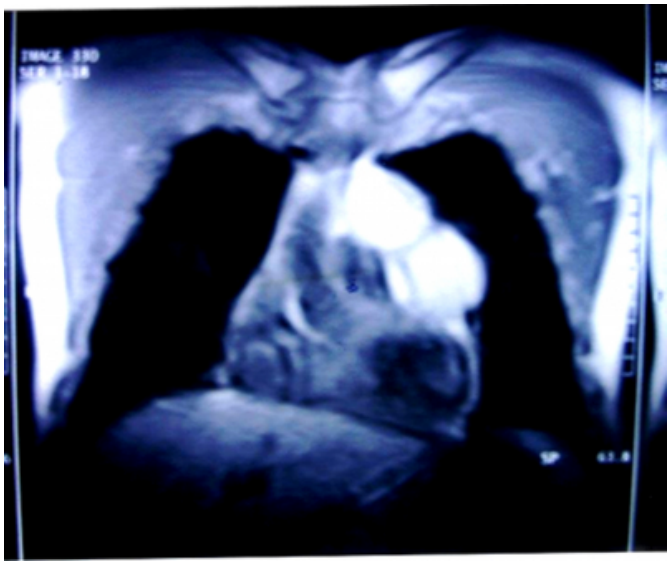
Thymoma is the most common primary neoplasm of the anterior mediastinum, although it can also arise in other locations: the neck, the middle or posterior mediastinum, the lung, and the pleural cavity ([1]). It forms 20-30% of mediastinal masses in adults ([1]). Ectopic thymomas are considered to arise from distributed thymic tissues and as a result of failure to migrate into the anterosuperior mediastinum. ([2]). Despite complete resection, noninvasive thymoma may recur postoperatively. Therefore, extended thymectomy should be undertaken in all patients with noninvasive thymoma. Most of the patients were diagnosed while investigating myasthenia gravis or symptoms of pressure on neigbouring organs ([3]). Thymomas are histologicallysubdivided in four subgroups: lymphocytic, epithelial, spindle and mixed.([4]) This Lattes-Bernatz classification is not associated with prognosis. Most part of thymomas are encapsulated; however invasion to neigbouring organs is seen at 20%. Encapsulated thymomas must be considered as benign. Extended thymectomies have to be performed to all thymomas. The most important prognostic factor is the presence of invasion.

CASE REPORT

A 50-year-old man presented cough and fever for a week. On plain chest roentgenograms, a mass at left hilar region was seen. Contrast-enhanced CT revealed a solitary, lobulated and nonenhancing mass, 10 cm in maximum diameter (10x8x6cm), near the left atrium and ventricule. Magnetic resonance (MR) imaging revealed a lobulated, well defined cystic mass located into the anterior mediastinum. The mass started from upper mediastinum and continued 4 cm inferior to the carina (Figure 1).

Figure 1

Figure 1: Coronal T-weighted image shows hyperintense cystic mass which starts from upper ediastinum and continues behind the left atrium.



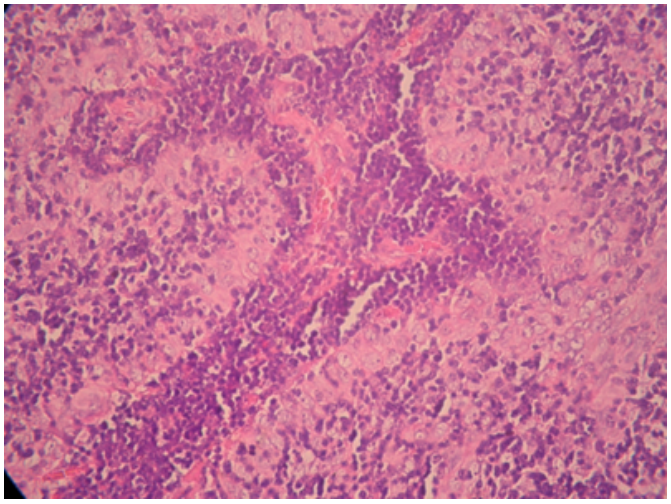
Physical examination and laboratory work-up were within normal limits. Needle biopsy revealed cystic fluid material, epithelial cells were not seen. We undertook surgical exploration. Anterior thoracotomy was performed. The tumor was localized below innominate vein. Separation of superior vena cava and the aota and retraction of the right main pulmonary artery inferiorly, exposed the tumor (10x8x6cm) which was solid, encapsulated and easily extracted.

An adjacent mass neigbouring left atrium and left ventricle with cystic and solid components was detected. And

resected. Histopathological examination of the resected specimen revealed a thymoma stage I, with cystic appearence (Figure 2) (the classification of Masaoka) ([5]). The postoperative course was uncomplicated.

Figure 2

Figure 2: The epithelial cells can be recognized by their larger nuclei with pale chromatin and small nucleoli. The background is rich in small lymphoid cells.



DISCUSSION

The mediastimun is tightly packed with intertwined organs and conduits. Shields' -3-compartment model is the most accurate anatomic representation of the mediastinum, which consists of an anterior compartment, a visceral compartment, and the bilateral paravertebral sulci. The visceral compartment of Shields' mediastinal classification contains the heart, pericardium, and the major vessels leaving and entering this organ; the trachea and main bronchi; lymph nodes (paratracheal and tracheobronchial); and the phrenic and vagus nerves. Thymic lesions are classically found in the anterior compartment. Rarely, ectopic thymic tissue is present in the retroinnominate vein area ([6]). Ectopic thymomas are considered to arise from distributed thymic tissues as a result of failure to migrate into the anterosuperior mediastinum ([4]). Exceptionally, thymic tissue can be found with visceral, middle mediastinum, asinous observation. To our knowledge, middle mediastinal thymoma at the paracardiac region has previously been reported in only one case in the literature ([4]).

Most of the ectopic thymomas are detected by chest roentgenogram during a routine medical check-up in asymptomatic patients. Thirty % to 60% of these patients with thymoma may have myasthenia gravis.

Neddle biopsy is preferred for small and well-delineated lesions that on CT examination appear to be amenable to complete resection. Indeed in certain tumors, such as thymomas, cells shed from the tumor might implant in the adjacent mediastinal structures. Thymomas appear to have malignant potential. The overall rate of recurrence of thymoma is approximately 20%.

In a study of Morrissey et al, mediastinal biopsies with fine aspiration needles and allowed to differentiate thymoma from lymphoma ([7]). Encapsulation and resectability of thymoma is associated with good prognosis. Complete surgical resection is the cornerstone of curative therapy for encapsulated thymomas. For patients with encapsulated (stage I) thymoma, the role of adjuvant radiation therapy has not been evidenced ([8]).

CONCLUSION

Despite complete resection, noninvasive thymoma may recur postoperatively. Extended thymectomy, including the mediastinal adipose tissue and the retroinnominate vein area, should be undertaken in all patients with noninvasive thymoma.

In conclusion; thymomas should be considered in the differential diagnosis of masses at visceral mediastinum.

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