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Case Report

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Asymptomatic giant thymoma

Hamit Can Özpolat[1], Ayça Karabulut Önel[2], Ahmet Cemal Pazarlı[1]
Handan İnönü Köseoğlu[1], Halil İbrahim Yakar[1], Gökhan Aykun[1]

[1]Department of Chest Diseases, Faculty of Medicine, Gaziosmanpaşa University, Tokat, Turkiye
[2]Department of Pathology, Faculty of Medicine, Gaziosmanpaşa University, Tokat, Turkiye

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Corresponding Author: Ahmet Cemal Pazarlı, dracp60@gmail.com

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ABSTRACT

Thymomas are tumours that originate from epithelial cells of the thymus gland. Most patients, estimated to be two thirds, remain asymptomatic and are often diagnosed following routine examinations. Symptomatic patients may present with neurological paraneoplastic syndromes as well as compression symptoms. Asymptomatic patients are usually found incidentally. In this article, we present a case of a giant thymoma that was discovered incidental/perioperatively in the light of the existing literature.

Keywords: Thymoma, paraneoplastic syndrome, incidental

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INTRODUCTION

The thymus gland, located in the anterior mediastinum, plays an important role in the immune system. Thymic epithelial cells are involved in the development of mature T lymphocytes which play a role in cellular immunity. Thymomas are rare epithelial tumours which represent more than half of anterior mediastinal tumours.[1]

Patients with thymoma frequently do not present clinical symptoms. Approximately 30% of the patients have an asymptomatic course, while 30% develop findings related to myasthenia gravis (MG). Depending on the location of the tumour, pain may be manifested by cough, hoarseness, dyspnoea, vena cava superior syndrome and weight loss in a minority of patients. Other parathymic syndromes have been reported to a smaller percentage. Pleural and/or pericardial effusion is a serious clinical finding. In rare cases of spontaneous rupture of the tumour, severe chest pain and shortness of breath may develop due to mediastinal haemorrhage. Radiographically, CT is considered the standard method; mediastinal enlargement and haemothorax are seen; presence of irregular margins, multiple calcifications and low attenuation suggest invasion. Other malignancy rates accompanying thymomas have been reported in various series. Pan et al.[2] reported that other solid organ malignancies were significantly higher in patients with thymoma.

CASE

A 47-year-old male patient was admitted to the urology clinic because of flank pain, a 3 cm stone was detected in the left renal ureteropelvic junction and ureteroscopy was planned. He was referred to our clinic because of perioperative postero-anterior chest radiography findings. The patient had no comorbidities or medication history, and no active respiratory symptoms. Chest radiography showed homogenous opacity in the left lung adjacent to the mediastinum (**Figure 1a**). No abnormalities were found in routine laboratory investigations. Thoracic computed tomography revealed a relatively smoothly circumscribed lobulated contoured heterogeneous mass lesion with heterogeneous density, which was approximately 123×94×98 mm. It compressed the heart inferiorly at its widest point in the anterior mediastinum and had no obvious signs of invasion in the anterior wall of the chest and adjacent mediastinal structures whose borders were not clearly distinguishable from the pericardium (**Figure 1b**). A transthoracic tru-cut biopsy was performed by Interventional radiology under thoracic USG guidance. The cytology of the material obtained showed a lesion consisting of polyglonal shaped small epithelial cells mixed with thymocytes, which could not be clearly distinguished in haematoxylin-eosin sections, but immunohistochemically stained with Pan-CK and CK8/18, and immunohistochemical staining showed scattered membranous staining in thymocytes with CD45 and CD3 (**Figure 2 a, b, c**). The patient was referred to our thoracic surgery clinic to be evaluated for complete resection with the diagnosis of thymoma.

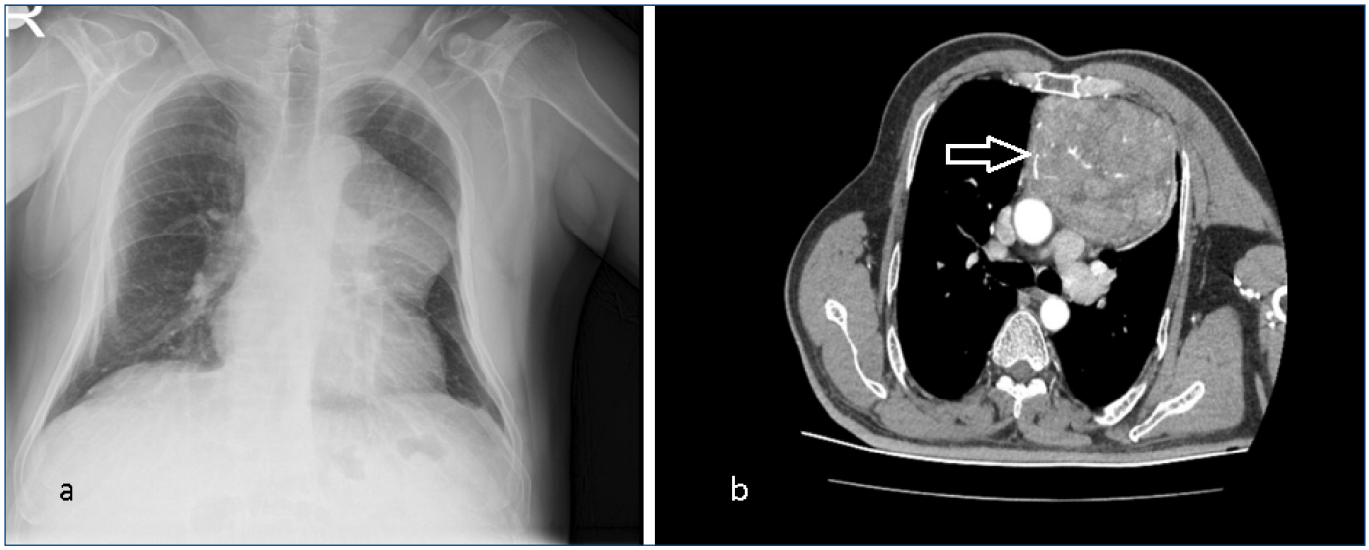

Figure 1. a. Posterio-anterior chest radiograph, **b.** Mass lesion in the anterior mediastinum on computed thoracic tomography

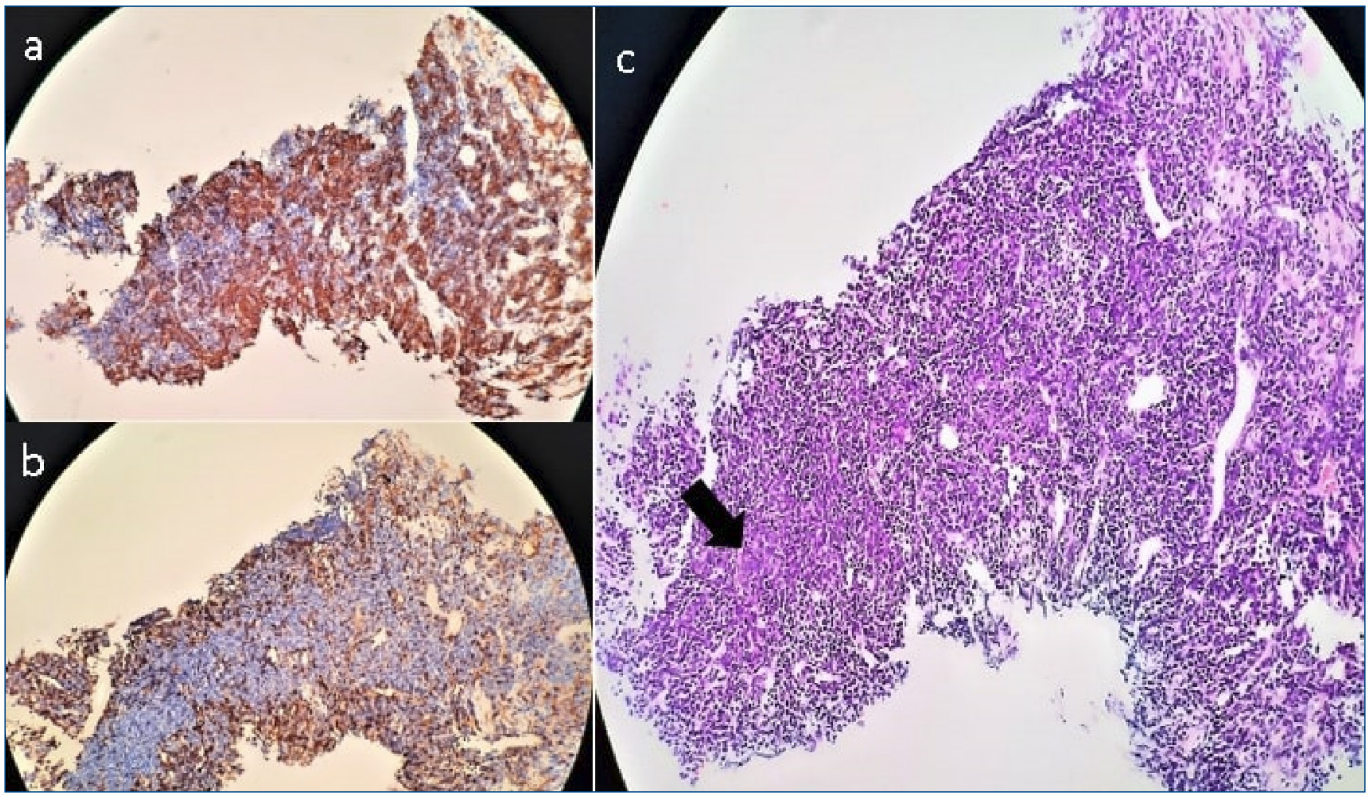

Figure 2. a. Staining in epithelial cells with CK8-18 (X200), **b.** Staining in lymphocytes with CD45 (X200), **c.** Lymphocytes (thymocytes) and scattered polygonal epithelial cells (black arrow) (HEX200)

DISCUSSION

Thymoma is a slow growing epithelial neoplasm. It represents approximately 20-30% of all mediastinal tumours. Sarcoma, solitary fibrous tumour, germ cell tumours, lymphoma, mesothelioma and metastatic tumours should be considered in the differential diagnosis of giant intrathoracic masses. Recommended investigations for the evaluation of mediastinal masses include thoracic CT with contrast and routine laboratory blood tests. Specific markers such as AFP and B-HCG may be ordered especially in young patients. Fine needle aspiration biopsy (FNAB) is a feasible and accepted diagnostic method for the diagnosis of anterior mediastinal masses and histopathological classification of thymomas. Ultrasound-guided FNA samples have been reported to be more reliable and diagnostic because they contain more cells. Annessi et al.[3] reported that the specificity and sensitivity of ultrasound-guided FNAB was 100% in anterior mediastinal masses. The most widely used and accepted staging system is the classification of Masaoka et al.[4] which includes clinical and histopathological features together with invasion and anatomical enlargement. Since complete surgical resection is the most effective method in thymic tumours, the lesions of all patients should be considered potentially resectable and should be carefully examined by an expert medical team. Complete surgical excision should be preferred in Masaoka stage I and II and selected stage III disease. However, it should be kept in mind that such an operation may carry serious, life-threatening mortal complications such as pneumonia, massive haemorrhage, pulmonary embolism and so on. The stage of the tumour is the most important prognostic factor; 5-year survival of completely resected patients is 90%, 90%, 60% and 25% for stages I, II, III and IV.[5]

CONCLUSION

Thymoma can occur at any age from 8 months to 90 years, with a mean age of 53 years. 95% of thymomas are localised in the anterior mediastinum. In this case, we present a case of thymoma which was detected during perioperative evaluation, evaluated clinically, radiologically and histopathologically and diagnosed as thymoma because it was asymptomatic despite its giant size. The accepted standards in the diagnosis of thymoma should be increased with better communication and multidisciplinary approaches.

ETHICAL DECLARATIONS

Informed Consent

All patients signed and free and informed consent form.

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

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Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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