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Case Report

A rare anterior mediastinal mass: Giant Thymolipoma

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Abstract

A 29-year-old male patient was admitted to the emergency with complaints of fever, nausea, vomiting and abdominal pain. Computed Tomography (CT), demonstrates an enlarged appendix vermiformis with mucosal enhancement represent inflammation. The patient was diagnosed with appendicitis and underwent surgery. In addition, while examining the abdominal CT, a mass was detected incidentally in the supradiaphragmatic area, which was partially included in the images, and contrast-enhanced thoracic CT was applied. We aim to present the patient diagnosed with thymolipoma according to thoracic CT result. Thymolipoma is a rare condition and resection of the lesion and thymus should be performed with video thoracoscopic surgery.

Keywords: Anterior mediastinal neoplasm; radiology; Thymolipoma; thymus neoplasm

INTRODUCTION

Thymolipoma is a rare benign anterior mediastinal mass of thymic origin that includes both thymic and mature adipose tissue. It constitutes 2%- 9% of all thymic tumors. There is no known gender difference and although it is seen between the ages of 3- 56. Timolipoma consists of adipose tissue seen as soft tissue weakening on CT scan (1). It is difficult to distinguish thymolipoma from other mediastinal fatty tumours. In this case report, we aimed to present a case with a large mediastinal mass and a pathological diagnosis of thymolipoma.

CASE REPORT

Twenty-nine year-old male patient was admitted to the diagnostic emergency service with complaints of fever, nausea, vomiting and abdominal pain. The patient did not have chest pain and shortness of breath. The patient had cough and sputum. The patient had a ten-year history of smoking. On physical examination, respiratory sounds were decreased in the right hemithorax and forced expiratory volume (FEV) was 1:3.61 (87%) in the respiratory function test. Acute phase reactants were high in laboratory results during appendicitis. However, laboratory findings during the Thymolipoma operation preparation process were normal. On CT scan of the patient, the diameter of the appendix vermiformis increased minimally (8.5 mm), and mucosal enhancement consistent with inflammation was observed. In addition, a contrast was observed in the periapendicular adjacent peritoneum. In addition, while examining the abdominal CT, a mass which was partially included in the images was realized incidentally, contrast-enhanced thoracic CT and chest X-ray (Figure 1) was performed. Chest X-ray shows that the lesion is located in the anterior mediastinum. Thoracic CT showed about 19.5x8 cm lesion started from the anterior mediastinum and continued along the right pericardial region and extended to the diaphragm, with thick linear septations and a predominantly fat density lesion leading mild pressure on the right atrium. The lesion did not invade surrounding tissues and there was no significant contrast enhancement (Figure 2).

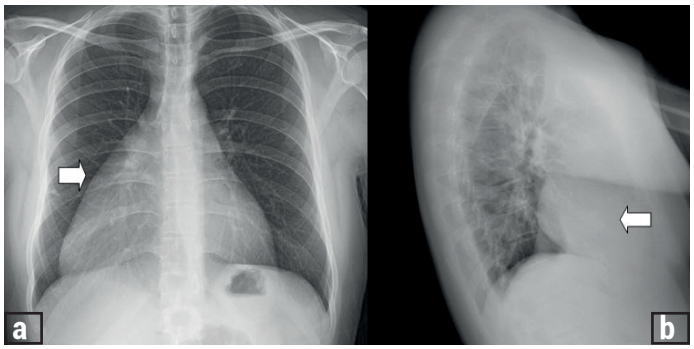

Figure 1. a)The lesion that caused cardiomegaly appearance in the right hemithorax on posterior-anterior. b) Lateral radiography shows that the lesion is located in the anterior mediastinum

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An operation was planned with the clinical and radiological diagnosis of thymolipoma in the thoracic surgery department where the patient was admitted. In surgery, the thorax was entered with an approximately 3 cm incision from the right 5th intercostal space. On exploration, a soft consistency encapsulated lesion, 18 cm in size, starting over the superior vena cava in the anterior mediastinum and extending to the diaphragm over the pericardium was palpated. The lesion was totally excised. There were no postoperative complications and the patient was discharged from hospital without chest pain symptoms. In the pathology report, two tissue fragments with a regular capsule-like outer surface weighing 666 gr, the larger of which was 16x11x3.5 cm and the smaller of which was 13x10.5x3.5 cm, were seen. Histopathologically, the tumor consisted of mature adipose tissue and Hassall's corpuscles and hyperplastic thymic structures.

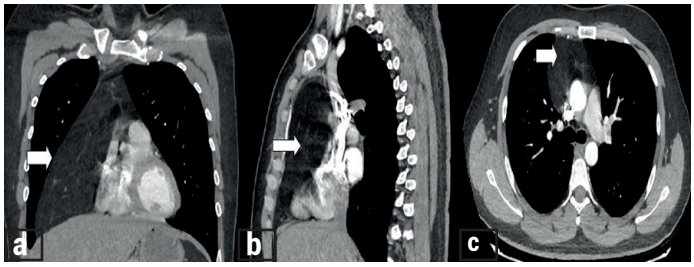

Figure 2. Contrast enhanced CT in coronal (a), sagittal (b) and axial (c) planes show a well circumscribed mass lesion localized in the anterior mediastinum without any invasion

DISCUSSION

Thymolipoma is a rare benign tumor of mediastinum (2). Thymolipoma is a benign encapsulated mediastinal tumor consisting of thymic and mature adipose tissue. Most of the patients are usually asymptomatic but symptoms may occur due to the compression of the mediastinal structures. Clinically, most thymolipomas are identified incidentally during diagnostic tests for other medical problems; however, sometimes the diagnosis can be made as a result of upper respiratory tract infection, chest pain, and shortness of breath, tachypnea and chronic non-specific chest symptom complaints (3). It was found in our patient incidentally in radiological tests performed during the diagnosis of appendicitis.

Thymolipomas have been reported to be associated with some autoimmune medical conditions such as myasthenia gravis (4). On CT scan, the most common findings seen in thymolipomas are scattered linear soft tissue densities with fat or predominantly fat (5). They may be confused with pleural effusion on chest radiography due to its homogeneous appearance and contralateral displacement of the mediastinum (3). Lipoma, liposarcoma, thymic hyperplasia and teratoma are included in differential diagnosis. It can be difficult to differentiate from lipoma. Invasion in liposarcoma may help to differentiate. Calcification in teratoma guides in differential diagnosis (6).

Definitive diagnosis depends on histopathological findings. Histopathologically, thymolipomas have varying rates of mature adipose and thymic components (7). In this case, thymolipoma consists predominantly of mature adipose tissue with scattered elongated clusters and small rounded atrophic thymic epithelial nodules embedded in fat.

Although it is possible to make diagnosis by imaging, a biopsy may be required to confirm the histology of the tumor in suspicion. In literature, the weight of tumour taken from thymolipoma patients varies between 154 g and 6000 g (8). In our case, the weight of tumour was measured as 666 g in two pieces of tissue, the larger of which had a size of 16x11x3.5 cm and the smaller of 13x10.5x3.5 cm.

Thymolipomas can adhere to neighboring structures and displace organs within the chest cavity; however, invasion to adjacent structures has not been supported by literature (9).

Surgical excision is the only treatment for thymolipomas. This treatment aims to reduce symptoms caused by the compression of adjacent structures of thymolipomas (10).

CONCLUSION

Thymolipomas may present as large mediastinal masses extending into the lungs and they are mostly diagnosed as part of investigating a secondary disease. The diagnosis can be made with classical radiographic findings and biopsy. The treatment is the surgical excision of the whole tumour.

Conflict of interest: The authors declare that they have no competing interest.

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