ID: IJARS/2014/9972:0001

Case Report

Surgery Section

Mediastinal Thymic Cyst: A Rare Case Report

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ABSTRACT

This report describes an uncommon case of mediastinal-thymic cyst, which was incidentally found in a 60-year-old female during her visit. Since the nature of her lesion was unknown, it was surgically removed, and mediastinalthymic cyst was diagnosed on the basis of pathologic findings. This report describes the course of treatment and outcome. The description of mediastinalthymic cyst in the literature is very limited. Our experience in the diagnosis and management of this case adds to this description. The role of imaging in the diagnosis is also discussed.

Thymic cysts are usually diagnosed accidentally during radiological evaluation of the chest for unrelated conditions. Although, most of these cysts are asymptomatic and of no clinical significance, a rare few are of importance because they cause symptoms and signs, masquerading as malignant mediastinal tumours. Symptoms appear late when the mass compresses on adjoining tissues.

Key Words: Congenital, Mediastinal Thymic cyst, Sternotomy, Thymomas

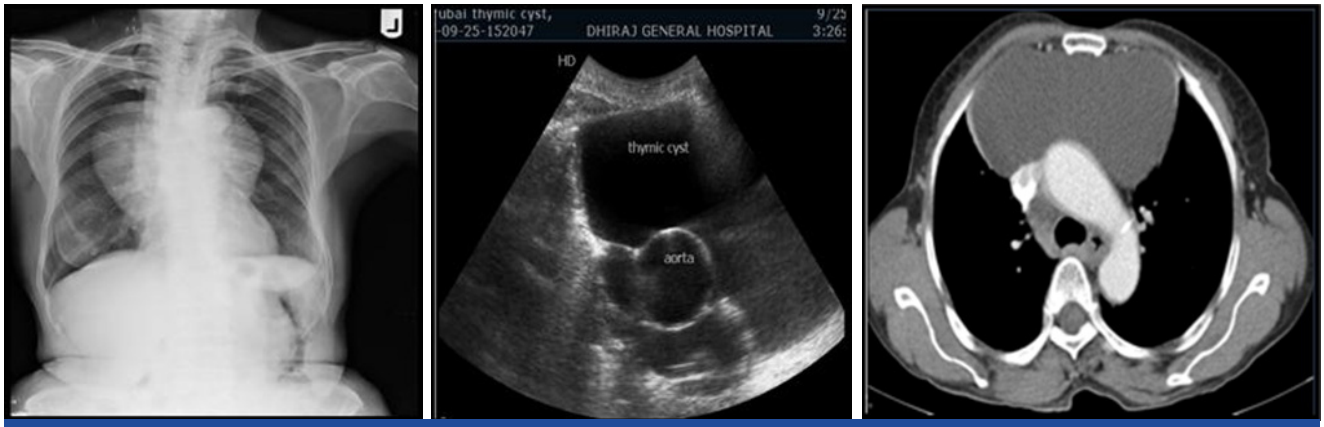
CASE REPORT

A 60-year-old female patient came to Dhiraj General Hospital with complaints of Left sided chest pain & dry cough since one month. Physical examinations & routine laboratory studies were insignificant. The patient was referred to the Radiology Department for further investigations [Table/Fig-1-4] and the findings were in favour of anterior mediastinal mass in the region of Thymus. Lastly, patient was referred to the thoracic surgery division for a left anterior mediastinal mass & was admitted for surgical diagnosis and treatment.

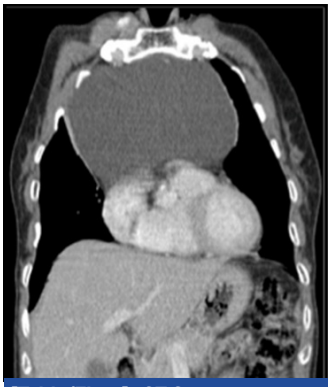
Mid line sternotomy was performed [Table/Fig-5] to excise the anterior mediastinal cyst completely and the specimen was sent for histopathological examinations. Gross inspections of the specimen showed a white thin walled unilocular cyst containing watery liquid. Histopathology [Table/Fig-6] confirmed a cyst, which is lined by a single layer of flattened epithelium with adjacent benign thymic tissue and concluded a diagnosis of a thymic cyst. The patient recovered well with routine postoperative management and she was discharged with a scheduled respiratory rehabilitation program and outpatient follow ups.

DISCUSSION

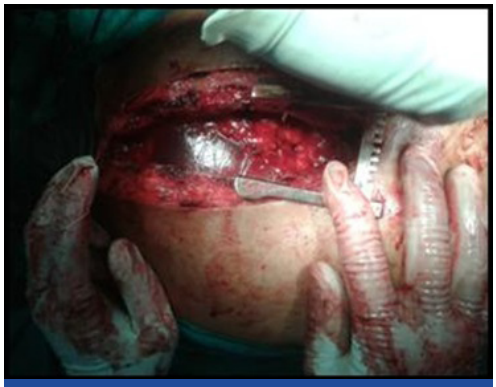
Thymic cysts are uncommon. Through literature review, there were few cases reported in the past. Even though the number of cases reported seems to be increasing with the advent



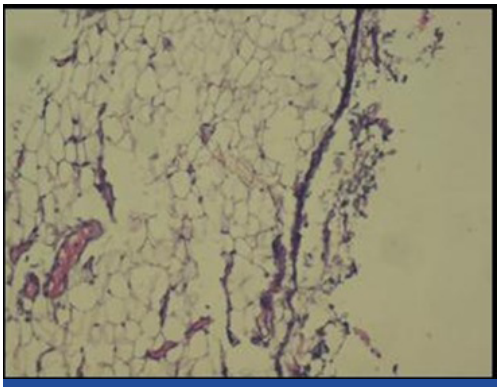
[Table/Fig-1]: Radiology Work-Up Chest Xray - PA View
[Table/Fig-2]: Ultrasonography
[Table/Fig-3]: Commuted Tomography Scan (CT Scan)



[Table/Fig-4]: CT Scan



[Table/Fig-5]: Intra Operative



[Table/Fig-6]: Histo-Pathology

radiologic modalities, the reported incidence rate in 2007 is 1 to 3 percent of all mediastinal masses and 5 to 28 percent of all mediastinal cysts [1].

Thymic cysts may be of wide and diverse aetiologies, and they can be either congenital or acquired [1-3]. Congenital cysts are generally thin walled, unilocular, translucent, and most importantly, non-inflammatory and has thymic tissue in their lining. Congenital thymic cysts are derived from the remnants of the thymopharyngeal duct and they can be found anywhere between the neck and the mediastinum, where the thymus gland migrates during its embryologic development [2-4]. The acquired thymic cysts can be further subdivided into inflammatory, infective and neoplastic types. They are primarily of multilocular in nature and they are lined partially by the epithelium with various degrees of inflammation [2,5]. Acquired multilocular thymic cysts may be developed de novo or it could be associated with wide range of different disorders. The reported disorders that can be associated with the occurrence of multilocular thymic cysts are cystic degeneration of thymomas, Hodgkin's lymphoma, seminoma, Sjogren's syndrome, Myasthenia gravis, HIV and so forth [6].

Most of the patients with thymic cysts are asymptomatic [7]. However, they can produce symptoms by the mechanical compressive effects on any adjacent structures in the thoracic cavity. Symptoms do occur, especially with higher frequencies in the paediatric population. Commonly reported symptoms include: wheezing, dyspnoea, cough, chest pain and dysphagia [2,6]. Thymic cysts are generally incidental findings after a radiographic study either done routinely or for other purposes. It can be a chest x-ray or any other imaging studies of the thorax, such as the computed tomography scan, echocardiography, or magnetic resonance imaging. Diagnosis is very rarely made preoperatively, but imaging studies often provides helpful information in surgical planning and assessing the extent of the lesion [2].

Thymic cysts have the potential to undergo neoplastic changes [5-6]. Intracystic haemorrhages or infections can expand a thymic cyst rapidly and amplify the local compressive effect and resulting in various symptoms. A haemorrhaging thymic cyst can also cause hemomediastinum or hemothorax. Even though these complications are rare, complete surgical resection is recommended to most if not all patients with mediastinal cyst due to these potential complications. Surgery provides a specimen for histological diagnosis and excludes its malignant potential, and it could also prevent further cystic enlargement and provide symptom relief. However, conservative treatment of asymptomatic patients also has been reported [1]. In our case we performed cyst excision by midline sternotomy and on exploration we found a huge thin walled cyst measuring approximately 10 x 15 cm anterior to cardia and adherent to pleura which was dissected and separated from pleura, pericardium and superiorly from aorta. Bilateral I.C.D. was kept and sternal closure was done.

The prognosis for thymic cysts is excellent. There are very few, if any, local recurrences that have been reported, even with near-complete resections leaving the attached portion of the cyst wall unremoved [5-6]. However, due to the limited cases and literature resources, questions such as the prognosis and complication rates in asymptomatic patients with mediastinal thymic cyst who were treated conservatively, or the possibility of neoplasm in the attached cystic wall which is left unresected, and many other questions in regards to the mediastinal thymic cysts still need to be answered by larger, more powerful research studies.

One should keep in mind, when a pericardial cystic lesion is found in symptomatic or asymptomatic patients, that there are various differential diagnoses, including pericardial cyst, bronchogenic cyst, teratogenic cyst, mesothelial cyst, cystic lymphangioma and parasitic cyst [8].

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FINANCIAL OR OTHER COMPETING INTERESTS:
None.

Date of Publishing: **Jun 15, 2014**