THYMOLIPOMA - A RARE BENIGN TUMOR OF THE THYMUS GLAND

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ABSTRACT:
Thymolipoma is an infrequent benign, 'slow growing tumor of thymus. The tumor manifests as soft tissue mass in the Anterior Mediastinum, descends and occupies the cardio phrenic space and usually asymptomatic or sometimes due to pressure effect heaviness and chest pain are the complaints.

We report a case of thymolipoma in a 30 years old female complaining of heaviness and constricting type of chest pain of 1 year duration. CT scan findings were a space occupying lesion in the anterior mediastinum. The tumor was completely excised through ‘Postero lateral thoracotomy’. Histopathological examination confirms the diagnosis. This is the first case we have reported from our institution.

Key Words: Thymolipoma; Anterior Mediastinum, pressure effects

INTRODUCTION:
Thymolipoma is a rare benign tumor of the thymus gland, the tumor manifests as soft tissue mass in the anterior mediastinum first reported by LANGE in 1916¹. Only 50 such cases have been reported in the world literature so far². The majority of the patients are asymptomatic and diagnosed on routine chest skiagram³. Because of its large size and pliability, a thymolipoma drape around the heart, simulating cardiomegaly on chest x-ray. We report a case of thymolipoma presenting as an anterior mediastinal mass.

CASE REPORT:
A 30 years female who was apparently asymptomatic one year back developed heaviness and constricting type of chest pain which got aggravated on walking, she was admitted in Gandhi Hospital Secunderabad.

- Physical examination and Routine investigations were found to be normal
- Chest X – Ray – NAD (No Abnormality Detected)
CASE REPORT

- CT Scan of Chest– A SOL (Space Occupying Lesion) in the anterior mediastinum- ‘? Lymphoma’

She underwent ‘Postero lateral thoracotomy surgery.

OPERATION FINDINGS:
A well encapsulated lesion of 12 x 10 x 5 cm extending along the course of phrenic nerve and attached to the upper part of pericardium, was excised and the specimen sent to department of pathology for HPE. (Histopathologic examination)

HISTOPATHOLOGY:
- **Gross** : Received a well defined lobulated yellow mass measuring 12 x 10 x 5 cm
  
  Weight – 250 Gms (Fig.1)

- **Cut section** : Yellow with gray white streaks with granular surface (Fig.1).

- **Microscopy**: Multiple sections studied reveal the tumor tissue consisting of adipose tissue and essentially un-remarkable thymic tissue, separated by thin fibrous strands.
  1) The adipose tissue consisting of mature adipocytes with normal blood vessels in between.
  2) Thymic tissue consists of epithelial cells and Hassal’s corpuscles.
  3) No Normal cortical and medullary arrangement is seen No. malignant change is seen (fig.2 & fig.3)

DISCUSSION:
Thymolipoma is a rare well encapsulated benign slow growing tumor consisting of 2-9% of all thymic neoplasms⁴. The tumor occurs in young adults varying from 20 – 30 years of age with no sex predilection and in majority of cases asymptomatic⁵. But in some cases it becomes symptomatic because of pressure effects.

- Chest X – Ray may reveal a large anterior mediastinum mass.
- CT & MRI Provides important information for assessing the lesion. Definitive diagnosis can only be reached through histopathologic evaluation. Signs and symptoms may improve following resection.
- 50% Cases associated with Auto immune disease like myasthesiagravis, Aplastic Anemia, Graves disease, Chronic Lymphoid leukemia⁶.

Pathological features have been proposed on the basis of 4 theories:
  1) Thymolipoma is merely a lipoma involving thymic fat or a lipoma of multi centric origin and involution of the thymic gland.
  2) Involutional Hyperplasia theory proposes that diffuse thymic enlargement from thymic hyperplasia is replaced by adipose tissue.
3) Mixed tumor theory proposes a mixed neoplasm of mesenchymal and endodermal origin. This type is consistent with our case. This type thought to represent typical thymolipoma with an island of non involuted thymic tissue in adipose tissue.

4) Involution thymoma theory. fatty degeneration of thymoma

Other tumors which are more common in anterior mediastinum.

1) Lipoma: Can be ruled out by the presence of thymic component.
2) Thymus Hyperplasia: Can be ruled out as the thymic tissue is not arranged in its normal orderly way.
3) Atrophic thymus with Adipose tissue replacement: is an incidental finding and does not form mass.
4) Teratoma: Teratoma and thymolipoma share common radiological features and can be difficult to differentiate.

However, lack of cystic changes and identification of an anatomic connection to the thymic bed is helpful to suggest thymolipoma.

CONCLUSION:

The infrequent tumor may be confused with other mediastinal tumors like lipoma, teratoma or thymus hyperplasic but histopathologic examination was revealed the benign mixed nature of the tumor consisting of both adipose tissue and haphazard arrangement of the thymic tissue.

Surgical excision is the treatment of choice. The case is brought to the notice because of its rare occurrence and excellent prognosis.

**Fig.1:** C/S showing yellowish G/W streaks with granular surface.
Fig. 2: Photomicrographs showing a mixture of mature adipocytes and thymic tissue [Haematoxylin and Eosin stain].

Fig. 3: Photomicrograph showing Hassle’s corpuscles [arrows] along with thymic tissue and adipocytes. [Hematoxylin and eosin stain].

REFERENCES: