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Case Report

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A RARE CASE OF ECTOPIC THYMOMA IN THE MIDDLE MEDIASTINUM

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ABSTRACT

Thymomas generally arise from the thymus in the anterior mediastinum, although they have occasionally been found in the neck, pulmonary hilum or posterior mediastinum .Thymoma arising in middle mediastinum is very rare .We present a case of ectopic middle mediastinal thymoma in a 60- year-old female with myasthenia gravis.

KEY WORDS: Thymoma, middle mediastinum, ectopic, myasthenia gravis.

CASE REPORT

A 60-year-old female was evaluated for recurrent episodes of left ptosis and slurring of speech over a period of one year and diagnosed to have myasthenia gravis. There was no past history of diabetes mellitus or hypertension or tuberculosis. Her family history was unremarkable. Blood investigations revealed raised serum acetyl choline receptor antibodies. Chest x-ray revealed an abnormal mediastinal radio opacity .She was further evaluated with contrast enhanced CT thorax which demonstrated a solitary heterogeneously enhancing soft tissue density lesion involving middle mediastinum extending to the superior mediastinum towards right side occupying the right paratracheal location. There was no evidence of calcification. Lesion is noted between the brachiocephalic vessels, trachea, superior vena cava, ascending aorta and right pulmonary artery.

Inferiorly it was extending upto the level of carina. Patient underwent mediastinal tumour excision via sternotomy. Intraoperatively there was a mediastinal tumour with good planes lying between the right pulmonary artery inferiorly, right subclavian artery superiorly, trachea medially and the SVC and right brachiocephalic vein laterally. HPR report was consistent with thymoma. Postoperative period was uneventful.

DISCUSSION

Most thymomas are found in anterior mediastinum because of the proper location of thymus. Thymoma is the most common anterior mediastinal tumour in adults and account for about 15-20% of primary mediastinal masses. They are most common in patients aged 50-60years.

In relation to its location, 75% occupy the anterior mediastinum, 15% the anterior and superior mediastinum, 6% the superior mediastinum and ectopic thymoma accounts for only 4%. Only a few thymic masses arising out of the anterior mediastinum have been described in the literature, and these have been found in an ectopic thymus location such as the neck, pulmonary hilum, or posterior mediastinum. In particular a thymoma arising in the middle mediastinum is extremely rare and is considered to be associated with mismigration of thymic gland tissue.

The thymus arises embryologically from the third pharyngeal pouch and probably fourth branchial pouch and migrates into the antero-superior mediastinum. Failure of the thymic gland to migrate during embryogenesis leads to ectopic thymic tissue. Based on the previous reports, ectopic thymic tissue may be present in the retro-innominate vein area, and adipose tissue surrounding the thymus which occasionally contains some thymic tissue, often has continuity with pleural or hilar adipose tissue. Thus, it is possible for thymoma to be located in the middle mediastinum. Only 13 previous case reports exist in the English literature.

Middle mediastinal thymoma shows similar imaging features as that of anterior mediastinal thymoma except for its rare location. It is notable that the tumour location was in the right side of the paratracheal area in all cases. The reasons for tumours presenting in the right side of the trachea are not known and may include the ectopic thymic tissue being present in the right side of retro innominate vein area, embryonically or anatomically.

Approximately 50% of patients with thymomas suffer from myasthenia gravis and approximately 15% of patients with myasthenia gravis have thymic tumours.

Differential diagnosis of middle mediastinal solid masses includes lymphadenopathy due to malignant lymphoma, sarcoidosis, Castleman's disease, metastasis and tracheal lesions. Neurogenic tumours and mediastinal goiters can also occur in the middle mediastinum.

FIGURES

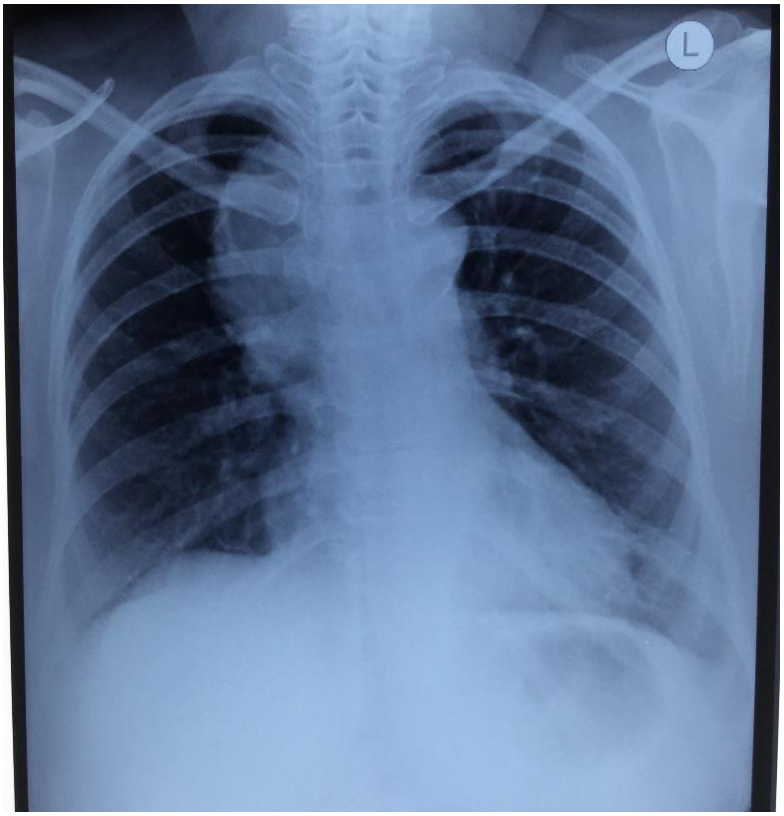

Fig. 1: Chest X-ray showing a well-defined mediastinal radio opacity in the right paratracheal location.

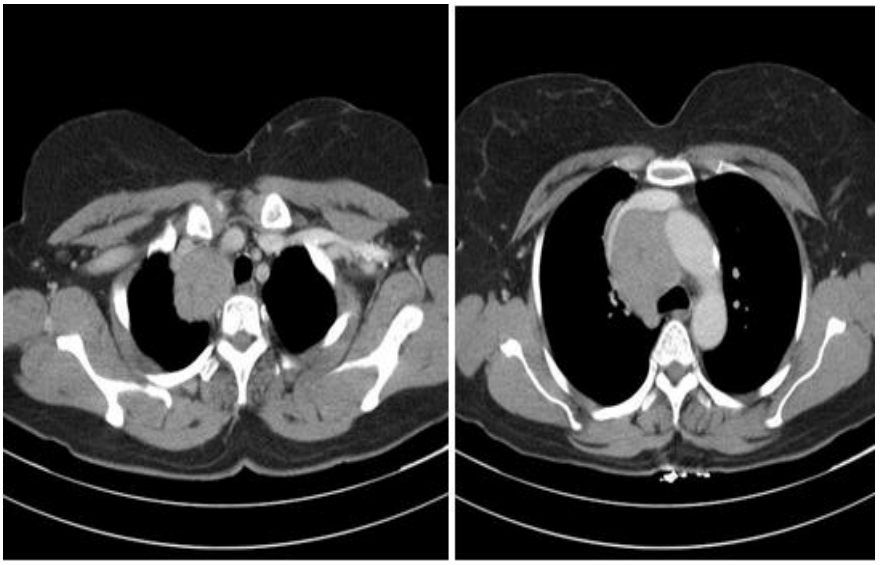

Fig. 2: Contrast enhanced axial CT sections of thorax showing enhancing lesion in the middle mediastinum extending to superior mediastinum.

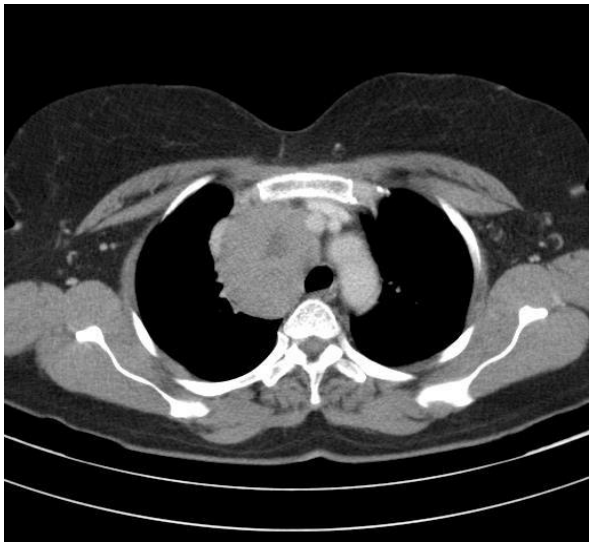

Fig. 3: Contrast enhanced CT section showing heterogeneous enhancement of the lesion.

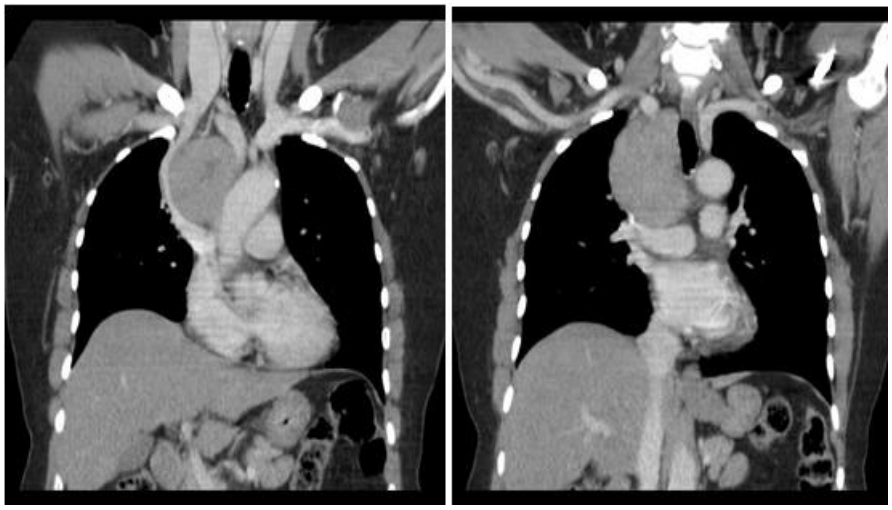

Fig. 4: Coronal CECT sections showing the lesion between the mediastinal vessels and right paratracheal location.

CONCLUSION

Thymomas are not usually considered in the differential diagnosis of middle mediastinal masses. Rarely thymoma can also arise in the middle mediastinum. So in view of the malignant potential and long-term survival of patients after complete resection, thymomas should also be considered as a differential diagnosis for middle mediastinal masses.

SOURCE OF SUPPORT –Nil.

CONFLICT OF INTEREST –None declared.

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