

ECTOPIC THYMOMA: A CASE FOR MEDIAN STERNOTOMY FOR COMPLETE THYMECTOMY

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ABSTRACT

Thymomas are normally found in the superior mediastinum or the upper part of the anterior mediastinum. We report a case of thymoma arising in the inferior aspect of the anterior mediastinum. This case illustrates that thymic tissue may be found low in the anterior mediastinum and supports the practice of a median sternotomy approach for thorough mediastinal exploration in all cases of thymectomy.

Keywords : Ectopic thymoma, thymectomy.

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INTRODUCTION

The thymus gland is normally situated in the superior mediastinum or the upper part of the anterior mediastinum. During its development, it arises from the third and fourth pharyngeal pouches and descends into the thorax. Small accessory nodules of thymic tissue may be found in the neck or the main thymic tissue and may continue upwards as thin strands into the neck along its developmental path⁽¹⁾. Thymic tissue may rarely be found in the lower anterior mediastinum and thymoma arising from such ectopic thymic tissue must be an even rarer occurrence. We report one case of a malignant thymoma arising in such a location.

CASE REPORT

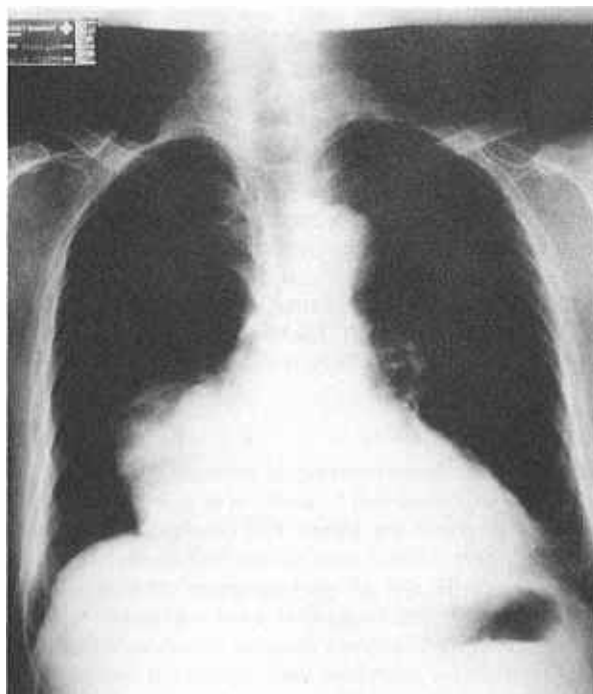
In December 1990, an 83-year-old Malay man was admitted to the National University Hospital for dyspnoea of three months duration. A chest roentgenogram showed a well defined mass in the right lung field lateral to the heart border. (Fig 1 and 2). A CT scan of the thorax showed a large lower mediastinal mass of soft tissue attenuation measuring 6.5 x 7 x 7 cm anterior to but separate from the heart (Fig 3). The mass extended from the level of T6 to T10. The initial clinical diagnosis was that of a dermoid tumour or a lymphoma. A fine needle aspiration biopsy was done and revealed a malignant spindle cell type thymoma. A mediastinal exploration and resection of tumour was performed through a median sternotomy. At operation the tumour measuring 15 x 10 x 7 cm was localized in the lower aspect of the anterior mediastinum adjacent to the right pericardial border. It infiltrated the pericardium and was adhered to the adjacent lung tissue. Partial pericardectomy and

staple-assisted resection of the lung tissue was performed concurrent with tumour resection. Mediastinal exploration showed no other thymic tissue in the rest of the anterior mediastinum or lower neck. Histopathological examination showed a spindle cell type thymoma of low grade malignancy. On review of the patient's symptoms, there were no symptoms suggestive of myasthenia gravis. In view of the patient's advanced age it was decided to closely follow up the patient with periodic CT scans and no adjuvant chemotherapy or radiotherapy was offered.

DISCUSSION

There have been many excellent reports on tumours arising from the thymus. Few of these series emphasise the location of the thymomas. In Herlitzka's series⁽²⁾ it was noted that 90% of thymomas arise in the anterior superior mediastinum. In Keyne's study⁽³⁾ the most characteristic position of thymic tumours was that overlying the root of the aorta and the upper part of the pericardium. Wychulis et al⁽⁴⁾ state that thymomas are characteristically situated at the base of the heart. Thymoma arising from the anterior inferior mediastinum is not common. Cohn⁽⁵⁾ mentions two such cases in his series of 70 thymomas. Thymic tumours have been reported to occur in abnormal situations such as in a completely intrapulmonary location⁽⁶⁾, be-

Fig 1 - Posteroanterior chest roentgenogram of the patient showing mediastinal mass



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Fig 2 - Lateral chest roentgenogram of the patient showing the lower anterior mediastinal mass

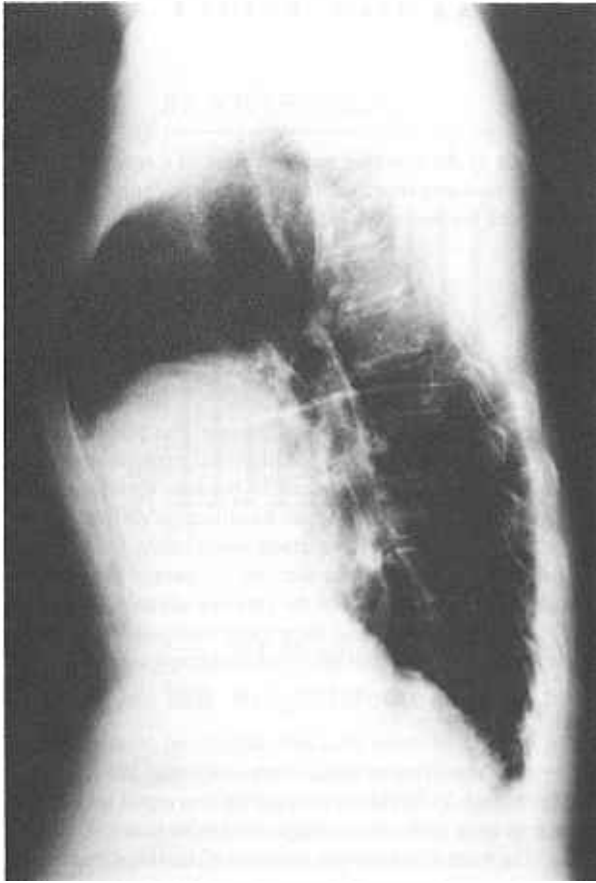
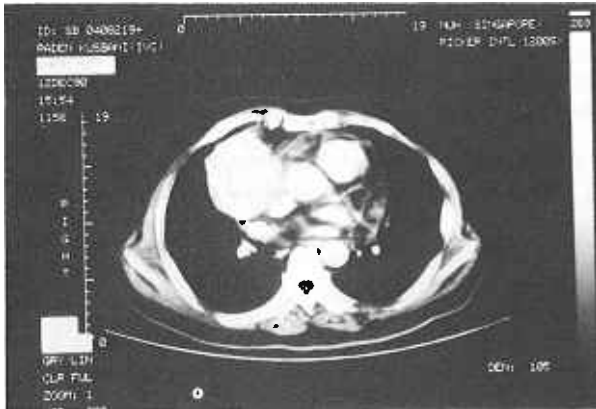


Fig 3 - CT scan of thorax at level of T8



hind the superior vena cava⁽⁷⁾ and in the posterior mediastinum⁽⁸⁾. We report this case as an unusually situated thymoma arising from ectopic thymic tissue in the lower aspect of the anterior mediastinum. The frequency of such an occurrence is unknown as most reports do not differentiate the anterior mediastinum into upper and lower segments.

At present, there is still some contention as to the surgical approach for complete thymectomy. There are surgeons who profess that total extirpation of the thymus is only possible through a sternal approach⁽⁹⁾, whereas others feel that it is possible to remove the thymus completely through a suprasternal approach⁽¹⁰⁾ or partial sternal splitting approach⁽¹¹⁾. The fact that thymic tissue may arise in the lower anterior mediastinum supports the use of a median sternotomy approach for total thymectomy as this part of the anterior mediastinum is inaccessible to a cervical approach. Our policy is to perform all thymic resection through a complete median sternotomy approach in order to achieve a complete anterior mediastinal clearance.

SUMMARY

In a review of the literature, Cohn⁽⁵⁾ describes 2 cases from his series of 70 cases of thymoma arising from similar location. We fail to find any other report of thymoma arising in a similar location in the lower aspect of the anterior mediastinum. Most authors do not differentiate the anterior mediastinum into upper and lower aspects and it is likely that other such cases may have been previously seen. Certainly such a finding supports the practice of a median sternotomy approach for a thorough mediastinal exploration to excise all thymic tissue in cases of myasthenia gravis and resection of thymoma.

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