Giant ectopic pericardial thymoma

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Introduction

Thymic tissue can occur outside the capsule of the thymus and is commonly found in the anterior mediastinum embedded in extrathymic fatty tissue. Unusual cases of ectopic thymoma have been described in the neck and cervical region as well as in the pulmonary hilum, lung parenchyma and pericardium. Till date there is no report of a giant ectopic pericardial thymoma.

Case Report

A 62-year-old lady presented with a history of recurrent chest infections, and she also had significant weight loss over one year. Her heart rate was 80 beats per minute and blood pressure was 140/90 mm Hg. On auscultation there was decreased air entry in the right lower lung zones. All other systems were normal. On investigation her erythrocyte sedimentation rate was 30mm at one hour and, all other laboratory parameters were normal. Chest X-ray showed a large opacity, occupying the right lower and mid hemiltorax merging with the heart shadow. Computed tomography revealed a large well-defined mass occupying the right lower hemi-thorax with minimal pleural effusion. Preoperative cardiovascular evaluation was normal except for hemodynamically insignificant extrinsic right atrial compression on echocardiography. The patient was taken up for surgery with a preoperative diagnosis of a benign pleural or pulmonary tumour. The mass was approached by a right posterolateral thoracotomy through the sixth intercostal space. A large mass was found arising from the right lateral pericardium just above the diaphragm, a leash of blood vessels were found entering the mass from the pericardium. There was no infiltration of the adjacent pleura or pulmonary parenchyma. The 16 x 13 x 9 cm mass was excised with a collar of pericardium. Cut section showed a nodular grey white surface with intervening fibrous strands and histopathology revealed a lympho-epithelial type of thymoma with few spindle cell elements and no capsular infiltration. The patient made an uneventful recovery and was discharged on the fifth postoperative day.

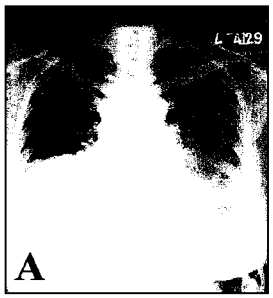

Fig. 1A. Chest X-ray showing a large opacity occupying the right hemi thorax.

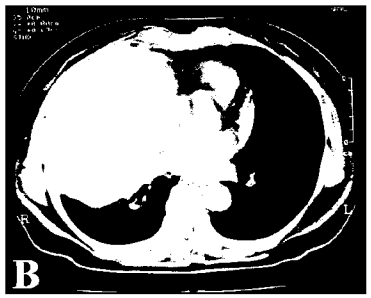

Fig. 1B. Computed tomography of the chest showing a large mass arising from the mediastinum.

Fig. 2A. Excised specimen of the well encapsulated mass.

Fig. 2B. Cut section showing a nodular surface.

Discussion

Thymoma is the commonest tumour of the anterior mediastinum. But its occurrence in ectopic locations is not uncommon, particularly in the neck, in relation to the inferior parathyroid gland to which it is embryologically related[1]. The origin of ectopic thymoma

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is postulated to be either due to thymic remnants along its embryological pathway or due to monodermal teratomas[1]. Thymoma is also associated with various immunological syndromes, making their diagnosis and surgical excision important[2]. Unusual ectopic locations have been reported in the pulmonary parenchyma[1], hilar region, pericardium[3] and in the posterior mediastinum[4]. Pericardial origin of thymoma has also been previously reported[3]. But unlike this case, where the tumour growth was into the right thorax, the one reported by Iliceto et al[3] was located on the visceral pericardium and was intra-pericardial.

Diagnosis of thymoma can be suspected from the chest x-ray and computed tomography when the mass is in the anterior mediastinum[5]. Fine needle aspiration cytology and needle biopsy are avoided to preserve the capsular integrity. Diagnosis is confirmed by histopathology and, rarely there is difficulty in pathological diagnosis necessitating immuno-histochemistry and lymphocyte marker studies to make the diagnosis[6]. In our case the diagnosis of an ectopic thymoma was not suspected, because the computed tomography of the chest revealed a large mass in the right lower hemithorax in close proximity to the heart and it was relatively asymptomatic and did not have features of malignancy such as infiltration, mediastinal lymph nodes or significant pleural effusion. We preferred to do exploratory thoracotomy as excision of the mass was inevitable and there was no need to subject the patient to a needle biopsy and take risk of contaminating the pleural cavity.

At surgery the mass was well capsulated, originating with a broad pedicle from the pericardium over the right atrium and ventricle. Taking care not to breach the capsule the giant thymoma was removed with a cuff of pericardium.

In conclusion thymoma may occur in unusual locations such as the pericardium and can grow to large proportions before becoming symptomatic. Rarely patients present with immunological syndromes related to the thymoma that maybe fatal when diagnosis and surgical therapy is delayed. Diagnosis is rarely made preoperatively when thymoma occurs in unusual locations. A high index of suspicion is necessary to avoid breaching the capsule by needle biopsy. Complete surgical excision without breach of the capsule can result in cure.

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