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Case Report

A rare case report of a young female patient with thymoma presenting as hemothorax and hemopericardium

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ABSTRACT

Thymoma is a rare neoplasm affecting adults between the fourth and sixth decades of life. Although its mostly diagnosed incidentally, there has been rare cases presenting with hemothorax or hemopericardium. We describe the case history of a 31-year-old Asian female presenting with sudden onset breathlessness and sharp chest pain with chest X-ray and ECHO consistent of massive pericardial effusion and bilateral pleural effusion. Fluid analysis showed plenty of RBC without any evidence of malignant cells. CECT Thorax showed an anterior mediastinal mass whose histopathology confirmed a type AB Thymoma. The patient is currently undergoing neo-adjuvant Chemotherapy and is planned for surgical resection once the tumour becomes operable. This case report describes a young female with an unruptured thymoma presenting with bilateral hemothorax and hemopericardium.

Keywords: Thymoma, Hemothorax, Hemopericardium, Young patient

INTRODUCTION

Thymomas and thymic carcinomas originate from the epithelial cells of the thymus within the anterior mediastinum. They are the most common mass of the anterior mediastinum. They account for approximately 20% of all mediastinal neoplasms. They commonly occur between the fourth and sixth decades of life. No sexual or racial predilection exists. Patients with thymomas or thymic carcinomas present in one of three ways: An incidental finding on imaging in an asymptomatic patient. A patient symptomatic due to the local compressive effects of the mass within the thoracic cavity (e.g., dyspnoea, cough). A patient symptomatic due to a paraneoplastic syndrome.[1]

CASE REPORT

A 31 year old Asian female with nil comorbidities presented to the casualty with history of sudden onset breathlessness and chest pain for 1 day duration. The breathlessness persisted with no diurnal or postural variation. There were no aggravating or relieving factors. The chest pain was sharp in nature and was felt on either side. It aggravated upon taking deep breaths and there were no relieving factors.

No history of fever, cough or haemoptysis. No significant past history of lung infections and no significant family history. After obtaining informed consent from the patient.

On examination

Patient was afebrile, tachypnoeic with a respiratory rate of 34/min, pulse rate of 110/min, blood pressure-90/62 mmHg and hypoxemia with oxygen saturation of 86% at room air. Cold peripheries were noted.

Systemic examination

Respiratory system: Bilateral breath sounds heard with reduced intensity of breath sounds in bilateral infra-axillary, infrascapular and right mammary areas.

Cardiovascular system: Muffled heart sounds heard.

Abdomen examination: Soft, non-tender, no hepatosplenomegaly.

Cranial nervous system: Conscious, oriented, no focal deficits.

Diagnostic assessment

Blood routine: Haemoglobin-14.7 g/dl, total count-10180 cells/cumm, platelets-3.375 lakh cells/cumm.

Liver function tests, renal function tests, serum electrolytes-within normal limits.

Chest X-ray showed blunting of bilateral costophrenic and cardio-phrenic angles with homogenous opacity in bilateral lower zones with cardiomegaly.

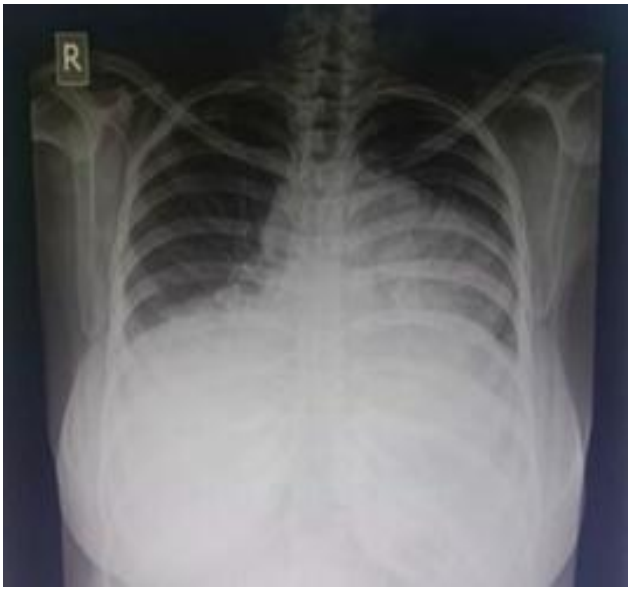

Figure 1: X-ray chest PA view.

2D ECHO showed massive pericardial effusion with bilateral pleural effusion. Immediate pericardiocentesis was done and haemorrhagic fluid was drained. Needle thoracostomy was done and 10 ml of similar fluid was aspirated and sent for analysis.

Fluid analysis showed blood tinged or turbid fluid with 800 cells/cumm with N 10%, L 90%, RBCs plenty (+++) with macrophages and mesothelial cells present in singles and clusters. Malignant cells were absent. Fluid albumin-3 g/dl, LDH-363 IU/L, protein 4.9 g/dl, sugar 49 mg/dl. Fluid Gram staining showed occasional pus cells with no organism seen and culture and sensitivity yielded no growth.

CECT thorax showed a relatively well-defined heterogenous lesion in prevascular space of anterior mediastinum with cystic areas and punctate calcifications. PET CT showed no evidence of metastasis.

Histopathology showed morphological features of thymoma showing predominant epithelial component and few lymphocytes with an intact capsule.

IHC done with Tdt, CD45, CK5/6, PAX8 are diffuse and strongly positive suggestive of thymoma of AB type.

Therapeutic intervention

Patient is currently undergoing neoadjuvant radiotherapy and is planned for surgical resection after the tumour size becomes operable.

DISCUSSION

Thymoma is a rare neoplasm originating from the thymic epithelium, with an incidence of 0.13 per 100,000 person-years, and is identified incidentally on imaging in asymptomatic patients. Rarely, a pericardial effusion may be the initial manifestation of thymoma, and in severe cases it can result in cardiac tamponade.[2] Basha et al described the case of a 66-year-old male with large, bloody pericardial effusion, which was later diagnosed as an invasive type B3 thymoma.[2] Hokka et al describes the case of a 77-year-old female with a non-traumatic hemothorax following a ruptured thymoma.[3]

To the best of our knowledge, there is no review of literature for thymoma presenting as bilateral hemothorax and hemopericardium. Although thymoma is exceedingly uncommon in children and young adults, our case describes a 31-year-old, making this report all the more important.[4]

This case report brings insights to the fact that unruptured thymomas can also present with bilateral hemothorax and hemopericardium as this case was diagnosed on the basis of histopathology, and not on the basis of fluid analysis.

CONCLUSION

Thymoma has a variety of presentations but without an aggressive disease profile, it is often asymptomatic. This case report describes a young female with an unruptured thymoma presenting with bilateral hemothorax and hemopericardium. It was diagnosed on the basis of histopathology and not on the basis of fluid analysis.

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