Case Report

Mediastinal Haemangioma with Pericardial Effusion: A Rare Entity

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ABSTRACT

Mediastinal haemangioma is a rare benign vascular tumour. A young male presented with complaints of cough and dyspnoea. Serial chest radiographs were suggestive of progressive mediastinal widening and cardiomegaly. Pericardiocentesis revealed haemorrhagic fluid which was negative for microbiology and malignant cells. Patient was unresponsive to antituberculosis treatment and steroids. Computed tomography (CT) of thorax revealed an anterior mediastinal mass lesion with pericardial effusion which on biopsy was found to be a mediastinal haemangioma.
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Key words: Mediastinal mass, Pericardial effusion, Mediastinal haemangioma.

INTRODUCTION

Mediastinal haemangioma is a rare entity and is a benign vascular tumour. It is considered to be a developmental anomaly and is usually located in the anterior mediastinum. The patients are usually asymptomatic and the diagnosis is established on excision biopsy after imaging. Only a few cases of mediastinal haemangioma have been reported and very few have been reported to invade adjacent structures. We report one such case of this rare entity.

CASE REPORT

An 18-year-old male, student from New Delhi presented with complaints of cough for four years, that had worsened in the last two months with progressively increasing dyspnoea. He also complained of generalised weakness for two months. There was no history of wheezing, expectoration, haemoptysis, chest pain or fever.

Serial chest radiographs over the last four years revealed progressively increasing mediastinal widening and cardiomegaly. Pericardial tap done at another hospital was haemorrhagic and the fluid was negative for acid-fast bacilli (AFB) on smear and culture and cytology revealed no malignant cells. In view of the haemorrhagic pericardial effusion and tuberculosis being the most common cause of pericardial effusion in India, antituberculosis treatment (rifampicin, isoniazide, ethambutol and pyrazinamide) along with steroids was started. The patient's symptoms were not relieved with this treatment.

On presentation, the general physical examination was normal. The patient was haemodynamically stable and afebrile. Systemic examination revealed diminished intensity of heart sounds with no other remarkable finding.

Routine investigations revealed a normal haemogram and biochemical parameters. Direct sputum smear was negative for AFB. Chest radiograph was suggestive of mediastinal widening and cardiomegaly (Figure 1). Echocardiography showed a massive pericardial effusion. Approximately, 700 mL of pericardial fluid was

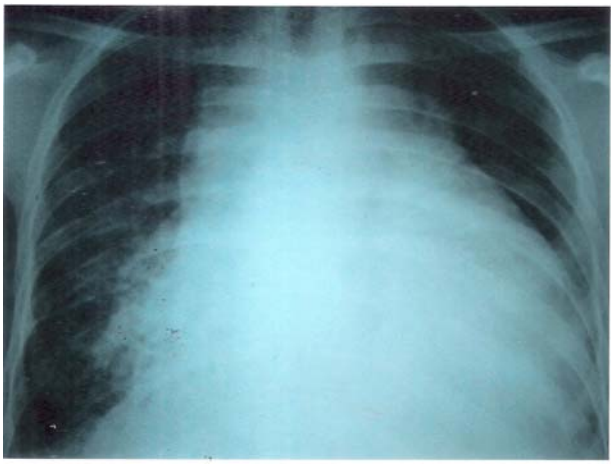

Figure 1. Chest radiograph (postero-anterior view) showing mediastinal widening and cardiomegaly.

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aspirated that was haemorrhagic and again no AFB or malignant cells were found. A repeat chest radiograph showed persistent mediastinal widening and cardiomegaly. A CT thorax was done to confirm the anatomical diagnosis. It showed an anterior mediastinal mass (Figure 2). On coronal section, mass was showing heterogeneous attenuation with a pericardial effusion (Figure 3).

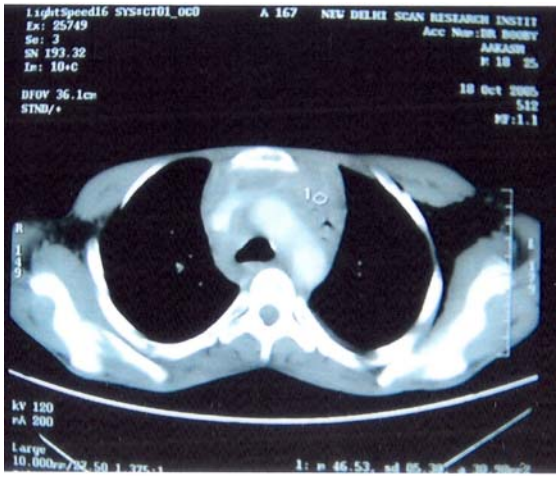

Figure 2. CT thorax (transverse section) showing an anterior mediastinal mass.

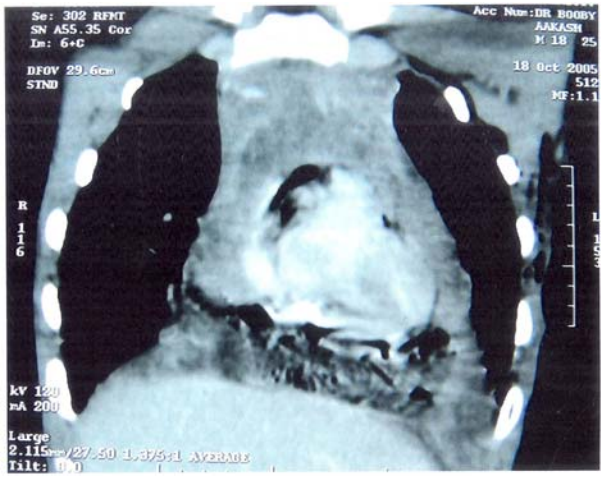

Figure 3. CT thorax (coronal view) showing anterior mediastinal mass with heterogeneous attenuation associated with a pericardial effusion.

The patient then further underwent mediastinotomy that showed a 1.5cm oval-shaped reddish-brown soft mass limited by a capsule in the anterior mediastinum adjacent to the pericardium. It was highly vascular and bled on touch. This lesion was excised. Histopathological examination of the excised lesion, showed variable sized blood vessels with irregular sinusoid like spaces. Fibro fatty stroma and hemosiderin laden macrophages were also seen (Figure 4). This confirmed the diagnosis of a mediastinal haemangioma with pericardial effusion.

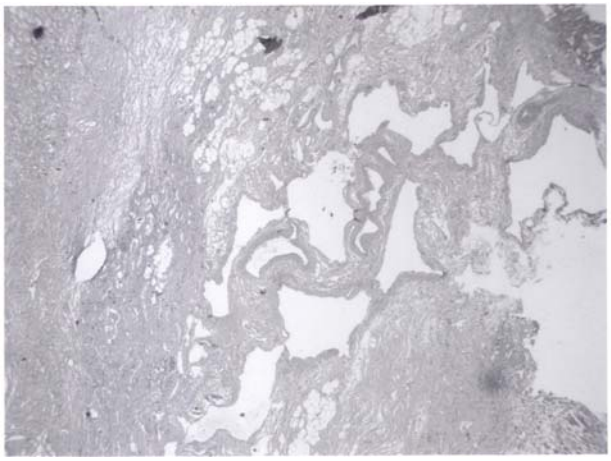

Figure 4. Histopathological examination of the biopsy specimen showing variable sized blood vessels along with fibro fatty stroma and hemosiderin laden macrophages (Hematoxylin-Eosin stain x 100).

The patient improved clinically and has been asymptomatic for the last one year on follow-up.

DISCUSSION

A mediastinal haemangioma is a rare, benign vascular tumour. It constitutes about 0.5% of all mediastinal tumour. It is usually seen in patients below 35 years of age. The incidence is equal in males and females.[1]

It is frequently contained in a compartment but may infiltrate adjacent structures. Most occur in the anterior mediastinum and a few in the posterior mediastinum.[1] According to a study of 18 cases of mediastinal haemangioma, 14 were located in the anterior mediastinum and four in the posterior mediastinum.[2] They are classified according to the size of their vascular spaces into capillaries, cavernous or venous haemangioma.[1]

It is usually asymptomatic in half of the patients but may present with cough, dysponea, chest pain, stridor or hoarseness of voice in others. Associated lesions in the mediastinum, skin, spleen, liver and kidneys have been recognised.[2] A chest radiograph shows mediastinal widening, while a CT of the thorax shows a well-marginated round or lobulated mass lesion. These lesions may show heterogeneous attenuation, punctate calcification or phleboliths. After intravenous contrast material, these lesions usually enhance heterogeneously. Calcified phlebolith are thought to be reasonably specific and are seen in upto 10% on chest radiography but probably more frequently on the CT.[1] Radionuclide scanning with ^{99m} Tc-MDP in these lesions may show significant uptake.[3] A case of anterior mediastinal haemangioma was found to be adherent to the superior vena cava, ascending aorta and right phrenic nerve but not invading the surrounding structures.[4] In another case

report,[5] an anterior superior mediastinal haemangioma was adherent to the pericardium in a 17-year-old female. It was associated with pericardial effusion in a case report of a 6 week-old girl child.[6] In another case it presented as a right supraclavicular swelling with no respiratory complaints.[7]

The treatment is surgical excision though sclerotherapy had been tried in few cases.

In conclusion, a mediastinal haemangioma should be considered in the differential diagnosis of a well-marginated mediastinal mass lesion with heterogeneous attenuation.

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