PERICARDIAL MESOTHELIOMA PRESENTING AS A MEDIASTINAL MASS

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ABSTRACT

A case of malignant mesothelioma of the pericardium, who presented with an anterior mediastinal mass, is reported. Such a presentation of the pericardial mesothelioma is distinctly rare. As in most of the other reported cases, our patient also did not have any exposure to asbestos. The diagnosis in the present case was established after surgery. Most of the cases reported in the literature, were diagnosed only at postmortem. The treatment of choice is surgical resection of the tumour. The prognosis of pericardial mesothelioma is poor and till now, only two long survivals have been reported.

Keywords : Mesothelioma, pericardial neoplasm, pericardial effusion.

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INTRODUCTION

Diffuse malignant mesothelioma is a tumour which arises from the mesothelial cells or possibly a more primitive precursor cell situated sub-mesothelially. The tumour most commonly arises from the pleura. An origin of this tumour from the pericardium is rare. We report a case of malignant mesothelioma of the pericardium presenting as an anterior mediastinal cystic mass. A brief review of the literature is presented.

CASE REPORT

A 32-year old man was admitted to our hospital with the complaint of heaviness in the left side of the chest for one month. He did not have any breathlessness, loss of appetite, loss of weight, cough, facial puffiness or hoarseness of voice. He was a teacher by profession. There was no history of exposure to asbestos at any time in the past. The general physical examination and the examination of the abdomen and the cardiovascular system were unremarkable. On percussion of the chest, the note was dull in the left mammary and inframammary areas anteriorly while on auscultation, the air entry was diminished in the same areas.

Investigations showed normal haemogram and liver function tests. X-ray showed evidence of a large anterior mediastinal mass extending into the left hemithorax (Fig 1). A computerised axial tomogram (CT) scan of the chest revealed a cystic mass in the anterior mediastinal extending into the left side of the hemithorax (Fig 2).

Fig 1 - CXR of patient at admission showing an anterior mediastinal mass on the left side.

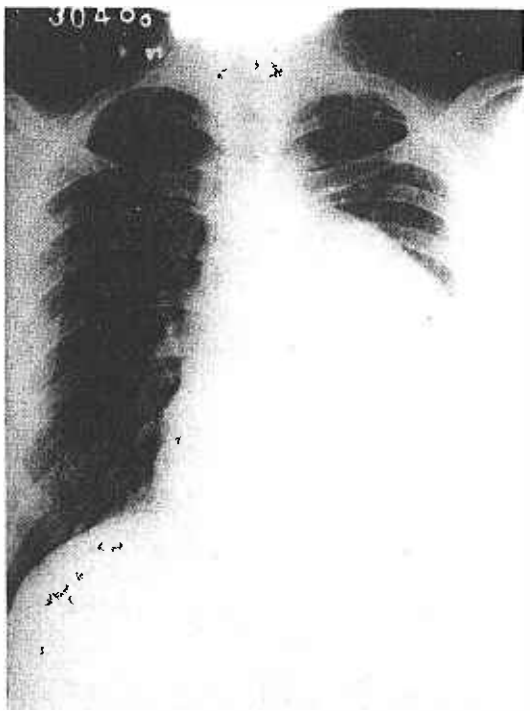
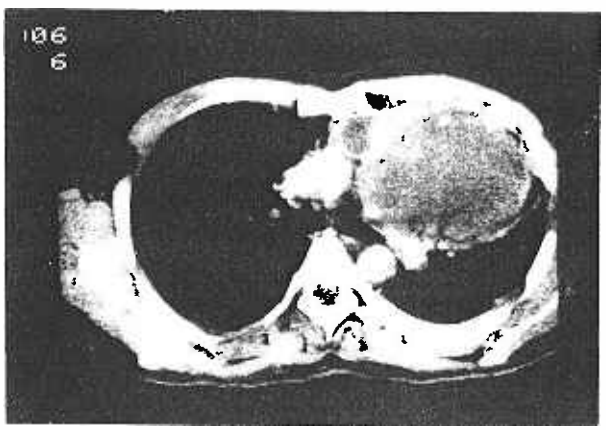


Fig 2 - CT scan of the chest showing a large cystic mass in the anterior mediastinum extending into left hemithorax.



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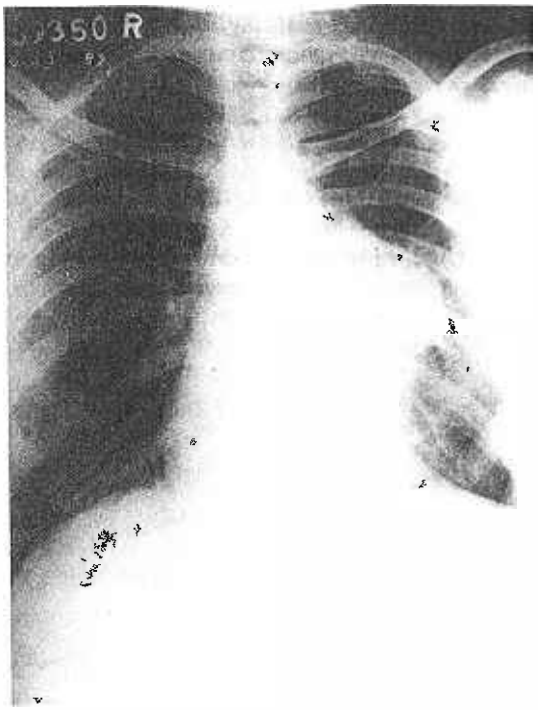
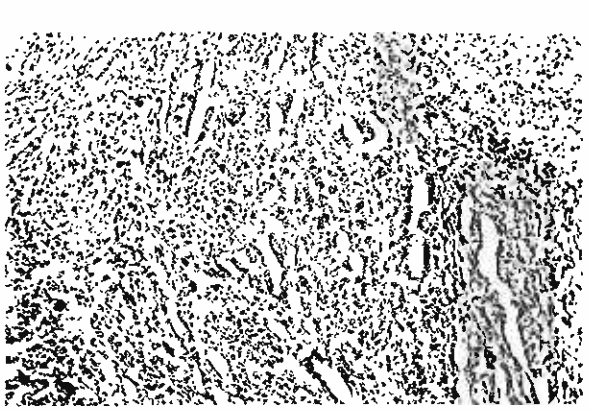
An aspiration of the mass was done under ultrasound guidance. About 200 ml of haemorrhagic fluid was aspirated which on cytopathological examination did not reveal any malignant cells. A repeat CXR after aspiration showed a significant collapse of the mediastinal mass (Fig 3).

Fig 3 - CXR after aspiration of the mass. Note marked reduction in the size of the mass.



With a preoperative diagnosis of a thymic cyst or a necrotic thymic tumour, the patient was taken up for surgery. At surgery, a tumour arising from the left lateral pericardium was found. It measured about 12 x 10 x 4 cm in size and had a large necrotic centre. The tumour was removed by blunt dissection but the surgical excision was not complete. The histopathological examination of the tumour showed a thick capsule deep to which was spindle-cell sarcomatous stroma containing numerous cleft-like spaces. These spaces were linked by flattened mesothelial cells showing pleomorphism and plenty of mitotic figures (Fig 4). Special stains for mucin were negative. A diagnosis of malignant mesothelioma of the pericardium was made.

Fig 4 - Histological section of the tumour showing epithelial and sarcomatous areas along with foci of necrosis (H+E X/250).



DISCUSSION

Mesothelioma of the pericardium is uncommon, although it is the most frequent primary tumour of the pericardium and accounts for about half of the pericardial tumours[1]. In a large autopsy series of 500,000 cases, the incidence of primary pericardial tumours was below 0.0022%[2].

From India, only 4 cases of primary pericardial mesothelioma have been reported[3-6], and ours is the fifth case of such tumour. Though exposure to asbestos is present in most of the cases with pleural mesothelioma, it is rarely seen in patients with pericardial mesothelioma[7]. In the present case also, there was no exposure to asbestos at any time before presentation to us. A rare association of pericardial mesothelioma with tuberculosis has also been reported[3]. The clinical symptoms are mainly dyspnoea, cough, dysphagia and chest pain. Rare manifestations reported include cardiac tamponade[4], congestive heart failure[5,8], constrictive pericarditis[9], acute myocardial infarction[8,10] and rheumatic heart disease[11].

Presentation of pericardial mesothelioma as a mediastinal mass is distinctly rare[10,12]. In our case, the patient presented with a mediastinal cystic mass and a preoperative diagnosis of a thymic cyst was made. In about 3/4 of reported cases, the diagnosis was established only at postmortem. In the present case, we were able to confirm the diagnosis antemortem after the surgery.

The treatment of pericardial mesothelioma is surgical removal of the tumour, if possible. In the literature, only two patients with long survivals of 5 years and 2.5 years respectively have been reported[1,6]. The role of radiotherapy is not clear. For patients with unresectable disease, doxorubicin has been used although no patient has been cured with chemotherapy[13].

In this report, we have described a case of malignant pericardial mesothelioma who presented with a cystic mediastinal mass. Such a manifestation of this tumour is distinctly rare and this prompted us to report the present case.

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