

PERICARDIAL CYST --- A CASE REPORT



Medical Science

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ABSTRACT

Pericardial cyst is an uncommon, benign, congenital anomaly of the mediastinum. It is often an incidental diagnosis. The potential life threatening complications make surgical excision mandatory

INTRODUCTION:

Pericardial cyst constitutes 6 % of all mediastinal masses & 33% of all mediastinal cysts (Bronchogenic – 34 % , Enteric –12 % , Thymic ,etc – 21%). It usually does not present until middle age.

CASE REPORT:

A 65 year old gentleman , known case of Diabetes Mellitus , Benign Prostatic Hyperplasia & Chronic renal disease presented to the Medicine department with history of dyspnoea on exertion Class II – 1 year duration. Physical examination was unremarkable. Routine chest X-ray showed an oval shaped radio-opacity adjacent to the right heart border encroaching onto the right cardiophrenic angle. Its outer border was calcified. Plain Computerized Tomography scan (CT scan) (Fig. 1) displayed a well defined lesion , , in the anterior mediastinum, adjacent to the right border of the pericardium, extending from the ascending aorta to the right dome of diaphragm, 7.5 x 7.5 x 2 cm, attenuation co- efficient of 30-40 H.U . Peripheral rim is partly calcified. Fat planes between the mass & aorta and right atrium are maintained showed a solid mass adjacent to the right border of the pericardium .

Patient was taken for elective surgery . An ovoid mass (Fig. 2) 6 x 5 x 2 cm with a smooth surface (with blood vessels on the surface & part of the wall calcified) was found arising from a 1 cm diameter area of the pericardium adjacent to the distal SVC & SVC –RA junction. The mass was lying parallel to the right border of the pericardium upto the right cardiophrenic angle. Right Phrenic nerve was running along the posterior surface. Right pleura was free. Adhesions between the mass & the pericardium were released , the phrenic nerve was dissected off the mass , the point of origin of the mass from the pericardium was ligated & the mass excised in- toto (Fig. 2). The histopathological examination revealed the mass to be a Pericardial cyst with hemorrhage into the cyst (Fig. 3) . Patient was discharged on the 5th post – operative day.

DISCUSSION:

Pericardial cyst arises due to the failure of fusion one of the mesenchymal lacunae that form the pericardial sac. 75% are detected incidentally during routine chest x-ray or Echocardiography [1,2]. Size varies. 70 % are located in the right cardiophrenic angle, 22% in the left cardiophrenic angle , 8 % in the anterosuperior or posterior mediastinum [1,3]. It is always unilocular (unlike Lymphangiomatous cysts which are always multilocular)

Symptoms could be chest pain (due to hemorrhage into the cyst / infection or inflammation of the cyst , rupture of the cyst , torsion of the cyst or rarely compression of the Right Coronary artery in the right Atrioventricular groove) , cough or dyspnoea due to compression of the bronchus. Life – threatening complications [2,4 ,] are (i)cardiac tamponade (due to intrapericardial rupture of the cyst or hemorrhage into the cyst with sudden increase in size) (ii) arrhythmias (commonest is Atrial Fibrillation) (iii) sudden death due to rupture , (iv) obstruction of right main bronchus. Other complications are inflammation , infection, partial erosion into adjacent structures , obstruction of

right ventricular outflow tract causing congestive cardiac failure [3]. The rates of complications have not been reported. Spontaneous resolution by rupture into the pleural space can occur , but its incidence is not known.

Diagnosis is established by Contrast CT scan or Magnetic resonance imaging.

Surgical excision is curative. Video –assisted thoracoscopic surgery [5] is preferred to Thoracotomy . Non – surgical methods like CT guided aspiration (with or without injection of sclerosant like Alcohol) is reserved for cases where the co- morbidities preclude safe surgery as the recurrence rate is more than 30 %.



Fig. 1. Plain Computerized Tomography scan (CT scan) displaying a well-defined lesion in the anterior mediastinum, adjacent to the right border of the pericardium, extending from the ascending aorta to the right dome of diaphragm, 7.5 x 7.5 x 2 cm, attenuation co- efficient of 30-40 H.U . Peripheral rim is partly calcified. Fat planes between the mass & aorta and right atrium are maintained

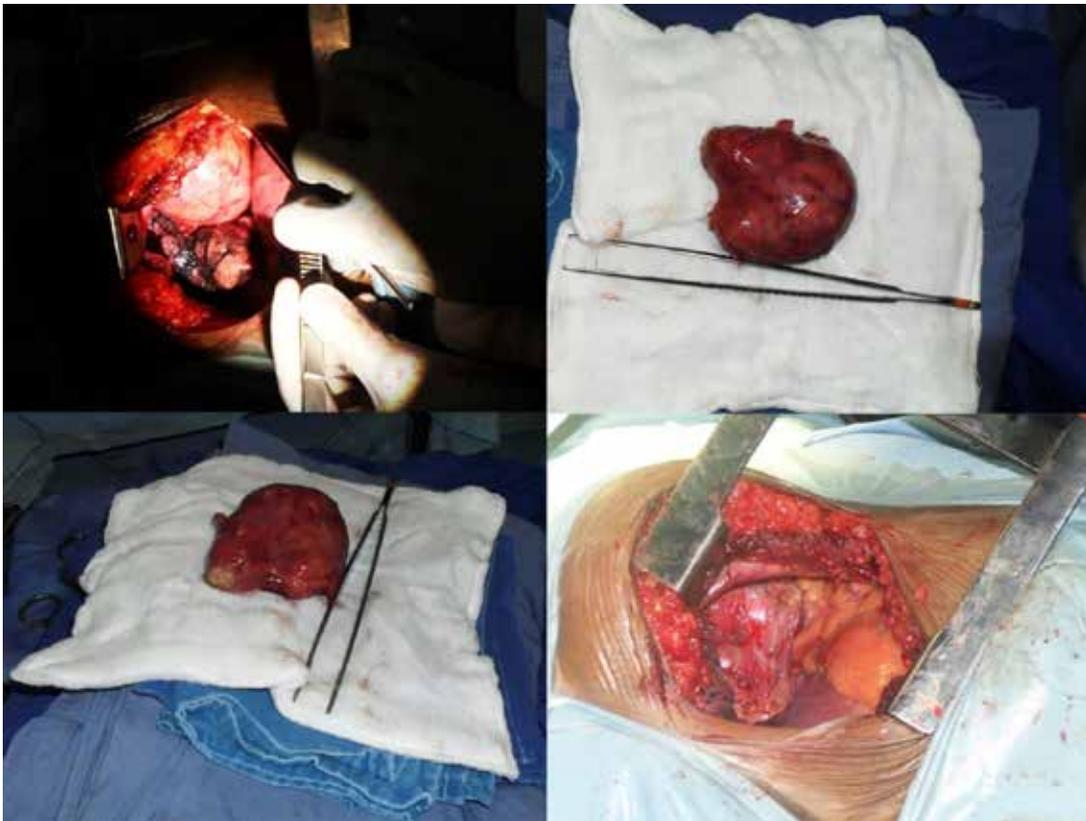


Fig. 2. Intraoperative photographs showing(i) the pericardial cyst visualised through a right anterior thoracotomy (ii) pericardial cyst excised in-toto with pedicle seen (iii) intact pericardium after excision of the cyst.

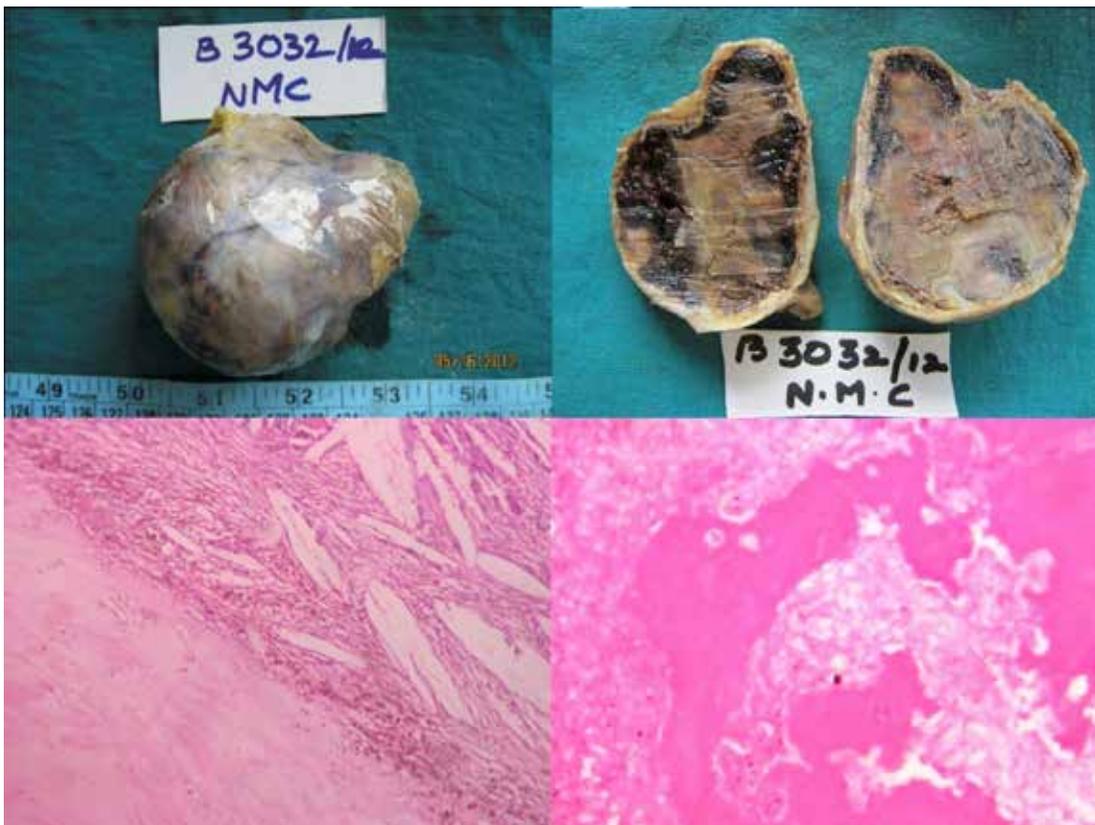


Fig. 3. Pericardial cyst specimen – whole and cut section showing hemorrhage into the cyst. Histopathology (low power and high power) confirmed the diagnosis of pericardial cyst with hemorrhage into the cyst.

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