International Journal Dental and Medical Sciences Research
Volume 6, Issue 5, Sep - Oct 2024 pp 201-203 www.ijdmsrjournal.com ISSN: 2582-6018

Left Cardiac Myxoma: A Report of Two Rare Cases

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Submitted: 20-09-2024 Accepted: 30-09-2024

ABSTRACT-
Atrial myxoma is a rare and benign tumor that arisesfrom connective tissue of heart.It is the most common primary cardiac neoplasm,more often seenin women aged 30 to 60 years. Most commonly arise in isolated (sporadic)manner (90%) with few (10%)associated with carney complex(hereditary syndrome). Left sided myxomas are more common and presents with signs of mitral stenosis or insufficiency .Right sided tumors present withdyspnea, syncope and distension of neck veins . Two dimensional echocardiography, CT, MRI, gatedradionuclide blood-pool scan, or cardiac catheterization all help in the diagnosis of myxoma. It is important to rule out Carney complex because chancesof recurrence are moreas compared to non syndromic myxomas.
Here we report two rare casesof left sided atrial myxoma in young male patients presented withcommon chief complaints of breathlessness and chest pain.

I. INTRODUCTION-

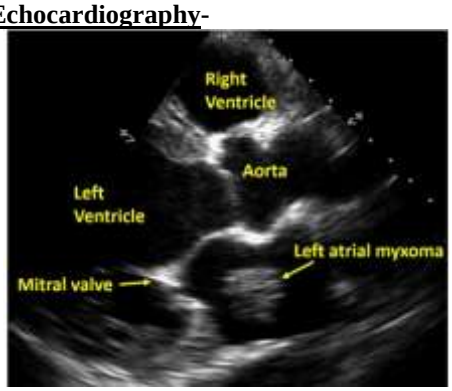
Atrial myxoma are the primary tumors of the heart. Their incidenceranges between 0.0017% and 0.03% worldwide. The prevalence of cardiac tumours at autopsy is 0.001% to 0.3% in which more than 50% aremyxoma.Over 72% of primary cardiac tumours are benign.In 7% it has genetic origin and arises as a component ofheritable disorder with some clinical manifestation[1],[2]. These are the benign neoplasms arising from primitivemultipotent mesenchymal cells.Two thirds of CarneyComplex-associated cardiac myxomas exhibit mutationsin PRKAR1A[3],[4].

II. CASE HISTORY-

CASE1-A 22 year male patientcame with complaints of acuteonset of breathlessness and chest pain since fourmonths.There was no history of cough, syncope and fever andno history ofsimilar complaints in the family. On local examination there was pallor but no cyanosis and clubbing. His vitalsand other lab investigationwere within normallimits.

On radiological investigations, x-ray showedmild cardiomegaly but x-ray film is not available and echocardiography revealed46x31 mm echogenic structure in left atrium attached to interatrialseptum.Intra-opfindings showed4.5x1cm,myxomatous mass attached to left atrial septum. Removal of left atrial myxoma viamidline sternotomy was done and the mass was sent for histopathological examination.

2D-Echocardiography-



CASE 2 - A18 year male patient presented with breathlessness on exertionsince 2 months.There was no history of cough, syncope and fever and no history of similar complaints in the family.
On local examination there was pallor but no cyanosis and clubbing.On radiological investigations, xray showed left atrial enlargement, mitral valve obstruction alongwith pulmonary edemaand2D Echo revealed large atrial myxoma5.1x3.7 cm with small central liquificationand was attached to interatrial septum along with associated mitral stenosis,early diastole anterograde flow,severe pulmonary artery hypertension, mild mitral regurgitation and tricuspid regurgitation but the scan is not available.Mitral valve replacement and removal of left atrial myxoma viamidline sternotomy was done and the mass was sent for histopathological examination.

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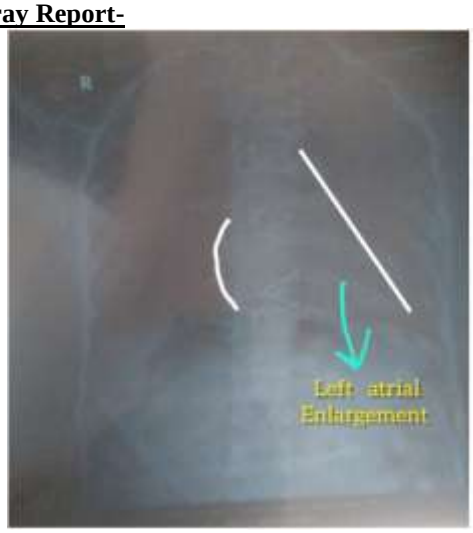
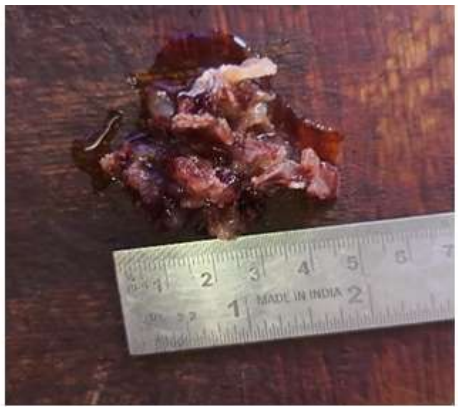
X-ray Report-



PATHOLOGICAL EXAMINATION-

Gross examination of case 1-

Received agrey brown soft tissue piece measuring 4.0x3.5cm, Outer surfaceappeared smooth and glistening. Cut surface showed greybrown myxoid areas.



Gross examinationof case 2-

Received asingle,globular specimen measuring 5.5x5.5x2 cm. Outer surface is gray-white to gray-brown smooth. Cutsurface shows gelatinous and hemorrhagic areas.

(Outer Surface)-(Cut Surface)-

MIROSCOPIC EXAMINATION-

Case1-Section from the tumour tissue shows stellate cells with abundant eosinophiliccytoplasm, indistinct cell borders, oval nucleus with openchromatin andindistinct nucleoli. These cells are surrounded by myxoidstroma. Section also shows edema and focal areas of hemorrhage along with mild chronic inflammatoryinfiltratecomprising of lymphocytes.

Fig.-AFig.B

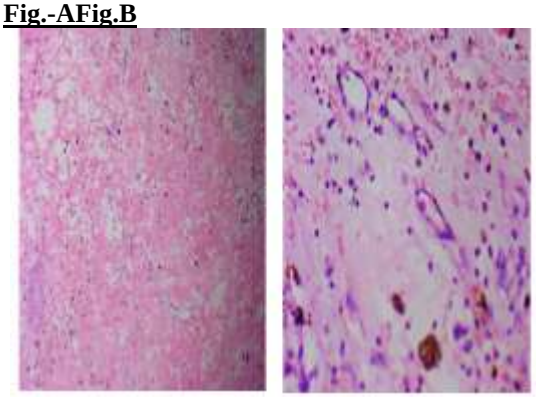


Fig.A-10xshowing edema **and** Fig.B- 40x showing inflammatory infiltrate with some myxoid areas**.**

Case2-Section from the tumour tissue shows stellate cells with abundant eosinophilic cytoplasm, indistinct cell borders, oval nucleus with open chromatin and indistinct nucleoli. These cells are surrounded by highly myxoid stroma. Section also shows focal areas of hemorrhage along with mild chronic inflammatory infiltrate comprising of lymphocytes.

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Fig.-AFig.B

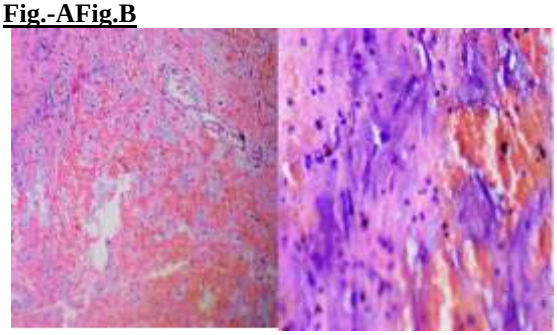

Fig.A- 10x view **and** Fig.B- 40x showing highly myxoid areas.

IMPRESSION- HISTOMORPHOLOGY IS CONSISTENT WITH ATRIAL MYXOMA

III. DISCUSSION-

Cardiac myxoma being a primary tumour of the heart, frequently occurs in the left atrium.The tumour may cause symptoms of left atrial obstructionand systemic embolization[5].

Myxomas occur most oftenin patients aged 30 to 60yrs, with female predominance, andin families with a tendency to develop myxomas[6].About85% of myxomas occur in the left atrium, 10% in the rightatrium, and 5% in the ventricles[7]. Atrial myxomas produce3 types of clinical presentation: obstructive, constitutional,and embolic[8].Obstruction mimics mitral and tricuspid valvedisease and occurs due to blockage of the atrioventricularvalves. The tumour can mimic mitral stenosis, andoccasionally an early diastolic rumbling sound called‘tumour plop’ may be heard during auscultation. Diastolicmurmurs are the most common murmur heard in up to89% of patients with cardiac myxoma[9]. Echocardiographyshows a nonhomogeneous mass almost filling the leftatrium completely and prolapsing through the mitralvalve into the left ventricle during diastole[10].

IV. CONCLUSION-

More than 90% of primary cardiac tumors are benign,with the majority in adults being myxomas.In infants and children the most common primary tumorof the heart is the rhabdomyoma. Less than 10% can be associated with carney’s complex. The prognosis for patients undergoing surgical resection of atrial myxomas isexcellent.The operative mortality rate does not exceed 5% with rapidpostoperative recovery.

The recurrent rates are 1% to 3% in sporadic cases,12% in familial cases, and 22% in complex atrial myxomas.Benign cardiac tumors as well, however, can haveclinically malignant consequences given the frequency ofendocardial or conduction system involvement.

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