Myxoma Of The Mitral Annulus*

P.K. AGARWAL
*RAMESH THAKUR***
L.C. GUPTA
V.K. PURI

SUMMARY :

A case of "Syndrome" cardiac myxoma involving the mitral annulus is reported. The correct preoperative diagnosis of this exceedingly rare site was established using two-dimensional echocardiography. The superiority of this simple atraumatic investigation over conventional angiocardiography for diagnosis of atrial myxomas is discussed.

Cardiac myxomas are the most frequent beingn tumoursni of the heart constituting nearly 50% of the primarycardiac tumours and are found almost exclusively in the atria; roughly 75% occur in left atrium[1]. Their localization is even more specific in that almost all of them attach to or overlie the fossa ovalis or its rim, but uncommonly may originate from a variety of locations within the atria; mitral annulus [2], mitral valve itself[3] or the inferior vena cava. The purpose of this report is to document an unusual case of myxoma of the mitral annulus and to emphasise the superiority of two dimensional echocardiography, a simple noninvasive technique, over conventional angiocardiography in the correct diagnosis of this notoriously ellusive condition, which was previously inaccessible except through invasive techniques.

CASE REPORT:

Patient L.D., a 27 years old housewife was referred to this unit for cardiac evaluation following an episode of right sided hemiplegia of sudden onset. There were no cardiac or constitutional symptoms. Physical examination revealed a resting heart rate of 84 bpm, regular. The central and peripheral pulses were normal, and blood pressure was 130/80 mmHg. There was no heart failure. Precordial examination revealed cardiac enlargement with left ventricular apex, palpable in the left sixth intercostal space in the midclavicular line. A mild left parasternal impulse was also present.

On auscultation, there was a loud first heart sound with a loud pulmonic component of second heart sound, in addition to the third heart sound (? tumour plop). A grade 4/6 apical pansystolic murmur and a short diastolic rumbling murmur of grade 2/6 were heard. There was no postural variation in these murmurs. Also, she had multiple freckles over face and a fibroadenoma of left breast. Haemogram was normal. ASO titre was 60 todd units. The electrocardiogram revealed sinus rhythm with left ventricular volume overload pattern (deep Q waves in leads III, avF and v5-6 of 3-6 mm) (Fig. 1A), and the chest radiograph showed mild cardiomegaly with pulmonary venous hypertension. Echocardiography (m-Line, two dimensional and doppler) demonstrated typical features of atrial myxomas with an abnormal echodense mass, attached to the mitral annulus (Fig. 1B; 2A and B). It measured 2 x1.5 cm, was adherent to the anterio-medical portion of annulus by a short peduncle on its atrial side and was freely mobile. There was free mitral regurgitation upto mid - left atrial cavity (peak flow velocity on CW probe was 5.2 m/sec. with a predicted left atrial v- wave pressure of 22 mm of Hg). Mitral valve leaflets were not thickened and left atrial size was normal. At cardiac

* From the Departments of Cardiology and Cardiothoracic Surgery, King George's Medical College, Lucknow-226 003, India.

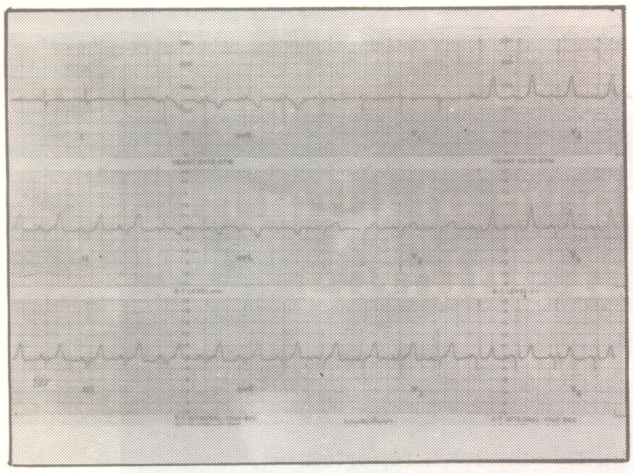


Fig. 1A 12 lead electrocardiogram showing left ventricular colume overload pattern.

catheterization, the mean pulmonary capillary wedge pressure was 25 mm of Hg. The left ventriculogram showed moderate mitral regurgitation with a radionegative shadow of 2 x 1.5 cm. just

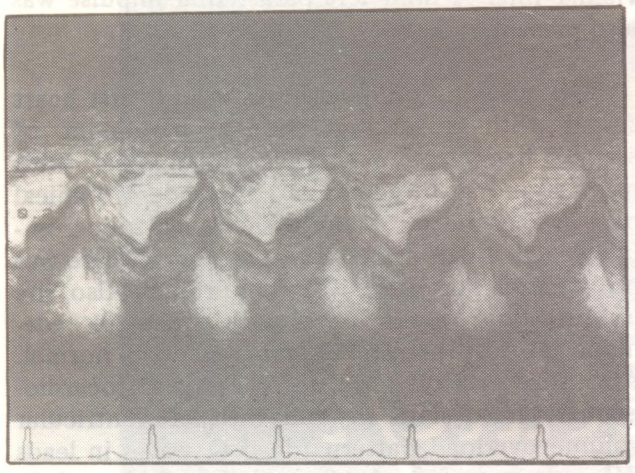


Fig. 1B M-mode Echocardiogram illustrating abnormal dense echoes behind anterior cusp of mitral valve.

above the mitral valve. Computerised axial tomography of head revealed an infarct in the left middle cerebral artery territory. At surgery a pedunculated tumour attached to the mitral annulus was removed. Mitral valve leaflets were normal. The microscopic appearance of the tumour was characterstic of myxoma. The patient's recovery was satisfactory and she was asymptomatic 7 months after surgery. She was in sinus rhythm with precordial findings of

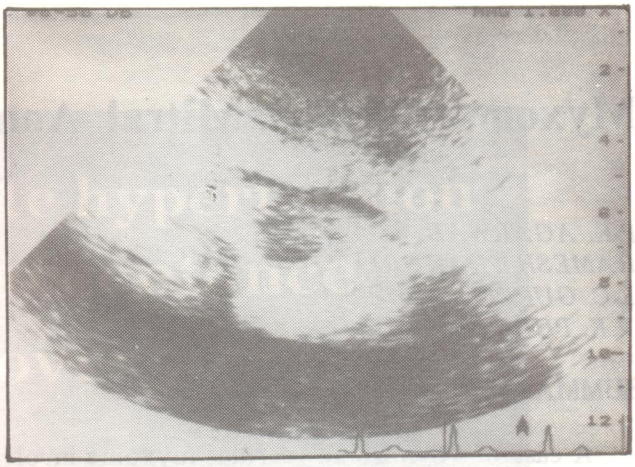
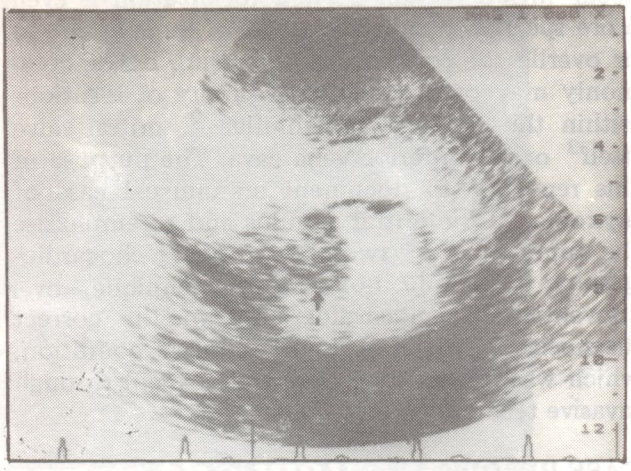


Fig. 2 Two dimensional echocardiogram.

A. Parasternal long axis view showing the tumour attached to mitral annulus. Anterior leaflet of mitral valve is normal.

residual mild mitral regurgitation and her chest radiograph was normal with a cardiothoracic ratio of 0.51. There was no evidence of tumour recurrence on two-dimensional echocardiogram.



B. Parasternal short axis view showing the tumour.

DISCUSSION:

'Sporadic' atrial myxomas are typically solitary and pedunculated whereas 'Syndrome' cardiac myxomas are characterised by presentation in young age, atypical tumour site, skin freckles, benign endocrine neoplasms, familial tendency and a high rate of tumour recurrence (18-21%)[4-5].

Our case of 'syndrome' myxoma of mitral annulus is perhaps the first reported case diagnosed with two dimensional echocardiography before surgery. To our knowledge, there is only a single report of myxoma of mitral annulus by Sutton et al (1980)[3].

Until recently, the angiocardiography was virtually the only way to make the clinical diagnosis. However, false positive and false negative results have been reported[6]. A false positive diagnosis may be made when a filling defect is simulated by undyed blood from pulmonary veins diluting the contrast medium in the left atrium[7]. Two dimensional echocardiography is a simple, non-invasive technique and can be performed at the bedside for the diagnosis of this ellusive condition[8]. Also; it is helpful in correctly localising the site of origin of tumour which is frequently not possible with angiocardiography. The site of tumour attachment is important from surgical viewpoint since myxomas attached to the mitral valve apparatus may require valve replacement[9]. In our case, since the tumour was adherent to the mitral annulus by a discrete peduncle sparing the anterior mitral leaflet, a simple excision was possible.

Hence, the changing scene of surgical management of 'syndrome' cardiac myxoma speaks of the necessity of correct localisation of tumour site prior to surgical intervention.

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