

# Cardiac Myxomas. A Clinical Challenge !

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## SUMMARY:

A series of 12 cardiac myxomas were reviewed. Dyspnoea was the commonest presenting feature in all the cases. Six of the 12 cases had cardiac failure and one had cerebral embolism. All cases revealed diastolic murmurs, 2 cases had in addition systolic murmurs, while 'tumour plop' was heard in only two patients. ECG showed right axis deviation in 3 cases, atrial fibrillation in 2, and non-specific T wave changes in all cases. Chest X-ray revealed cardiomegaly with varying degree of UIV diversion. Based on the clinical data the diagnosis of atrial myxoma could be made in only 2 cases, in the remaining 10 cases, 9 had the clinical diagnosis of mitral stenosis, and one as suffering from Ebstein's anomaly. Thus the clinical diagnosis of atrial myxoma remains a clinical challenge, and 2D Echocardiography is the single most helpful test.

## INTRODUCTION

Primary cardiac tumours are rare, in review of 480,331 necropsies Strauss and Merliss found an incidence of only 0.17 per 1000 (1). Left atrial myxoma is the commonest primary tumour of the heart (2). Less frequently myxoma originates from the right atrium and only occasionally from the ventricles (3). Cardiac tumours often remain undetected and present considerable diagnostic problems because of its protean manifestations (4). Echocardiography has greatly increased the potential for prompt and correct diagnosis (5,6,7).

In this study an endeavour has been made to highlight the limitations of the clinical diagnosis and the value of Echocardiography in detecting atrial myxomas.

## PATIENTS AND METHODS

Over a ten-year period (1977-1987) 12 patients in AFIC Rawalpindi have been diagnosed as having atrial myxomas. There were 10 cases of left atrial myxoma and 2 cases of right atrial myxoma. We reviewed these patients records and results of diagnostic tests.

## RESULTS

The ages of six males and six females ranged from 24 to 52 years (mean=38 years). The commonest clinical presentation was dyspnoea (100%). Palpitation was the next common

NO.	AGE	SEX	SYMPTOMS	SIGNS
1.	29	F	Dysp, Fever	↑ JVP, Normal S1, OS, MDM
2.	35	M	Dysp	↑ JVP, Loud S1, OS, MDM
3.	37	F	Dysp, Palpit	↑ JVP, Loud S1, MDM, 'Tum Pl'
4.	40	M	Dysp, Palpit	↑ JVP, 'a' wave, PSM & MDM over TA, L+4 cm
5.	33	M	Dysp, Cough, Oedema, Wt loss	↑ JVP, Clubbing, Creps Loud S1, MDM, L+6 cm Ascites
6.	35	F	Dysp, Palpit	↑ JVP, Loud S1, MDM, Creps, L+2 cm
7.	38	M	Dysp, Palpit, Cough, Vomiting	↑ JVP, Normal S1, OS, MDM, Creps, L+2 cm
8.	36	F	Dysp, Fever, Arthralgia	↑ JVP, 'machinery-like' murmur, L+6 cm, Lt Hemiplegia.
9.	52	M	Dysp, Fever, Arthralgia	↑ JVP, Loud S1, OS, Creps, L+2 cm
10.	24	F	Dysp, Palpit, Anasarca	↑ JVP, Loud S1, MDM, 'Tum Pl'
11.	45	M	Dysp, Palpit, Chest pain	↑ JVP, Loud S1, OS, MDM
12.	38	F	Dysp, Dizzy spells	↑ JVP, OS, MDM

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symptom (42%). Arthritis fever, and weight loss were less common (25%). Hemiplegia due to cerebral embolism was the presentation in one case (8%). (Table I)

All patients revealed diastolic murmurs (100%) with opening snap documented in 6 cases (50%). Two cases in addition, had pansystolic murmurs (17%), one with right atrial and another with left atrial myxoma. 'Tumour plop' was heard only 2 cases (17%), one with right atrial and the other with left atrial myxoma. All patients exhibited signs of congestive cardiac failure. (Table I)

TABLE II		
CLINICAL DIAGNOSIS		
(n=12)		
1. Atrial Myxoma	:	2 (17%)
2. Mitral Stenosis	:	9 (75%)
3. Esbtein's Anomaly	:	1 (8%)

ECG demonstrated sinus rhythm in all except 2 cases who had atrial fibrillation (17%), right axis deviation in 3 cases (25%), right bundle branch block in one (8%), and first degree heart block in one (8%). ST-T changes were noted in all the cases (100%). (Table IV)

TABLE III		
HOW DIAGNOSIS ESTABLISHED		
(n=12)		
Clinical	:	2 (17%)
Echocardiography	:	8 (67%)
Cardiac Cath	:	1 (8%)
Surgery	:	1 (8%)

Chest X-ray in these patients showed cardiomegaly (100%) with elevated pulmonary venous pressure of varying degree (100%). Pleural effusion was observed in three cases (25%). (Table V).

Based on above results clinical diagnosis of atrial myxoma could be established in only 2

TABLE IV		
ECG ABNORMALITIES		
(n=12)		
ST-T Changes	:	12 (100%)
Atrial Fibrillation	:	2 (17%)
Rt Axis Deviation	:	3 (25%)
RBBB	:	2 (17%)
I° Heart Block	:	1 (8%)

cases (17%), one with left atrial and another with right atrial myxoma. In both the cases the common denominator was 'tumour plop'. In 9 cases (75%) the clinical diagnosis was mitral stenosis (all cases with left atrial myxoma). Remaining one case was diagnosed as a case of Ebstein's anomaly. (Tables II & III).

TABLE V		
RADIOLOGICAL FINDINGS		
(n=12)		
Cardiomegaly	:	12 (100%)
ULV Diversion	:	12 (100%)
Pleural Effusion	:	3 (25%)

2D Echocardiography was performed in ten cases (83%) and it visualised a mass of echoes behind the anterior leaflet of the mitral valve in 8 cases (80%) with left atrial myxoma and echoes behind the tricuspid valve prolapsing into the right ventricle during diastole in 2 cases (20%) with right atrial myxoma. In 2 patients who presented in 1977 (when echo facilities were not available) were diagnosed — one at cardiac catheterisation for presumed mitral stenosis and the other at operation for closed mitral commissurotomy. (Table VI)

TABLE VI		
ECHOCARDIOGRAPHIC FINDINGS		
(n=10)		
Left atrial myxoma	:	8 (80%)
Right atrial myxoma	:	2 (20%)



## DISCUSSION

Left atrial myxomas can mimic mitral stenosis and hence delay the diagnosis. This was the commonest diagnosis in our series and is comparable with other series (8,9,10). The clinical features in atrial myxomas are obstructive, constitutional, and embolic (3). Obstructive effects are produced from the occlusion of mitral or tricuspid valve opening thus causing pulmonary hypertension and hence dyspnoea which was the common feature in all our cases. Pedunculated tumours produce mitral or tricuspid valve murmurs as a result of deformed mitral or tricuspid valve.

Multiple embolism is said to be common in this disease. This complication was seen in only one of our patients (8%). Embolism probably does not occur in solid, capsular, coated myxoma which were present in almost all our cases. However, when a fragile, gelatinous myxoma is located in central bloodstream tumour fragmentation and embolism are much more likely to occur (11,12).

In a number of cases vague constitutional symptoms dominate the clinical picture. This feature was noted in 3 of our cases (25%). This is in sharp contrast to the work of some other workers (13-15). The reason for lesser percentage in our cases is not known.

ECG and chest X-ray reflect haemodynamic abnormalities similar to those of mitral or tricuspid valve disease and are in no way helpful in the diagnosis (4).

Echocardiography usually detects myxomas cheaply, reliably, and quickly (5,7,15). It diagnosed accurately all 10 cases in our series in whom this test was performed. It is now advocated that surgical excision of atrial myxomas be performed after diagnosis by 2DE without confirmation by cardiac catheterisation (16,17).

Thus, as it is evident from the present study, the diagnosis of atrial myxoma is a clinical challenge with the best of physicians. It mimics closely mitral stenosis. 'Tumour plop' if audible (which is rare), (17%) in our cases, is the single

most helpful sign. Varying intensity of the murmur so commonly talked about is a rare finding. ECG and chest X-ray are unhelpful by themselves. 2DE is the single most helpful test which must be performed in all cases of mitral stenosis and those suspected of atrial myxoma, i.e., unexplained embolism or unexplained constitutional symptoms for exclusion of atrial myxoma.

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