Myxoma Originating From Right Ventricular: Out Flow Tract Case Report

*KHALIL-UR-REHMAN**
*FAROOQ NAZIR***

Summary

A 28 years old house wife presented with history of cough and fever for the last 3 months and she developed yellowness of eyes and swelling of the face and the feet for the last one month. Clinically, she was anaemic, jaundiced and has raised JVP, facial and pedal edema, a third heart sound and an ejection systolic and early diastolic murmurs along the left sternal edge. A pleuropericardial and pericardial rub was also audible. Chest radiograph showed enlargement of cardiac shadow and a wedge shaped opacity in the outer part of left, middle and lower radiological zones. Echocardiography revealed a pedunculated freely mobile, echogenic mass in the right ventricular out flow tract (RVOT). Echocardiography repeated at weekly intervals showed no change in the findings. A diagnosis of right sided myxoma was made.

Introduction

Myxomas are the commonest primary heart tumours and majority occur sporadically. Fifth decade is the mean age of presentation and two thirds of the patients are females. However, the age of presentation varies from 3-83 years. More than 80% occur in the left atrium and are often solitary, although myxomas of the right atrium, both ventricles have been described which may be even multiple as well. They can produce signs and symptoms of mitral valve disease, trispid valve disease, pulmonary valve disease, embolic phenomena, pericarditis, myocardial infarction and pyrexia of unknown origin. As they cause fever, caehsxia, malaria, arthalgia, rash, Raymond's phenomenon and episodes of bizzare behaviour with elevated levels of gamma globulin, inter-linken-6 (a marker of auto-immune disease), raised ESR, total leukocyte count, platelet count, thrombocytopenia and anaemia, they may be misdiagnosed as collagen vascular disease.

Case Report

Sabahi Mai aged 28 years presented with history of fever 3 months ago. Initially, fever was of low grade and then its severity increased. Fever was associated with bouts of dry cough and chest pain. She occasionally had chilly sensations. After few days of the fever, she had hemoptysis which persisted for 2-3 days and later on cough became productive. The fever and dry cough are still present. One month after that she developed yellowness of eyes with some loss of appetite and pain in the upper part of abdomen. She

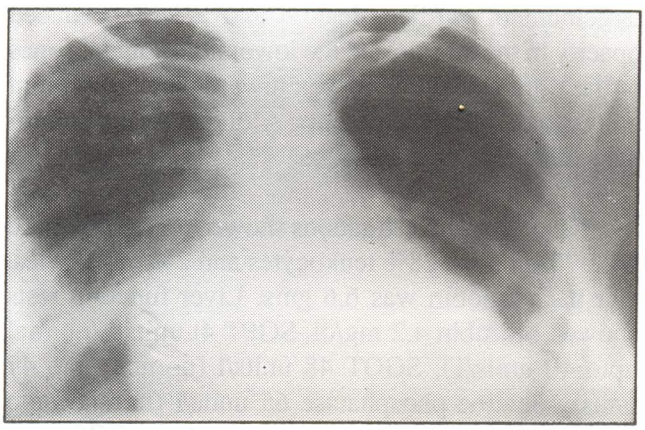

Figure-1.1
X-Ray Chest PA View, showing classical Hampton's Hump

* Senior Registrar Cardiology, Nishtar Hospital, Multan.

** Professor and Head, Department of Cardiology, Nishtar Medical College, Multan.

occasionally vomited. Simultaneously she noticed swelling of feet and later on of the face.

On admission, her pulse was 100/min. blood pressure was 112/72 mmHg, temperature 100.6°F and respiratory rate was 24/min. She had a puffy face, with anaemia and jaundice, but no clubbing or cyanosis. Thyroid was enlarged which was present

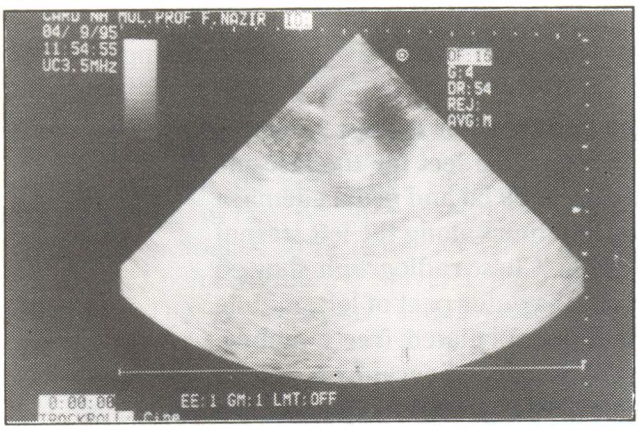

Figure-1.2
Parasternal Short Axis View in Systole showing Myxoma in RVOT protruding into Pulmonary Artery

for the last many years. JVP was raised approximately 6 cm above the clavicle and dependent edema was present. Cardio-pulmonary examination reveals no abdominal findings on palpation. Auscultation revealed normal S_1 and exaggerated splitting of S_2 and a third heart sound, an ejection systolic and early diastolic murmurs, audible along the left sternal edge with a pericardial and pleuro-pericardial rub. She had tachyponea with harsh vesicular breathing and occasional crepitations. Her chest radiograph revealed enlargement of cardiac shadow and a wedge shaped opacity in the middle and the lower radiological zones or the right side with an apex towards the right hilum a classical Hampton's hump. A diagnosis of pulmonary infarction was made.

Laboratory investigations showed a TLC of 13600 with 70% polys, 28% leukocytes and 2% monocytes. Her haemoglobin was 6.6 gms. Liver function tests showed bilirubin 4.2 mg/dl, SGPT 41 units/l (normal upto 40 units/1), SGOT 48 units/l (normal upto 47 units), alkaline phosphatase 65 units/l (normal upto 279/l). Blood cultures were negative. ECG was unremarkable. The echocardiography revealed dilated right ventricle (diastolic dimensions 39 mm, dilated main pulmonary artery 37 mm with a pedunculated homogenons freely mobile echogenic mass have an area of within the RVOT.

Doppler studies showed pulmonary regurgitation and the pulmonary artery pressure was estimated to be 44 mmHg. The right atrium was also enlarged, while rest of the chambers were normal. Echocardiography repeated after weekly intervals showed the same findings. A diagnosis of right sided myxoma was made.

Discussion

The patient in focus is a 28 years old female with non-specific features like fever, malaise, anaemia and jaundice. She had a pulmonary infarct and a persistent freely mobile echogenic mass. The possibilities could be subacute bacterial endocarditis, a thrombus or some tumour; myxoma and papillary tumour can be considered in this regard. The possibility of SBE was ruled out by serial negative blood cultures. Among the remaining possibilities although thromboembolic phenomena and myxomas are both common in females, there are few points which clearly favour myxoma rather than thrombus. They are:-

1. Pulmonary infarcts produced by myxomas take a longer time to resolve as in this case (H/O cough and hemoptysis 3 months back) than those produced by thromboembolism. Radiograph taken on admission is shown in Figure-1.1.

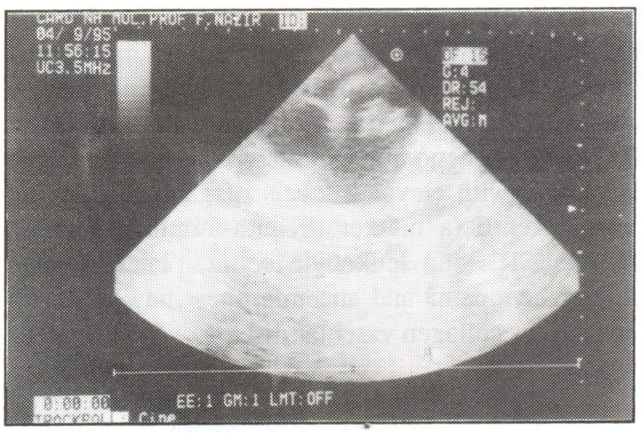

Figure-1.3(a)
Parasternal Short Axis
View in Diastole

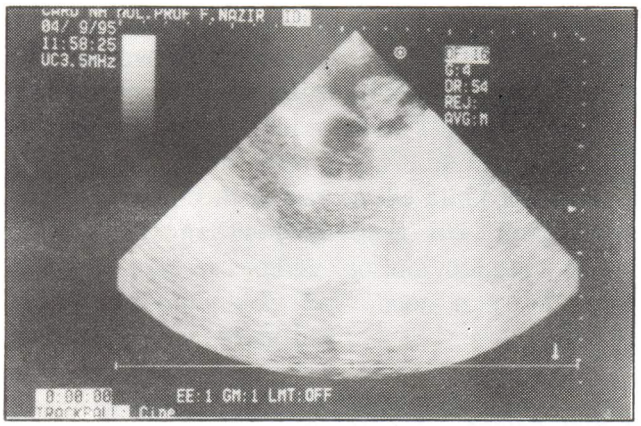

Figure-1.3(b)
Parasternal Short Axis
View in Diastole

2. Thrombus often has a laminated, irregular structure while myxoma has a relatively smoother contoure.

3. Myxomas are persistent in nature and have got a pedical with which they are attacked as in this case, while thrombi in the right sided chamber are often temporary. Figure-1.3a is taken one week after figure-1.3b and 1.2.

The origin of myxomas is not clear and some presume it to be an organized clot. But, DNA analysis and most investigators believe that myxomas are primary tumours and the parent cells may be endothelial or mesenchymal cells, and they can occur in any part of the heart, also having the ability to implant and grow at distant foci such as great vessels, brain or bone. They may be locally malignant. Myxomas of the right side are very rare and their detection justifies them to be reported.

References

1. BUDZILOVICH G, ALEKSIC S, GRECO A et al: Malignant cardiac myxomas with cerebral metastasis. Surg Neurol 1979; 11: 461.

2. CAENEY JA: Differences between non-familial and familial cardiac myxomas. Am J Surg Pathol 1985; 9: 53.

3. DAVIDSON ET, MUMFORD D, ZAMAN Q, HOROWITZ A: Left atrial myxoma in elderly. Report of four patients over age of 70 years and review of literature. Am Geriat Soc 1986; 34: 229.

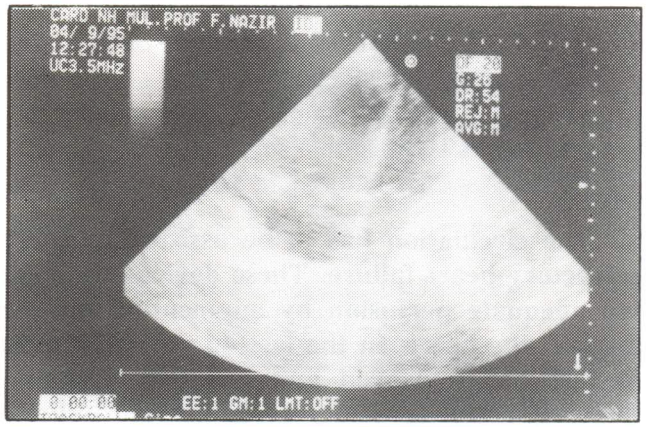

Figure-1.4
Apical 4 Chambers View showing Enlarged
Right Sided Chambers

4. GOODWIN JF: Symposium on cardiac tumours. Spectrum of cardiac tumours. Am J Cardiol 1968; 21: 307.

5. JOURDAN M, BATAILLE R, SEQUINE J et al: Constitutive production of interleukin-6 and immunological features in cardiac myxoma. Arthritis Rheum 1990; 33: 398.

6. KOTANI K, MATSUZAWA Y, FUNAHASHI T et al: Left atrial myxoma metastasizing to aorta, with intraluminal growth causing renovascular hypertension. Cardiology 1991; 78: 72.

7. MACGREGOR GA AND CULLEN RA: The syndrome of fever, anaemia and high erythrocytes sedimentation rate with an atrial myxoma. Br Med J 1959; 5: 158.

8. SAYLER WR, RAGE DL AND HUTCHINS GM: The development of cardiac myxoma and papillary endocardial lesions from mural thrombus. Am Heart J 1975; 89: 4.

9. SEIDMAN JD, BERMAN JJ, HITCHCOCK CL et al: DNA analgesis of cardiac myxomas. Human Pathol 1991; 22: 494.

10. SMITH C: Tumours of the heart. Arch Pathol Lab Med 1986; 110: 1.