Left Atrial Myxoma from Anterior Mitral Valve

Abstract

Primary cardiac tumors are relatively rare, and myxoma, the most common variety, is found predominantly in the left atrium. Clinical presentation varies from asymptomatic incidental masses to serious life-threatening cardiovascular complications. Some cases are difficult to diagnose, as symptoms can be nonspecific. We present a case of a young female with 4 months of history of dyspnea, weight loss, and night sweats, eventually diagnosed as a case of large left atrial myxoma arising from the anterior mitral valve through transthoracic echocardiography.

Keywords: *Myxoma, transesophageal echocardiogram, transthoracic echocardiography*

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Introduction

The prevalence of cardiac tumors at autopsy ranges from 0.001% to 0.3%. Primary cardiac tumors are extremely rare with a reported incidence between 0.001% to 0.28%,[1] whereas metastatic involvement of the heart is over twenty times more common. Over 72% of primary cardiac tumors are benign, of which 50% are myxomas.[1,2] Approximately 80% of myxomas originate from the left atrium, and most of the remainders are found in the right atrium.[3] Myxomas arising from the mitral valve have rarely been reported.[1]

Case Report

A 40-year-old married female presented with 5 months of history of anorexia, generalized weakness, and shortness of breath. She was being treated on an outpatient basis without much relief. The patient also complained of unquantifiable weight loss and night sweats during this period. On interview, the patient reported frequent episodes of dizziness on leaning toward her left side.

Vital signs were stable with a blood pressure of 122/70 mmHg, pulse rate of 105 bpm, respiratory rate of 14 breaths/min, and temperature of 36.7°C. On physical examination, pupils were equal, reactive to light and accommodation, and all physiological parameters were in the normal range. Pulses were intact bilaterally in the upper and lower extremities with no edema. Jugular venous pressure was normal. Lungs were clear to auscultation bilaterally with no wheezing. Cardiovascular examination revealed Grade 3/6, holosystolic murmur at the apex. Electrocardiograph showed normal sinus rhythm with QRS axis of 90. Chest X-ray revealed left atrial enlargement.

Transthoracic echography (TTE) showed large myxoma, of size 41 mm × 27 mm, attached to the base of the anterior mitral leaflet, almost filling the entire left atrium and protruding into the left ventricle during diastole [Figure 1].

Due to myxoma, there was decreased coaptation of the anterior and posterior mitral valves resulting in mild mitral regurgitation [Figure 2]. Transesophageal echocardiography confirmed the findings of large myxoma arising from the base of the anterior mitral leaflet [Figure 2].

She was taken up for surgery, and myxoma was resected. Postoperative period was uneventful. Histopathological examination of resected tissue showed tumor cells arranged in loose clusters and scattered singly in a myxoid matrix with areas of hyalinization and calcification, confirming it to be myxoma [Figure 3].

Discussion

Majority of cardiac tumors are metastases commonly from the lung, breast, melanoma, lymphomas and leukemias.[4] Primary tumors are relatively rare, and myxomas are the most common.

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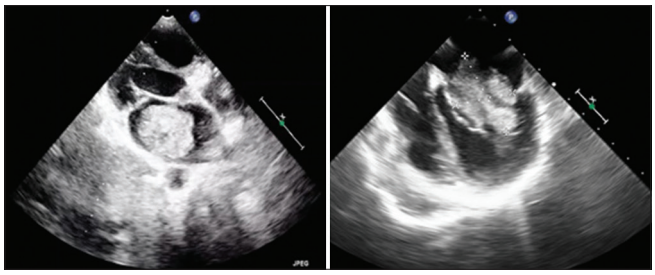

Figure 1: Transthoracic echo image showing large myxoma in the left atrium attached to the base of the anterior mitral leaflet

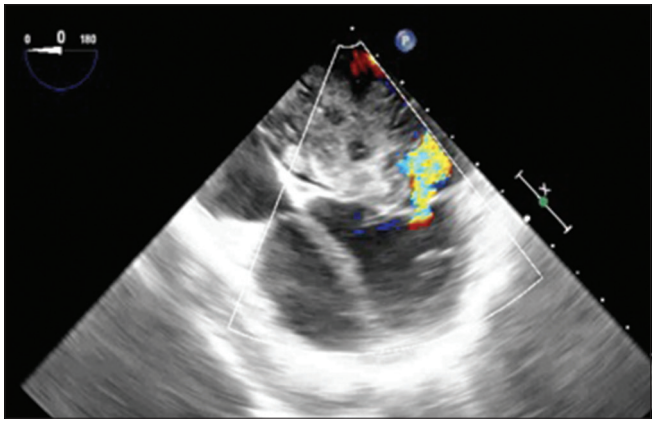

Figure 2: Transesophageal echocardiography showing large myxoma attached to the base of the anterior mitral leaflet and mild mitral regurgitation

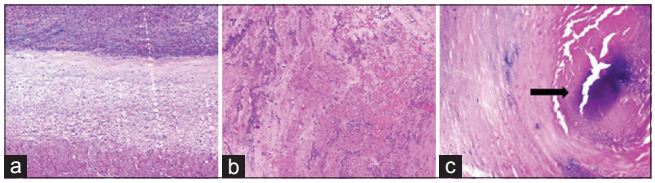

Figure 3: Areas of hyalinization and calcification (arrow). (a) H and E, ×20, (b) H and E, ×40 and (c) H and E, ×80

Eighty percent of myxomas are found in the left atrium. Our patient had a myxoma arising from the anterior mitral leaflet which is extremely rare. There is female preponderance (with 75% of patients being females), and most present between the third and sixth decades of life, as in this case.[5]

Approximately 50% of patients with myxomas may experience symptoms due to central or peripheral embolism or intracardiac obstruction, but 10% of patients may be completely asymptomatic. Commonly observed symptoms and signs include dyspnea, orthopnea, paroxysmal nocturnal dyspnea, pulmonary edema, cough, hemoptysis, edema, and fatigue. Symptoms may be worse in certain body positions due to motion of the tumor within the atrium.

Symptoms could be nonspecific. Common presentations include the manifestations of left ventricular failure, syncope, embolism, and constitutional symptoms (fever, fatigue, weight loss, and increased erythrocyte sedimentation rate). Interleukin-6 is responsible for most of the constitutional symptoms.[6]

Left atrial hypertrophy is the most frequent electrocardiogram finding.[7] Auscultatory findings can be absent in up to 36% of these patients.[8] Transthoracic echocardiography is approximately 90% sensitive in the detection of left atrial myxoma, and the sensitivity of transesophageal echocardiogram approach is almost 100%, making it a valuable tool for diagnosis.[8] Computerized tomography and cardiac magnetic resonance imaging can also be helpful in delineating tumor characteristics and therapy. Myxomas represent a curable form of disease if treated surgically. Surgical resection usually results in complete resolution of symptoms. Long-term prognosis after resection is excellent. The recurrence rate is about 2%–5%.[7]

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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