IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 17, Issue 5 Ver. 5 (May. 2018), PP 20-22
www.iosrjournals.org

Bi – Atrial Myxoma Presenting As Acute Lower Limb Ischaemia in a Middle Aged Female: A Case Report

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Abstract: *Atrial myxoma is a benign tumour of the heart and forms a very small percentage of all cardiac cases. When present, they are usually located within the left atrium and sometime in the right atrium on the interatrial septum. Reports of biatrial myxoma are even more rare.*

*Here, we present an unusual case of a middle aged female who presented with sudden onset pain and swelling in her right lower limb for the past 2 days. She had no history of antecedent illness or any drug history etc. Colour Doppler revealed echogenic material in the superficial femoral artery and popliteal arterywith luminal compromise suggestive of thromboembolism. Cardiac examination revealed a middiastolic murmur across the mitral valve with a very faint tumour plop. Patient's ECG revealed normal sinus rhythm , right axis deviation and t wave inversions in lateral chest leads. Further workup via tranthoracic echocardiography revealed left atrial enlargement with an evidence of left atrial mass prolapsing through the mitral valve during diastole. LV was of normal size. Further transesophageal echocardiography revealed another mass, roughly 2*1 cm present in the right atrium along with evidence of minimal tricuspid regurgitation. On the basis of these findings, a diagnosis of bi-atrial mass likely myxoma causing acutelower limb ischaemia was made and the patient was referred for urgent surgical excision of the masses.*

Date of Submission: 26-04-2018 Date of acceptance: 14-05-2018

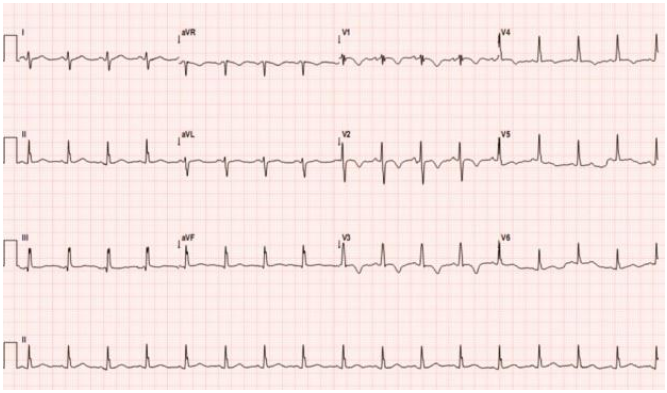
I. Introduction

An atrial myxoma is a rare, benign, cardiac tumour , usually occurring within the left atrium, mainly from an area in the atrial septum near the fossa ovalis. It has a incidence of 0.0017% in the general population and a female to male ratio of 2:1. Right atrial myxomas are much more rare. Bi-atrial myxomas, however, are much more rare, with incidence less than 0.02% of all tumours found in humans.[1] Typical symptoms include embolism, blood flow obstruction and constitutional symptoms. We report a unique case of a female patient with biatrial myxoma presenting as acute lower limb ischaemia.

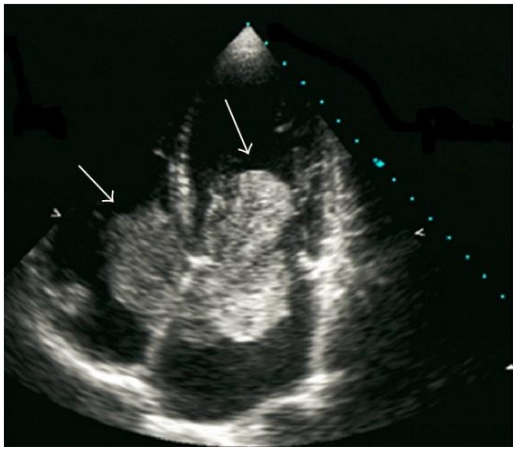
II. Case Presentation

A 39 years old female presented to our hospital with complaints of sudden onset lower limb pain and swelling for the past 2 days. The right lower limb appeared larger in size than the left lower limb, was tender to touch and local temperature was raised. Colour Doppler revealed echogenic material in the superficial femoral artery and popliteal artery on the right side with luminal compromise suggestive of thromboembolism.

Cardiac examination revealed a middiastolic murmur across the mitral valve with a very faint tumour plop. Patient's ECG revealed normal sinus rhythm , right axis deviation and t wave inversions in lateral chest leads. Transthoracic echocardiogram was performed which revealed left atrial enlargement with an evidence of left atrial mass prolapsing through the mitral valve during diastole. There was no organic defect of the mitral valve and Doppler echo revealed transmitral flow acceleration. LV was of normal size.



Ecg of the patient showing t wave inversions in lead III and V1-V4



Echocardiogram showing bilateral atrial tumours(arrows) and LA mass protruding through the mitral valve during diastole.

Further transesophageal echocardiography revealed another mass, roughly 2*1 cm present in the right atrium along with evidence of minimal tricuspid regurgitation. On the basis of these findings, a diagnosis of bi atrial myxoma causing embolism leading to acute lower limb ischaemia was made. IV anticoagulation with heparin was started and the patient was referred to a cardiothoracic surgeon for urgent resection of both masses.

III. Discussion

Myxomas are the most prevalent primary tumours of the heart. Despite being benign, they may lead to embolic events or even sudden death. Early recognition, diagnosis and prompt treatment remain vital to prevent life threatening events in such patients.

While myxomas are the most prevalent primary cardiac tumour and are commonly located in the left atrium, right atrial myxomas are quite rare in comparison. Multiple intracardiac myxomas are even more rare, accounting for less than 2.5% of all cardiac tumours.[2,3]

Symptoms in such patients are often due to endomyocardial flow obstruction or peripheral embolisation. Occasionally, the tumours may prolapsed through the valves or even embolise to distant locations leading to pulmonary embolism, arrhythmias, acute limb ischaemia or stroke. The cardiovascular examination can closely resemble that of a patient with mitral disease. Tumour plops may occasionally be heard. The most important investigation is the transthoracic and transesophageal echocardiography which can confirm the location and extension of the myxomas with a high specificity and sensitivity.[4,5]

Myxomas are usually considered to be benign in nature, however, malignant and recurrent forms of myxomas have been described in literature. Familial forms of myxoma have also been reported, specially in younger adults with history of similar disease in the family. For this reason, wide excision of myxomas should be performed along with surrounding cardiac tissue and septum if required.[6]

Bi-atrial myxoma is an extremely rare occurrence. Once a diagnosis is established, these tumours should be removed to prevent further cardiac or neurological sequelae. With complete resection, the recurrence rate is less than 5% and patients should be followed up with annual serial echocardiography.

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Singhal S "Bi – Atrial Myxoma Presenting As Acute Lower Limb Ischaemia in a Middle Aged Female: A Case Report."IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 5, 2018, pp 20-22.