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Giant Left Atrial Myxoma Revealed in A Setting of Myocardial Infarction: A Case Report

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Abstract

Myxomas are the most common benign cardiac tumors. They usually manifest as symptoms due to atrioventricular valve obstruction or embolization events.

Coronary embolization is a rare but potentially fatal complication.

We report the case of a 53-year-old female patient who presented to the cardiology emergency ward with acute chest pain and dyspnea NYHA class 2 to 3. The electrocardiogram (EKG) showed an ST elevation, troponins came back negative, coronary angiography was done immediately without any abnormality and a transthoracic electrocardiogram (TTE), showed a large mass in the left atrium obstructing the mitral valve evoking a left atrial myxoma.

The patient was operated on for surgical resection of the mass, the histological nature of the myxoma was confirmed.

We report this case with a review of the literature as a finding.

Introduction

Cardiac tumors are rare, Primary cardiac tumors represent about 5% of cardiac tumors, and their occurrence is estimated to be less than 0.03% [1]. and their occurrence is estimated to be less than 0.03% [1]. About 90% of primary cardiac tumors are benign. The most common type of benign heart tumor is myxoma which appears in the left atrium (LA) in 75-85% of cases [2, 3] They usually occur more in women and after the third decade of life [4]. The tumor can cause obstruction of the atrioventricular valve as well as the embolization event by throwing clots into the systemic and pulmonary circulation [1, 5]. Atrial myxoma causes embolization into the systemic circulation in 30-40% of cases [6], which can cause severe neurological manifestations and cardiac manifestations: arrhythmia, heart failure, and pericardial effusion [1]. The manifestations of myxoma depend on its size, location, and mobility [7]. Patients may present with polymorphic clinical patterns and might be asymptomatic [8]. Transthoracic echocardiography (TTE) remains the key examination for the diagnosis of myxoma [9]. Surgical removal of the tumor mass is the optimal treatment [1].

We report a case of incidental finding of a large left atrial myxoma in a 54-year-old female patient who initially came in with acute coronary syndrome.

Case Presentation

We report the case of a 53-year-old female patient who presented to the cardiology emergency ward with acute chest pain and dyspnea NYHA stage 2 to 3. The EKG revealed an ST shift in two leads, troponins came back negative, coronary angiography was done immediately without any abnormalities and a TTE revealed a large mass in the left atrium obstructing the mitral valve, evoking a left atrial myxoma.

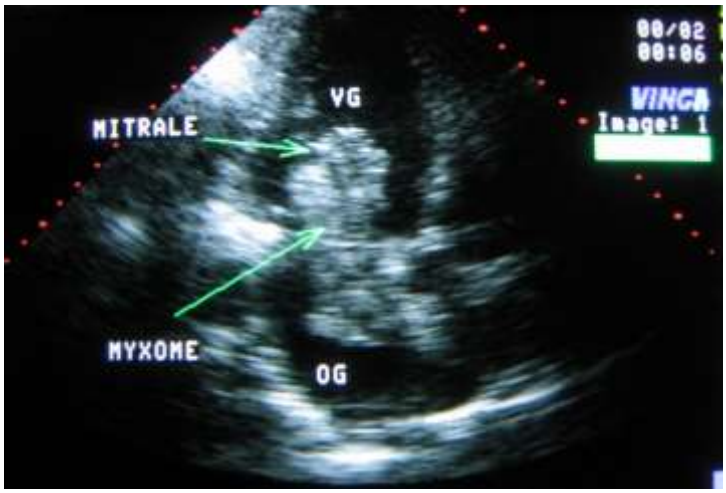

Figure 1: transthoracic echocardiogram in apical 4-chamber view showing a large left atrial mass attached to the interatrial septum obstructing the mitral valve

The patient was operated on for surgical resection of the mass, and the histological nature of the myxoma was confirmed. The postoperative follow-up was good.

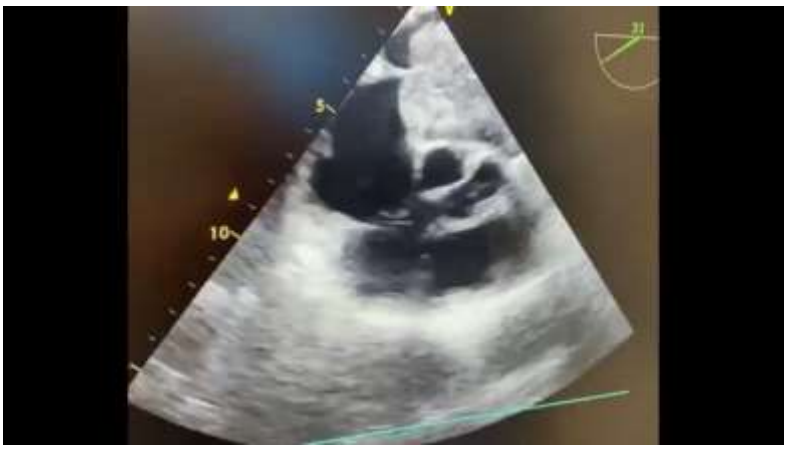

Figure 2: per operative Two-dimensional transesophageal echocardiogram in transverse mid-4-chamber view showing a coral-like left atrial mass prolapsing

We report this case with a review of the literature.

Discussion

In left atrial myxoma there are no specific signs and the patterns of findings are very polymorphic and related to the size, location and mobility of the tumor. (obstructive, embolic or constitutional). (9)

Myxoma syndrome presents with : fever, weight loss, arthralgias

The association between coronary syndrome and myxoma has been reported in 70 cases in the literature to date.

In 1/3 of the cases the myxoma embolizes into the systemic circulation but in the coronary arteries, the incidence is 0.06%, which makes acute myocardial infarction a rare manifestation of early myxoma.

The first explanation is related to the fact that the coronary ostia are disposed in perpendicular position to the aortic flow and the second is that the opening of the aortic cusps in systole protects the ostia from coronary events. (9)

This value is thought to be underestimated, either because of the lack of systematic echocardiographic evaluation of all patients with acute myocardial infarction or due to the lack of published data related to fatal events. Hence the extreme importance of performing an echocardiographic evaluation of patients with acute myocardial infarction before initiation of targeted therapy, as this will be the only way to avoid the potentially deleterious use of thrombolytic agents that may increase the risk of myxoma embolization, either by lysis of accumulated thrombus, or by hemorrhage and rupture of small fragments (10).

Embolization of the anterior descending and left circumflex coronary arteries has been reported, In a considerable number of cases, no coronary lesion was found on angiography, which may be explained by the high rate of recanalization of coronary embolisms from myxomas (10) .

In our case, the left atrial myxoma was giant multipoid with an irregular and very friable surface, which prolapsed through the orifice of the mitral valve.

Once the diagnosis of myxoma is made, resection surgery is the only effective treatment and must be performed immediately due to the imminent danger of embolization. The short- and long-term

prognosis is excellent, and recurrence is rare, however, semi-annual echocardiographic follow-up is recommended in all cases (1).

With this clinical case, we intend to alert to the fact that a diagnosis as common in our daily clinical practice as acute myocardial infarction can be the manifestation of a rare entity such as atrial myxoma, and that an embolic source should always be checked.

In cases of myocardial infarction with angiographically normal coronary arteries. The lack of atherosclerotic lesions or coronary thrombi is in concordance with the high rate of recanalization documented in myxoma emboli, especially in those with extremely friable surfaces, as in the case described. (9)

We also highlight the fundamental importance of echocardiography, in this case, performed early in the patient's approach.

Conclusion

Even though it is very rare for myxoma to cause acute myocardial infarction, in front of an acute coronary syndrome, echocardiography can make the diagnosis of a left atrial myxoma and allow a correct diagnosis and an immediate referral to the only treatment that could avoid a potentially fatal outcome.

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