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Left Atrial Myxoma Causing Myocardial Infarction

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Abstract **Case Report**

Atrial myxomas are one of the commonest primary cardiac tumors that generally affect the left atrium. Atrial myxoma is the general cardiac tumor, which leads to three main symptoms which includes obtrusive symptoms, constitutional symptoms, and embolic symptoms. The irregular blood flow induced by atrial myxoma plays a significant role to cause rigorous and irrevocable neurologic complications like repeated transient ischemic attack and stroke. Severe ST-segment elevation myocardial infarction (STEMI) caused by left atrial myxoma is very uncommon. Catheter approaches are mostly the initial step in managing STEMI with very less time delay. In this case study, we report atrial myxoma associated MI case and present the clinical and echocardiographic features of this presentation. We report a case of severe STEMI caused by left atrial myxoma. The patient was effectively treated by intracoronary aspiration. Intracoronary catheter aspiration helps to treat the myocardial infarction with quite less time delay.
Keywords: Atrial myxoma, myocardial infarction (MI), STEMI.

CASE STUDY

This report is regarding a 69 years old male patient who was underlying Dyslipidemia and patient had a history of Cerebro vascular accident (CVA) in 2012. The patient was complaining of chest pain associated with vomiting and excessive sweating and syncopal attack for five minutes. The ECG indicated ST-segment elevation in leads II, III aVF, and V1-2 consistent with acute ST-segment elevation myocardial infarction (STEMI). Atrial myxoma was detected in the patient using bedside echocardiography and thrombolysis was contraindicated. The echocardiography images have been displayed in the figure 2. The issue reported was inferior Myocardial Infarction with right ventricular involvement (RVI). RV involvement in acute inferior MI is an independent predictor of major complications and in-hospital mortality as well as long-term morbidity. Coronary Angiogram (COROS) was done to check the heart vessels. The patient was taken to the cardiac catheterization lab and Cardiac catheterization was done onset through the right common femoral artery. COROS discovered total occlusion of the Right Postero Lateral Coronary artery (RPL). Intracoronary Aspiration done For Right Posterolateral Coronary artery.

Fig-1: Emergency coronary angiogram

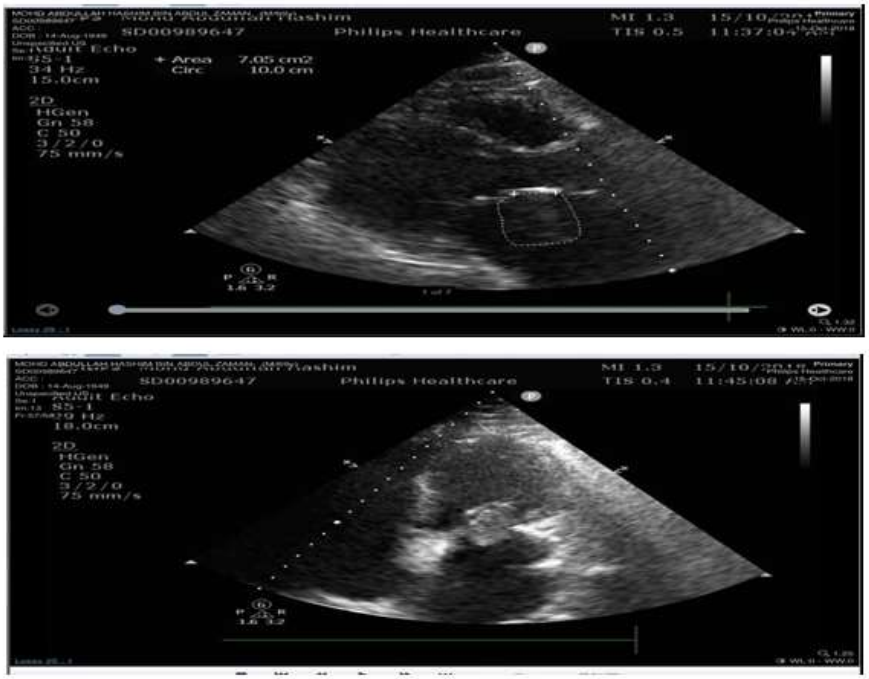

Fig-2: Echocardiogram showing a left atrial myxoma prolapsing into the right ventricle

After this treatment the patient was comfortable and there was no shortness of breath and chest pain. Carotid Doppler indicated normal thickness of intima-media and no calcified atheromatous plaque. Also there was no narrowing of visualized vessels and there were normal Doppler spectral wave's pattern for visualized vessels. However proceeded with left atrial Myxoma excision.

Echocardiography was done before discharging the patient from hospital and it showed an EF of 52.6%. The laboratory test results were in normal range. There were no complications and the patient was discharged from hospital.

DISCUSSION

Braun *et al*. [1] discussed around forty cases of MI occurred due to left atrial myxoma from 1970 to 2002. According to authors the right coronary artery is the most common cause of this. According to authors, there are 33% coronary angiograms which are found to be normal. Al Zahrani *et al*. [2] reported around seventeen cases of MI occurred due to left atrial myxoma from 2003 to 2014. Out of seventeen cases around ten cases had normal coronary angiograms and people who were below age of 45 years had normal coronary angiograms. The actual reason behind this is still under known and under investigation.

Generally Echo is not done before coronary angiography in case of myocardial infarction [3]. However in some cases, if angiography is done first and if left ventriculography displays normal systolic function, then Echo can also be skipped. Echo was available in the emergency room and was done prior coronary angiography. The presented case demonstrates the significance of early Echo in patients presenting with MI for diagnosing suspected cardiac mass.

CONCLUSION

In this case study, we have presented a case of severe STEMI caused by left atrial myxoma. The patient was effectively cured by intracoronary aspiration with an Export aspiration catheter with excellent distal coronary flow. Intracoronary catheter aspiration helps to treat the MI with quite less time delay. In the presented case study, Echo was done prior to coronary angiography.

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