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Case Report

Left Atrium Myxoma in Patient with Acute Cerebrovascular Lesion

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Summary

Primary cardiac tumors (PCT) are rare, accounting for 0.0017-0.03% in autopsy series, [1,2] in contrast to metastatic tumors of the heart, which are 30 times more frequent. We report the case of a female patient with atrial myxoma presented in the emergency room with stroke. The aim of this case presentation is to remind the importance of the early diagnosis by not skipping even the mild symptoms.

Background

The World Health Organization defines a cardiac myxoma (CM) as a neoplasm composed of stellate to plump, cytologically bland, mesenchymal cells set in a myxoid stroma [3] and they occur more frequently among women from the third to the sixth decade of life [4-6]. Cardiac myxomas are mostly pedunculated and solitary, and arise primarily adjacent to the lamina of the fossa ovalis and develop in the left atrium in 75% of cases, followed by the right atrium (18%), the right and left ventricles (3% in each), and the valves (1%) [7].

Most patients present with one or more of the triads of embolism, intracardiac obstruction, and constitutional symptoms [8-10]. Embolism occurs in 30 to 40 percent of patients with myxomas and since most myxomas are located in the left atrium, systemic embolism is particularly frequent. The most common arteries involved are the cerebral and retinal, followed by the visceral, renal and coronary [11-14].

The diagnosis is mostly based in trans thoracic or transoesophageal echocardiography. A CT or RMN can also be used to determine the diagnosis [15-18].

Case Presentation

The patient presented in the emergency room for mild dyspnoea and altered speech. She has a history for arterial hypertension. At the presentation she had stable vital signs, normal blood pressure and controlled cardiac rate. On physical exam she was space and time oriented, without nucal rigidity, she had photoreactive isochoric pupils without nystagmus, preserved occulo motority and intact visual field. She also presented with right facial paralysis, paraphasia and aphasia nominum. There were no sensor and motors deficiencies. Cerebellar sphere was intact. There was a systolic murmur at the apex and irregularly irregular rhythm. There was no jugular venous distension present. Lungs were clear to auscultation bilaterally with no wheezing. Abdomen was soft, non-tender, non-distended with normal peristaltic. Pulses were intact and symmetric bilaterally in upper and lower extremities with no presence of oedema.

Laboratory findings were as follows: WBC 7,14 K/ul, Hb 14,3 g/dl, Hct 42,6%, Platelets 209 K/ul. Electrolytes: Na 141 mmol/L, K 4.3 mmol/L, chloride 113 mmol/L, Cr 0.9mg/dl, Glucose: 96 mg/dl, troponin high sensitive 1 <0,01 ng/dl, PCR 1,6 mg/dl, total bilirubin 0.98 mg/dl,serum creatinine 0,95 mg/dl, urea 32,2 mg/dl, SGOT 26 U/L, SGPT 15 U/ll, total cholesterol 245,7 mg/dl, HDL cholesterol 42,45 mg/dl, LDL cholesterol 176,69 mg/dl, triglycerides 132,6 mg/dl.

The ECG shows atrial fibrillation with controlled ventricular response. She doesn't receive anticoagulation see in (Figure 1).

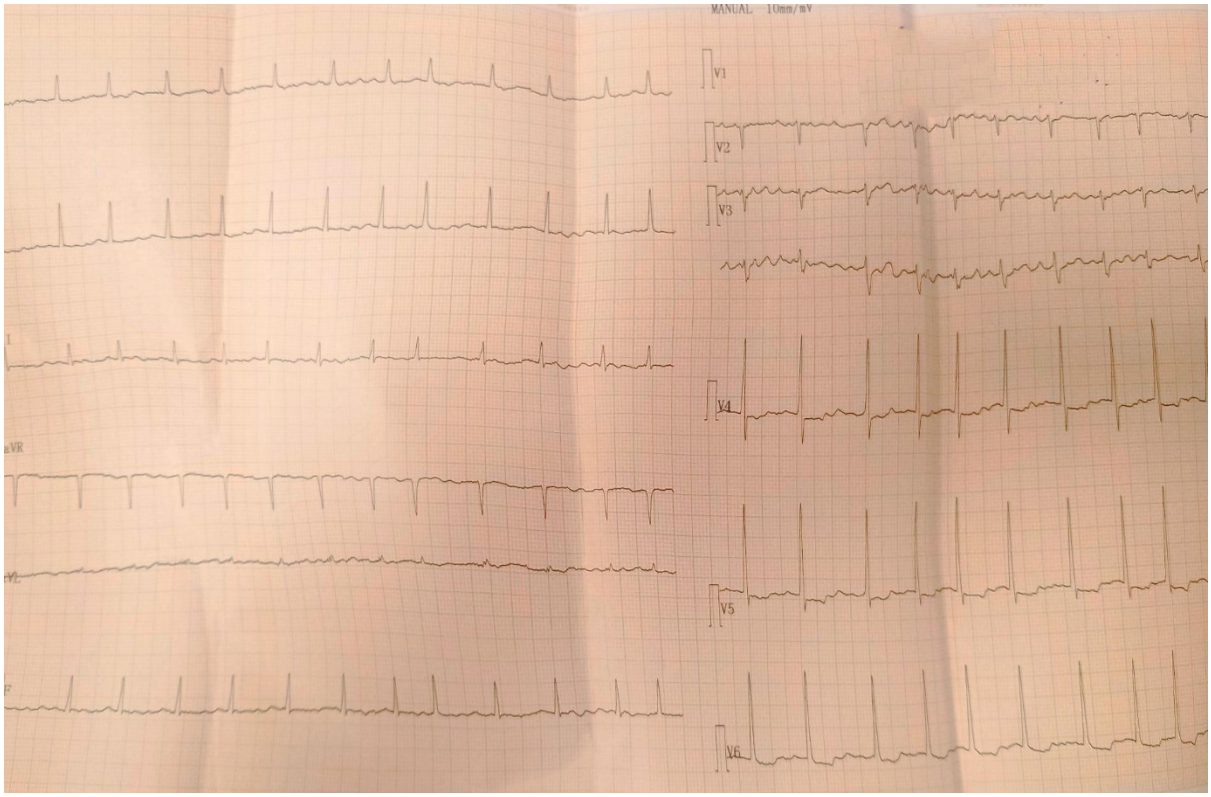

Figure 1: ECG at patient presentation in the Emergency Room showing atrial fibrillation.

A Supra aortic Angio CT is performed which resulted with a subacute left capsular ischemic lesion see in (Figure 2)

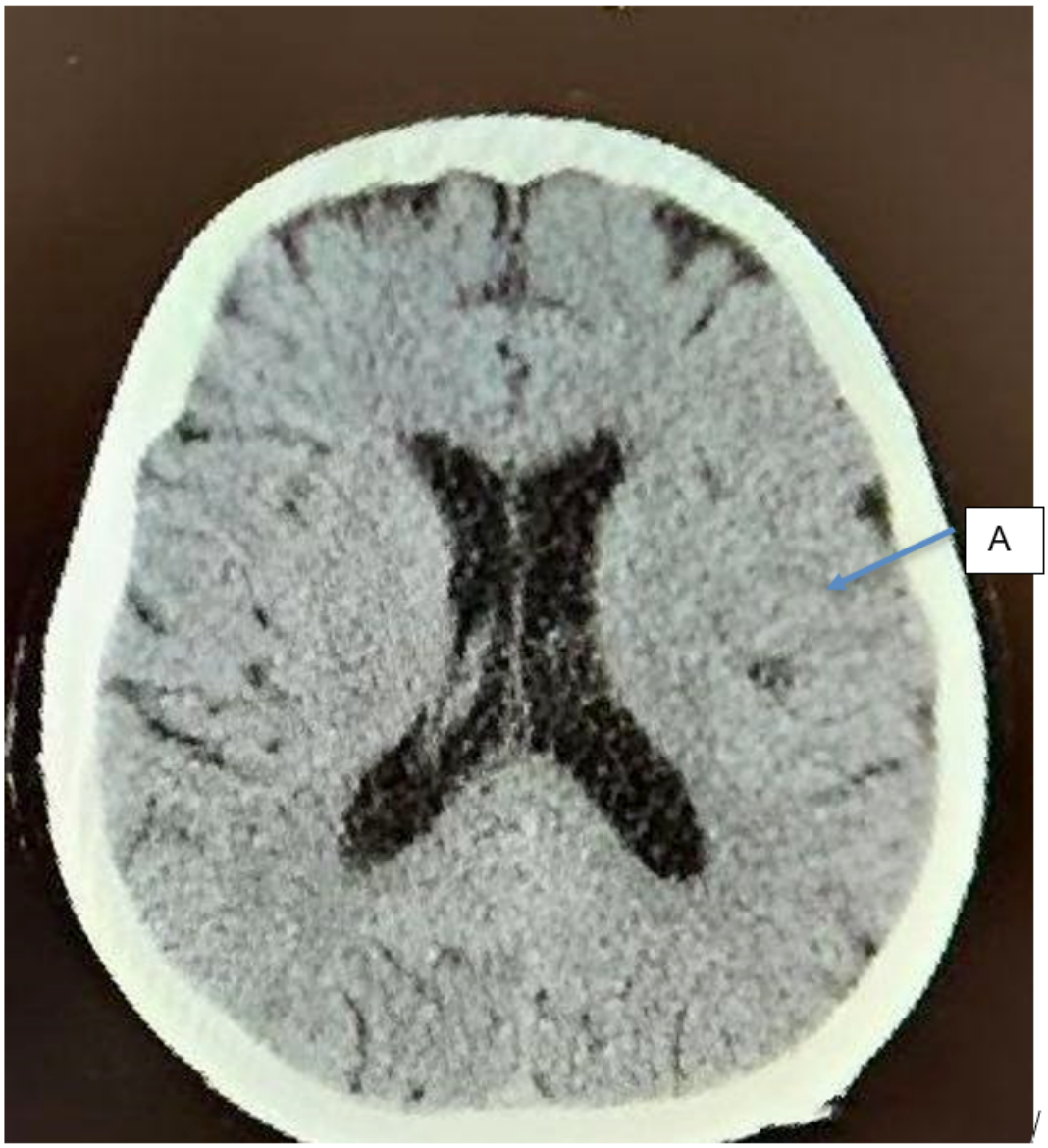

Figure 2: Cerebral CT scan showing the subcapsular ischemic lesion A

In the Transthoracic Echocardiography exam that we performed, resulted with a large mass, with dimensions 35,5 x 39,5 mm, in the left atrium. The left ventricle is not enlarged and has good kinetics and function, with an ejection fraction of 55%. Both left and right atriums are enlarged. There was a moderate mitral regurgitation and mild tricuspid regurgitation see in (Figures 3-5, video 1).

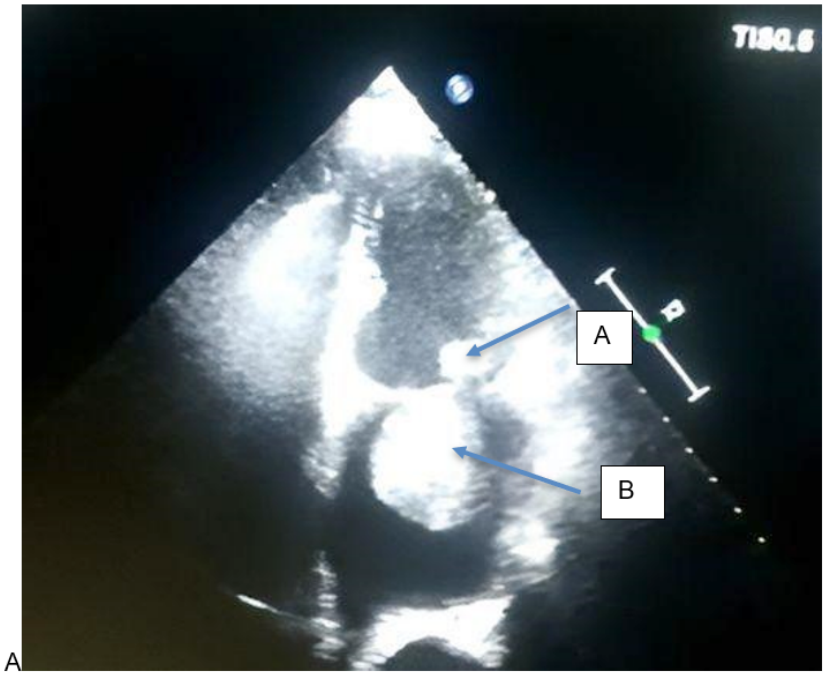

Figure 3: Trans thoracic Echocardiography, four chamber view showing **A:** Myxoma, **B:** Thrombus

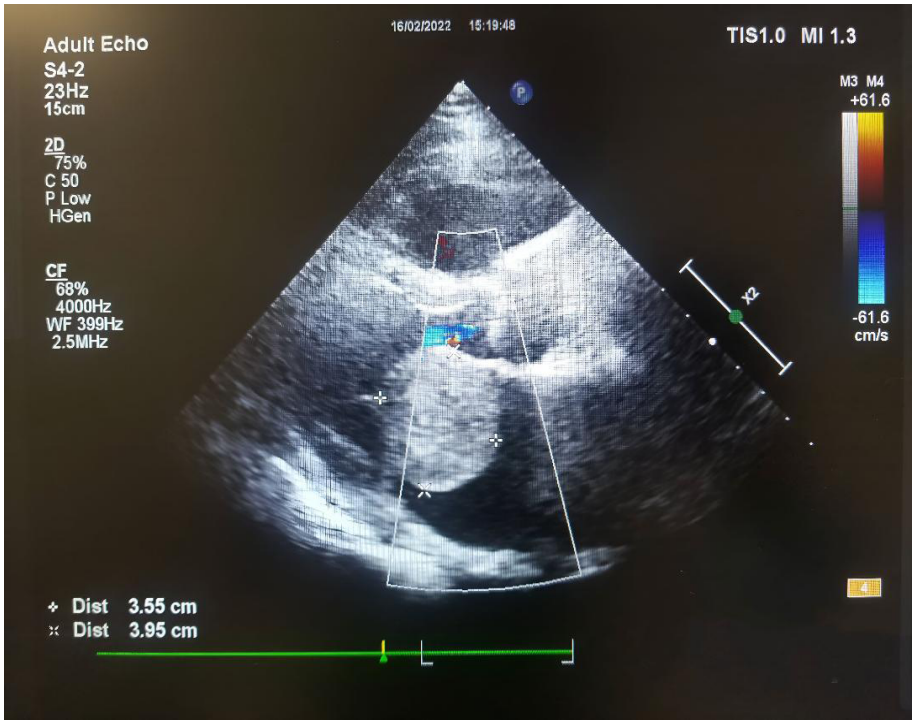

Figure 4: Trans thoracic Echocardiography, parasternal long axis view showing the Dimensions of the myxoma

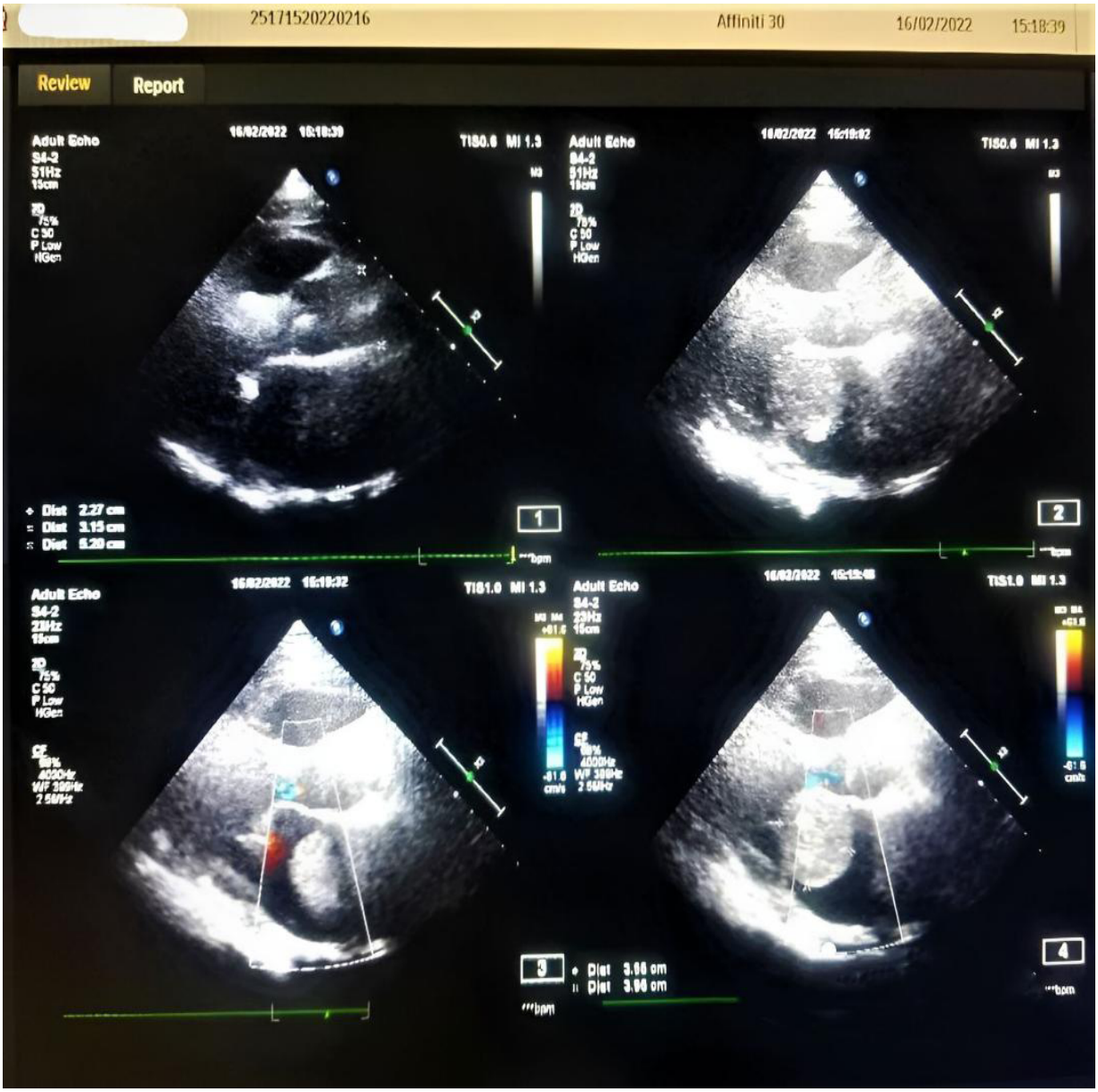

Figure 5: Transthoracic Echocardiography, parasternal long axis view

(Video 1: Transthoracic Echocardiography**)**

We referred the case to the Cardiac Surgery Unit of the University Hospital where the excision of the mass was performed see in (Figure 6, Figure 7).

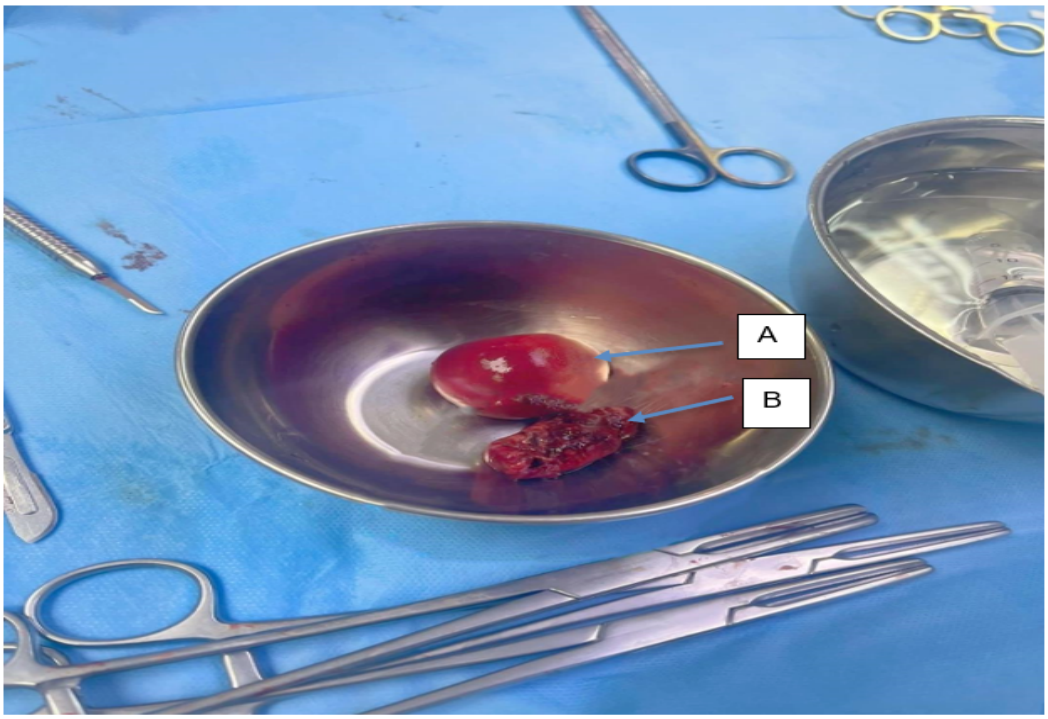

Figure 6: Post resection view of the mass showing A: Myxoma, B: Thrombus

Figure 7: Post resection view of the myxoma showing (A) and the thrombus (B)

The surgical technique consisted in a trans septal approach. It resulted to be a pedunculated atrial myxoma with a large intra cardiac thrombus whom pedunculus was disconnected, which was also was the reason, the mass was mobile. The patient now is discharged from the hospital in a good condition with the recommendation for follow up and an anticoagulation and antihypertensive therapy.

Differential Diagnosis

The differential diagnoses were large left atrium thrombus versus primary cardiac neoplasm. The final diagnoses were ruled out after surgical removal of the mass as it resulted as a pedunculated atrial myxoma, associated with a large thrombus.

Treatment

We referred the case to the Cardiac Surgery Unit of the University Hospital where the excision of the mass was performed. The surgical technique consisted in a trans septal approach. It resulted to be a pedunculated atrial myxoma with a large intra cardiac thrombus whom pedunculus was disconnected, which was also was the reason, the mass was mobile. The patient now is discharged from the hospital in a good condition with the recommendation for follow up and an anticoagulation and antihypertensive therapy.

Outcome And Follow-Up

The patient came in visit 1 month after the surgery. Her condition now is stable with anti-hypertensive and anticoagulant therapy. She has Atrial fibrillation with controlled ventricular response see in (figure 8).

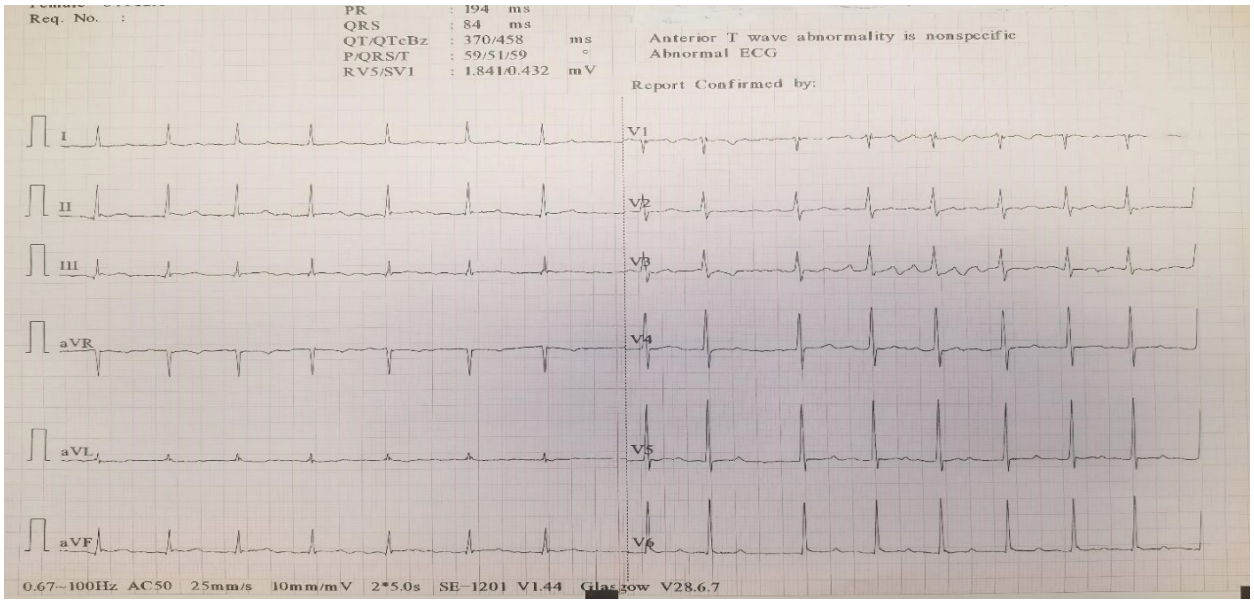

Figure 8: Post operatory follow up ECG showing Atrial fibrillation with controlled ventricular response

In the transthoracic echocardiography resulted with normal left ventricle kinetics and function, with an ejection fraction of 58 %. She has left atrium enlargement with mild mitral regurgitation. Calcification of aortic valve cusps and mild aortic regurgitation. Mild tricuspid regurgitation and right atrium enlargement see in (figure 9).

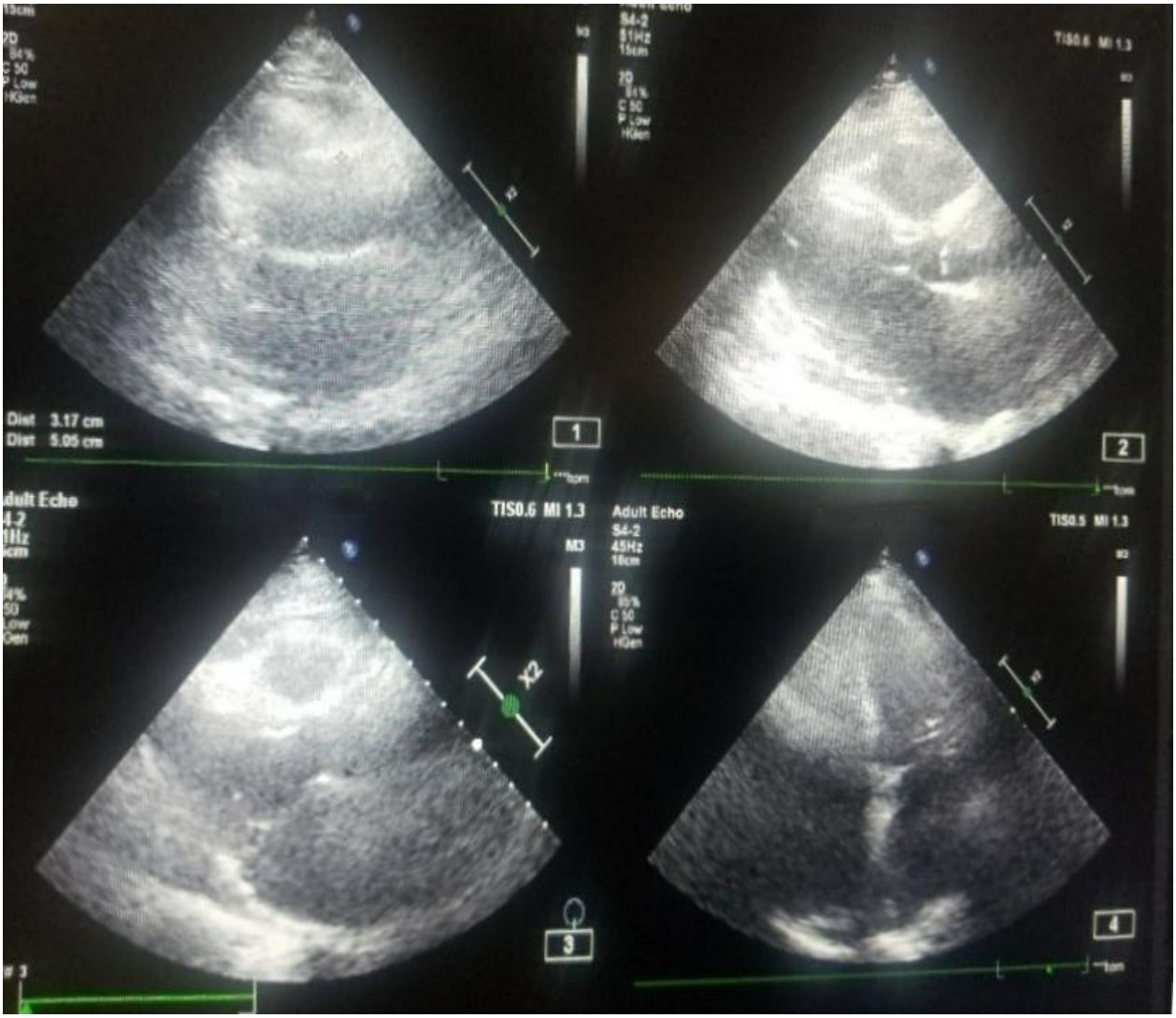

Figure 9: Post operatory follow up Echocardiography

She has a good performance and has fully returned to all of her daily activities.

Discussion

Cardiac myxomas are mostly benign neoplasms but can be fatal because of their localization and number of complications. They often co-exist with a thrombus and can be complicated with embolism. The differential diagnosis is made with valvular disease, endocarditis, pulmonary thrombo-emboly and systemic thrombosis. These cardiac neoplasms are often autoptically diagnosed because of the mild symptoms of the patients. Therefore, performing an echocardiography to these patients is of a big importance. Surgical treatment in the majority of cases is very successful and of a low risk and recurrences are low. After surgery, a follow up with echocardiography is needed.

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Learning Points/Take Home Messages

- This is an example of a rare disease.
- The diagnosis of the cardiac myxoma may require a multidisciplinary team because of the different presentation. Our case presented with a neurological syndrome, and the diagnosis was made with the help of the Neurologist and the Cardiologist.
- Performing a cardiac evaluation was crucial for making the diagnosis on time.
- Effective teamwork and collaboration between physicians is very important for resolving effectively difficult and rare diseases.

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