

INTRODUCTION

- Most primary cardiac tumors are rare (<.1%) and benign (90%)
- Primary cardiac sarcoma is a rare malignant neoplasm predominately found in the atria. ^{1,2}

HISTORY OF PRESENT ILLNESS

- A 37 year-old male presented to the ER after abnormal outpatient CT scan
- Previously seen in the ED for facial numbness and palpitations and discharged with a Holter monitor
- Noted by his PCP to have associated shortness of breath, elevated D-dimer associated with these symptoms
- CT angiogram performed for further evaluation showed low attenuation filling defect in the left atrium as well as the left upper lobe which prompted ER referral

LABS AND EXAM

5.88	13.2	243	136	102	15	86
			4.0	27	.96	

- TTE: EF 55%, large rounded mass attached to the atrial side of the anterior mitral leaflet. Noted mild MR and Moderate MS secondary to mass effect

CLINICAL COURSE

- The patient was admitted to the hospital and had unremarkable laboratory evaluation. He was initially anticoagulated as the mass was presumed to be thrombus.
- An Echocardiogram and cardiology consultation was obtained, and the patient was taken to the OR for surgical resection by CT surgery given his symptoms.
- He had resection of mass, with pathology consistent with MDM2 positive intimal sarcoma.
- The patient was referred to a quaternary care center for oncology care.

CLINICAL IMAGES

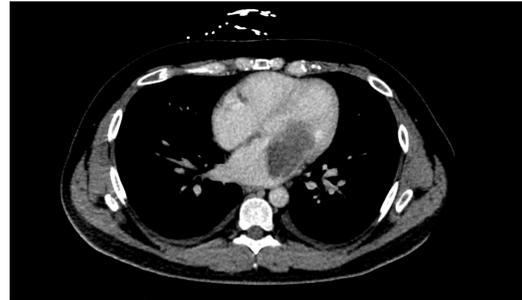


Figure 1: CT Imaging demonstrating filling defect

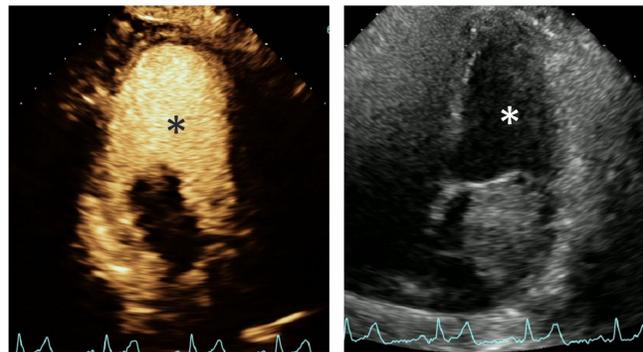


Figure 2: Transthoracic Echocardiogram Images

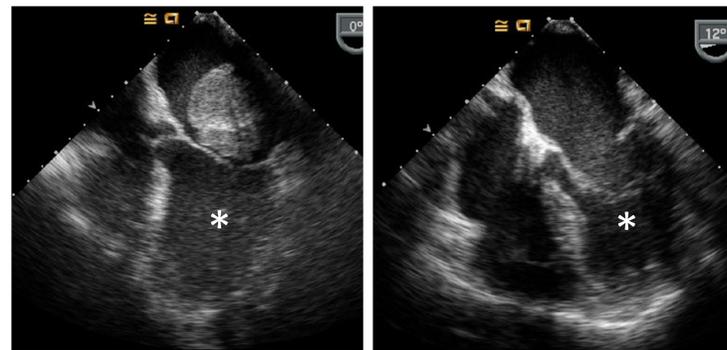


Figure 3: Transesophageal Echocardiogram Images



Figure 4: Post operative appearance of the Mass (* Used to indicate LV in all images)

DISCUSSION

- Primary cardiac tumors are quite rare and when discovered are mostly benign. Malignant cardiac tumors comprise a small proportion, as shown in figure 4 below. ¹

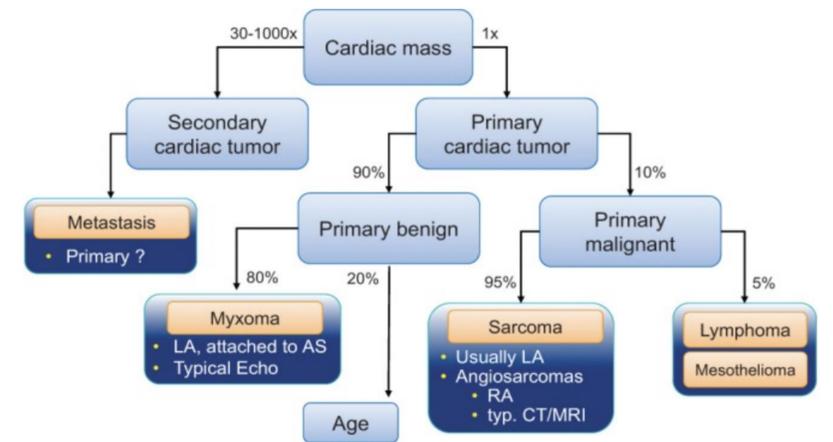


Figure 5: Relative frequency of cardiac tumors ¹

- In the differential diagnosis of a left atrial mass, one must consider thrombus, myxoma, lipoma, or rarely sarcoma. In the case of our patient, thrombus was first considered, though TTE would prove that this was not the case.
- Cardiac sarcoma comprise only around 4.8% of all resected cardiac masses in case series. They can present with various symptoms including heart failure and syncope. ³
- The atria are common sites for sarcoma, and left atrial sarcoma are frequent causes of embolic phenomenon.
- Intimal sarcomas are defined by the expression of the MDM2 proto-oncogene, which was detected in the tissue resected from our patient. ³
- In general, median survival is from 6-12 months in small case series, with surgical management and adjunctive chemotherapy being the mainstay of treatment. ¹
- Given the possibility of embolization, urgent surgery is typically indicated.

REFERENCES

- Mankad R, Herrmann J. Cardiac tumors: echo assessment. *Echo Res Pract.* 2016;3(4):R65-R77. doi:10.1530/ERP-16-0035
- Agaimy A, Röscher J, Weyand M, Strecker T. Primary and metastatic cardiac sarcomas: a 12-year experience at a German heart center. *Int J Clin Exp Pathol.* 2012;5(9):928-938.
- Burke A, Tavora F. The 2015 WHO Classification of Tumors of the Heart and Pericardium. *J Thorac Oncol.* 2016 Apr;11(4):441-52. doi: 10.1016/j.jtho.2015.11.009. Epub 2015 Dec 25. PMID: 26725181.