

Introduction

- The incidence of primary cardiac tumors is less than 0.1 % with 15% of these being malignant tumors.
- Osteosarcomas account for less than 10% of malignant primary cardiac tumors.
- We present a case of a cardiac osteosarcoma discovered during the workup for valvular endocarditis.

Case Presentation

History-

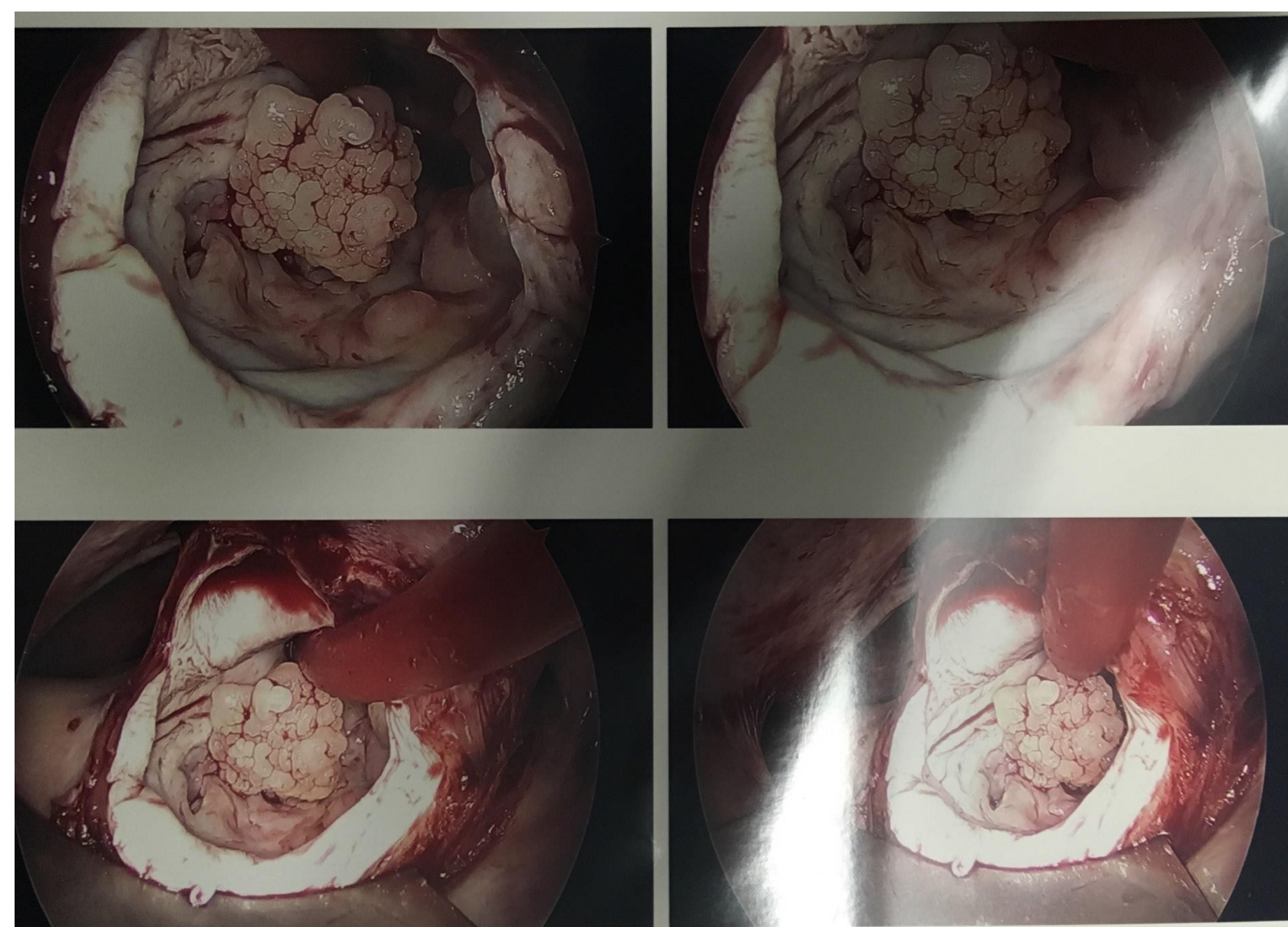
- A 38-year-old woman presented to the Emergency Department with worsening dry cough, chest pain and shortness of breath over the past 3 weeks with intermittent subjective fever and chills.
- One week prior she had gone to her primary care physician with similar symptoms. A chest x-ray was done and she was diagnosed with walking pneumonia and treated with Azithromycin for 5 days.
- After finishing a course of antibiotics, the patient's symptoms did not improve.
- Due to failure to improve, the primary care physician ordered a CT scan of her chest that revealed a calcified chronic thrombus along the wall of the left atrium and thickened mitral valve leaflets with bilateral pleural effusions.
- Of note, the patient had an episode of transient vision loss of her left eye eight months prior to the current illness.

Physical Exam-

- Vitals: Temp 99.1 F, BP 130/91, P 111, RR 18, O2 Sat 97% on RA
- General: Pleasant, talkative lady in no distress
- HEENT: Pupils equal and reactive to light and accommodation..
- Neck: Supple, No lymphadenopathy, thyromegaly or carotid bruits. No JVD.
- Heart: Normal S1, S2. Regular rhythm. Grade 3/6 holosystolic murmur best heard at the apex. No rubs appreciated.
- Lungs: Coarse crackles at the bases bilaterally
- Abdomen: Soft, non-tender, non-distended with no rebound, rigidity, guarding or abdominal mass
- Extremities: No subungual hemorrhages, Janeway lesions, Osler's nodes, or edema
- Neuro: CN II-XII intact, no dysmetria, 5/5 strength B/L in both upper and lower extremities.

Hospital Course

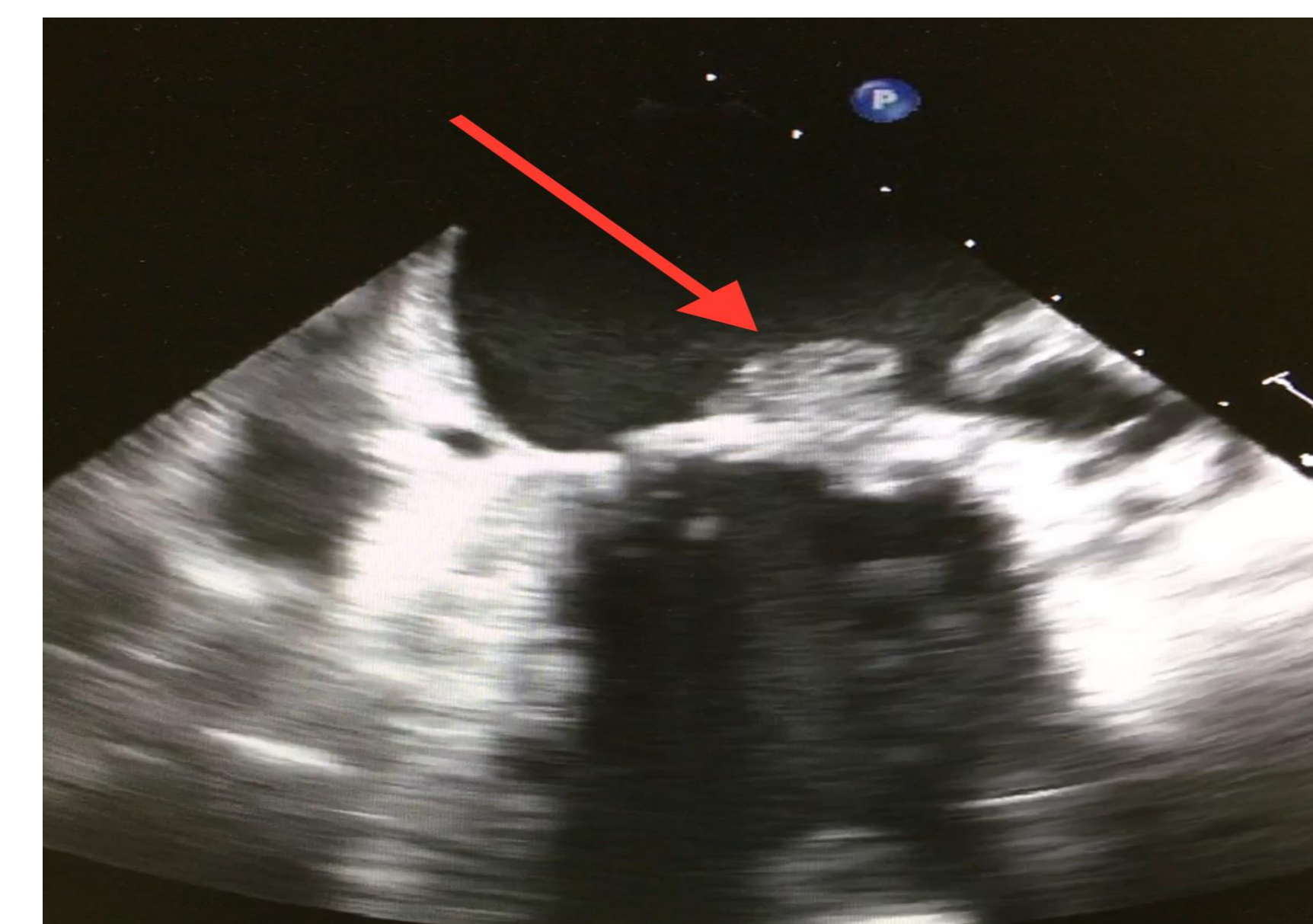
- Due to the initial suspicion about native valve endocarditis, patient was admitted to ICU, blood cultures were drawn and patient was started on Ceftriaxone and Vancomycin.
- A 2D ECHO showed thickened mitral valve leaflets, severe mitral regurgitation and mitral stenosis with a mean gradient of 23.
- Blood cultures were negative for infection.
- Cardiothoracic surgery was consulted for replacement of the mitral valve.
- Pre-operative transesophageal echocardiography showed not previously visualized large mass on the mitral valve and left atrial wall.
- A bio-prosthetic valve was placed and specimens of the mass, native valve, and satellite lesions were obtained.
- The pathology came back as high-grade primary cardiac osteosarcoma.
- Patient was discharged on post-operative day six to follow-up with hematology/oncology.



Tumor Shown During Surgery

Other Important Testing

- ECHO (01/04/16): Moderated mitral valve thickening with moderated to severe regurgitation
- CT (8/26/16): Calcified chronic thrombus along the wall of the left atrium and thickened mitral valve leaflets and bilateral pleural effusion



Transthoracic ECHO showing tumor (8/27/16)

Discussion

- Primary Cardiac Osteosarcomas are extremely rare and can be aggressive.
- Due to their rare occurrence and tendency to mimic a thrombus on imaging, they are usually not considered in the initial differential diagnosis.
- As in our patient, it was not until the surgery that the diagnosis of primary cardiac osteosarcoma was made. Clinical presentations depend on the location of the tumor.
- Primary treatment of choice is complete resection of tumor.
- The most important factor reported associated with a better outcome include tumor size <5 cm.
- Unusual presentation of thrombus with a satellite lesion as in our patient should make us think of primary cardiac tumors as it would change management and outcome for patients.

References

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