

RIGHT ATRIAL MALIGNANT MULTI-FOCAL HIGH-GRADE ANGIOSARCOMA WITH PULMONARY METASTASIS

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Background

Primary cardiac angiosarcoma (PCA) is a rare, aggressive, and malignant tumor with a high incidence of metastatic spread.

Diagnosis remains a clinical challenge due to nonspecific symptoms and metastatic disease at presentation.

Case

A 35-year-old African American man was diagnosed with a one-month history of pericardial effusion who presented with worsening shortness of breath treated with oral steroids.

An echocardiogram showed a large pericardial effusion with tamponade physiology prompting a pericardial window with evidence of hemorrhagic effusion.

Transesophageal echocardiogram showed a sizable right intra-atrial mass with mobile attachments concerning for a thrombus. Apixaban was initiated.

Outpatient cardiac magnetic resonance imaging (CMRI) was scheduled. He returned with chest pain before obtaining CMRI.

Results



Figure 1.
TTE: Large free-flowing pericardial effusion

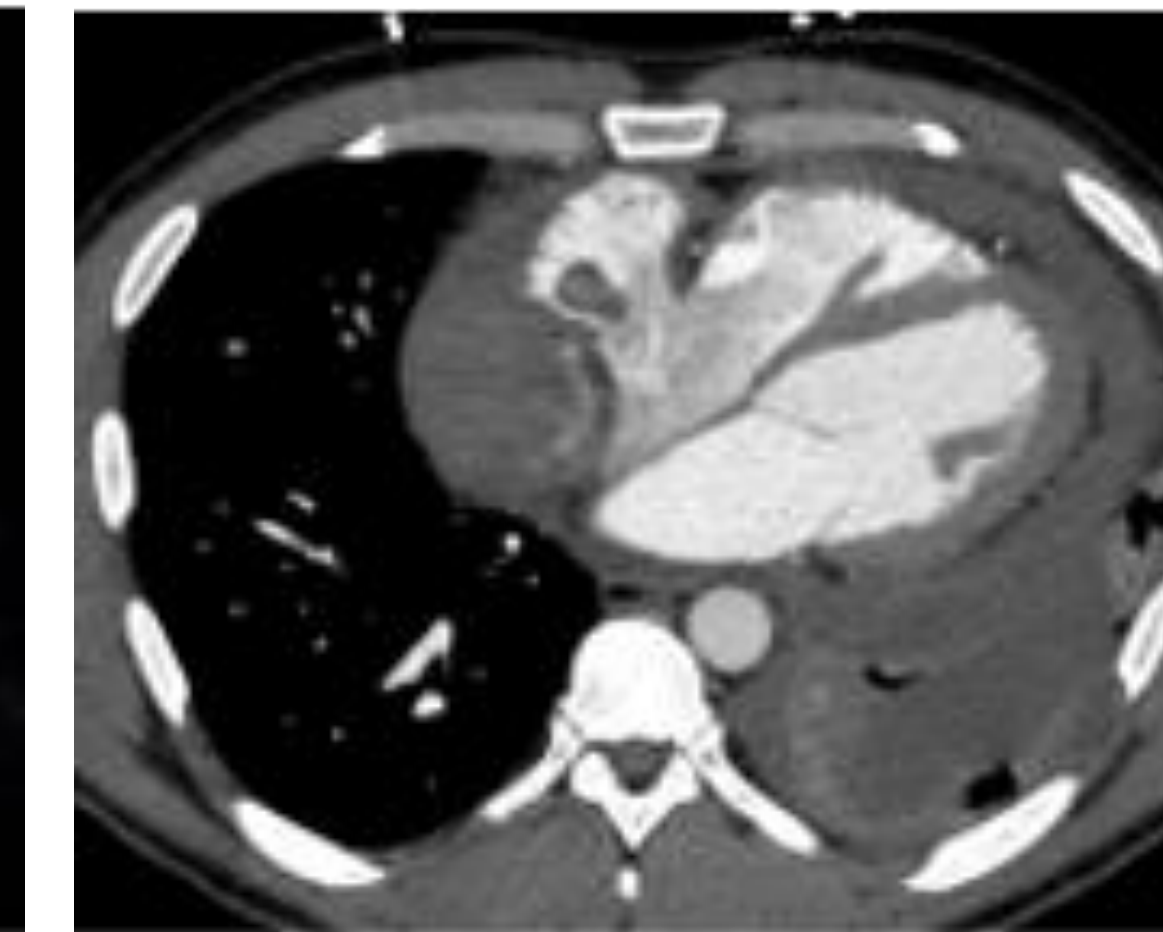


Figure 2.
CTA chest: Contrast in the RA extending to pericardial space concerning for bleeding

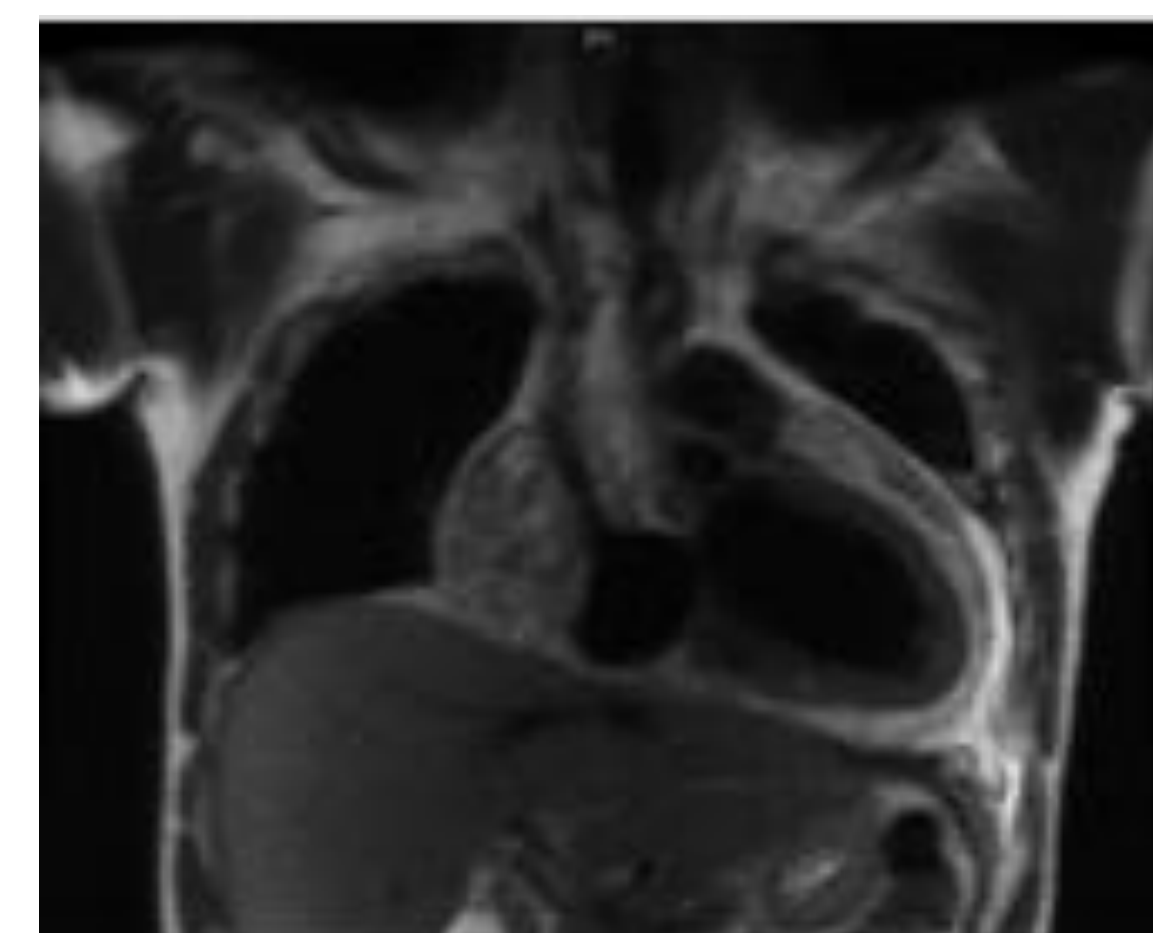


Figure 3.
Chest MRI: Mediastinal mass tracking along right atrium causing mass effect



Figure 4.
TEE: Large right intra-atrial mass with mobile attachments



Figure 5: Median sternotomy with adhesions and fibrinous tissue on pericardium



Figure 6.
Left Lung Nodule

Results

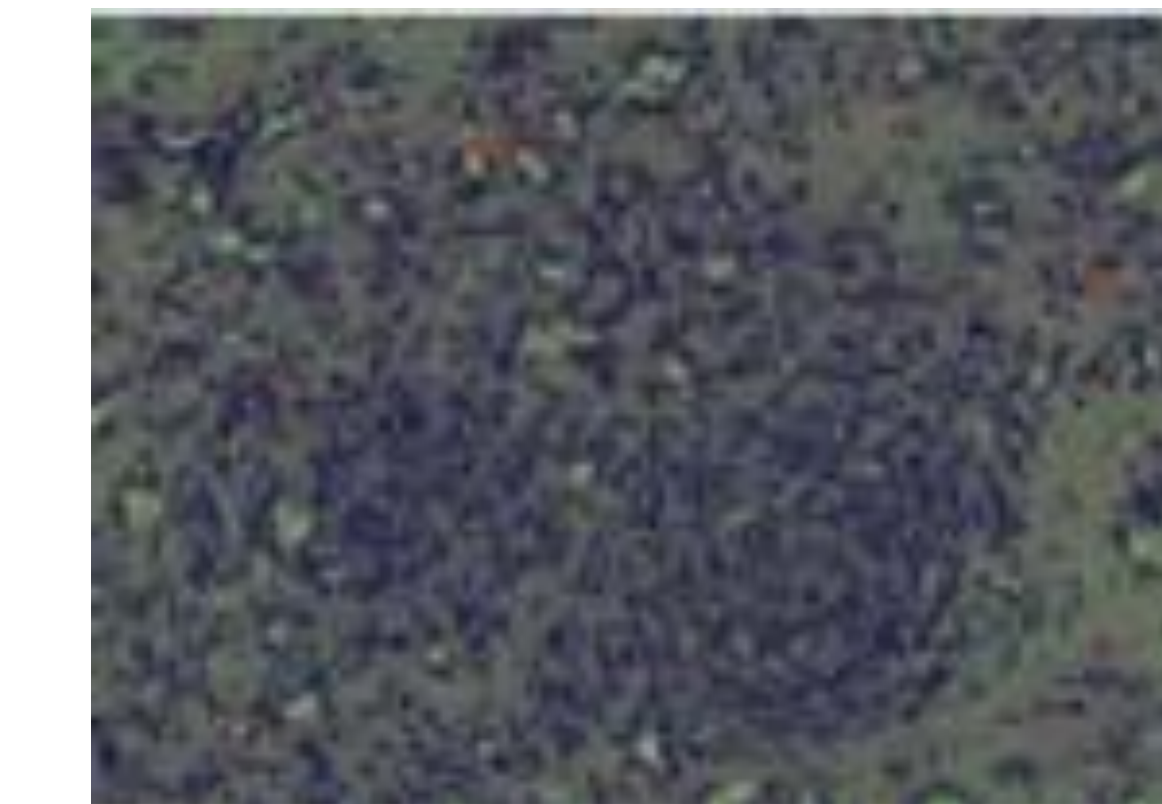


Figure 7. Multifocal high-grade angiosarcoma, with variable growth patterns and cellularities

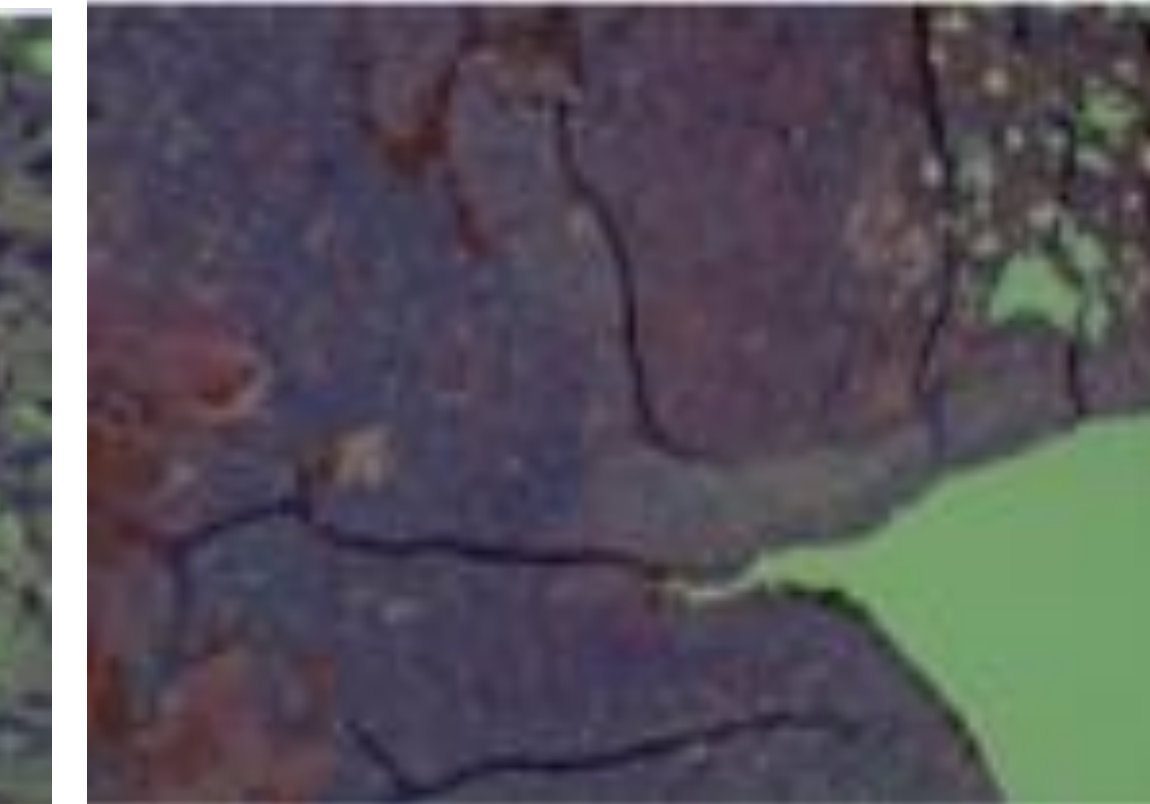


Figure 8. Multifocal high-grade angiosarcoma wedge resection (tumor on left infiltrating the lung on the right)

Decision Making

Chest CTA noting complex hemopericardium with contrast extending into the anterior mediastinum concerning for bleeding. Chest MRI demonstrated a mediastinal mass measuring 7.5 cm x 9.9 cm with atrial mass effect. Median sternotomy was performed with open cardiac biopsy and surgical resection of a lung mass with resultant biopsies consistent with multifocal high-grade angiosarcoma with associated hemorrhage.

Conclusion

Early diagnosis may prevent tumor progression. This case emphasizes the significance of multimodality imaging in diagnosing PCA. Unfortunately, the patient succumbed to the disease given the infiltrative metastatic spread.

References

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Patel SD, Peterson A, Bartczak A, Lee S, Chojnowski S, Gajewski P, Loukas M. Primary cardiac angiosarcoma - a review. *Med Sci Monit*. 2014 Jan 23;20:103-9. doi: 10.12659/MSM.889875. PMID: 24452054; PMCID: PMC3907509.