Clinical Images

Persistent Intracardiac Thrombus: Could it be Cancer?

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Figures 1 and 2. Transverse (Fig. 1) and sagittal (Fig. 2) plane cardiac MRI demonstrating a solid mass (9 cm×8.7 cm×9.4 cm) occupying most of the right ventricle (white arrows)

CASE

A 55-year-old man with ischemic cardiomyopathy, right ventricular (RV) thrombus on warfarin, and left nephrectomy

10 years prior for renal cell carcinoma (RCC) presented with dyspnea. An echocardiogram demonstrated the chronic RV mass, presumed to be a thrombus, enlarged from prior despite therapeutic anticoagulation (INR 2.4). A cardiac MRI performed to better characterize the lesion confirmed a large fat-containing mass with malignant features in the RV (Figs. 1 and 2). An endomyocardial biopsy revealed metastatic RCC. No evidence of other systemic, inferior vena cava (IVC) or atrial metastasis was identified. Despite palliative radiation, the patient died 3 months later.

Primary tumors of the heart are rare and outnumbered by metastatic disease.¹ Non dissolving intracardiac masses should raise suspicion for tumor. Our patients' 'thrombus' was likely tumor all along. Tumor extension to the heart is a known complication of RCC, but isolated RV metastasis without contiguous IVC or atrial involvement is exceedingly rare.² Echocardiography may identify a metastatic lesion, but cardiac MRI provides greater detail.³ No standard treatment guidelines exist, with surgical excision, immunotherapy and radiation therapy attempted, with generally poor results.^{4,5} Clinicians should maintain a high index of suspicion for metastatic disease, even in patients with remote history of cancer.

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REFERENCES

1. Bussani R, De-Giorgio F, Abbate A, Silvestri F. Cardiac metastases. J ClinPathol. 2007;60:27–34.
2. Atik FA, Navia JL, Krishnamurthi V, et al. Solitary massive right ventricular metastasis of renal cell carcinoma without inferior vena cava or right atrium involvement. J Card Surg. 2006;21:304–6.
3. O'Donnell DH, Abbara S, Chaithiraphan V, et al. Cardiac tumors: optimal cardiac MR sequences and spectrum of imaging appearances. Am J Reontgenol. 2009;193:377–87.
4. Masaki M, Kuroda T, Hosen N, et al. Solitary right ventricle metastasis by renal cell carcinoma. J Am Soc Echocardiogr. 2004;17:397–8.
5. Mumoli N, Cei M, Pasquinelli P, Carnesecchi C, Verzuri MS. Floating heart metastasis. J Am Soc Echocardiogr. 2006;19:1293 e1–2.

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