Images in Cardiology

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Cardiac Metastasis from Testicular Mixed Germ Cell Tumor

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FIG. 1 Cardiac metastasis from testicular mixed germ cell tumor. See text for details.

Testicular germ cell tumors rarely metastasize to the heart. We have seen a 26-year-old man with signs of right-sided heart failure four years after a diagnosis of mixed germ cell testicular tumor. The tumor had components of yolk sac, embryonal carcinoma, seminoma, and teratoma. At the time of diagnosis, the patient underwent left orchiectomy but refused chemotherapy and was lost to follow up. Transthoracic echocardiography showed a large, irregular, mobile mass within the right atrium (RA) that prolapsed through the tricuspid valve into the right ventricle (RV) in diastole (Fig. 1A). The mass was further characterized by transesophageal echocardiography as a large, freely mobile, irregular, multilobulated echodensity occupying most of the RA in systole (Fig. 1C) and much of the RA and RV (Fig. 1D) in diastole. The mass was also visualized within the superior (SVC) and inferior vena cava. A five-day

course of chemotherapy with bleomycin, etoposide, and cisplatin was started. The patient subsequently underwent cardiac surgery with removal of an $8.0 \times 6.0 \times 1.0$ cm mass from the RA consisting of multiple fragments of tan-yellow soft tissue with a grape-like appearance (Fig. 1B). Tumor implants were also seen on chordae tendinae of the tricuspid valve, necessitating valve replacement. Histologic evaluation of the specimen showed a predominance of fibrin clot with islands of cartilage. Metastatic tumor cells with large and pleomorphic nuclei were seen scattered throughout the mass.

Reference

1. Vohra A, Saiz E, Davila E, Burkle J: Metastatic germ cell tumor to the heart presenting with syncope. *Clin Cardiol* 1999;22:429-433