

CARDIAC METASTASES FROM METASTATIC MELANOMA

Sarah Beth Harrington, M.D. (Associate)
Department of Internal Medicine
Virginia Commonwealth University, Richmond, VA

A 77-year-old male with a history of Type 2 diabetes mellitus, hypertension, and coronary artery disease (status-post a three-vessel CABG six months ago), presented with a two week history of progressive dyspnea on exertion, now short of breath at rest. The patient reported lower extremity swelling, four-pillow orthopnea, paroxysmal nocturnal dyspnea, and a non-productive cough during the last few days. On exam, the patient was tachypnic and tachycardic with jugular venous distention to the angle of the jaw. Also noted was a hard fixed right anterior cervical lymph node. ECG showed sinus tachycardia with evidence of left ventricular hypertrophy and no ST or T-wave changes. Chest roentogram showed mild cardiomegaly and interstitial edema. The patient became rapidly hemodynamically unstable overnight, requiring intubation and vasopressors. An emergency transthoracic echocardiogram revealed a large echodense mass in the right ventricular apex causing right ventricular enlargement and left ventricular compression, with a left ventricular ejection fraction less than 10%. Upon further questioning, the patient's family remembered that he had a malignant melanoma removed from his right forearm fifteen years ago. The patient's condition continued to deteriorate and he died less than 24 hours from the time of admission. An autopsy revealed a large mass in the right ventricular myocardium, multiple pulmonary artery thrombi, and enlarged mediastinal and anterior cervical lymph nodes; biopsies of the mass and nodes were confirmed histologically as malignant melanoma.

The clinician should be alert to the possibility of cardiac metastases in patients with known malignant melanoma who present with cardiac symptoms. Malignant melanoma has the highest rate of cardiac metastases of any tumor. Most metastases are located in the myocardium, and valvular involvement is rare. Cardiac involvement tends to occur late as part of widely disseminated disease. In a select few, surgery may be useful to palliate symptoms and prevent death from cardiac complications.