**A LARGE MASS OBLITERATING THE RIGHT VENTRICLE: A TUMOR OR A THROMBUS?**

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*Introduction*: Metastasis to heart is rare, though detected in ~ 9.1% in patients with known malignancies. We discuss a patient with a large cardiac mass, possibly metastatic, obliterating the right ventricle (RV).

*Case report*: A 69-year-old African-American woman with hypertension, diabetes, chronic kidney disease, presented with one month history of worsening episodic dyspnea, and dizziness. Two months earlier, she was diagnosed with poorly-differentiated pelvic adnexal sarcoma, associated with mature teratoma of left ovary. She underwent bilateral salpingo-oopharectomy, pelvic/paraaortic lymphnode dissection, and omentectomy. Examination revealed tachypnea(23 times/min), and bilateral pitting pedal edema. Laboratory work up was unremarkable. Chest X-ray showed homogeneous right lower lobe opacity, with multiple nodules[Fig 1]. Non-contrast CT-chest confirmed presence of innumerable scattered ground-glass pulmonary nodules, consistent with metastatic disease. Trace pericardial effusion was evident[Fig-2]. Echocardiogram demonstrated echogenic RV mass protruding into dilated right atrium with near-complete obliteration of RV cavity [Fig-3]. Tricuspid valve was not visualized. Left ventricle was normal in size and function. This mass was thought to be metastatic from her known ovarian cancer. Patient was a poor candidate for surgery/chemotherapy, and succumbed to respiratory failure.

Discussion: Non-invasive evaluation of cardiac masses include echocardiogram, cardiac CT, and MRI. Echocardiogram shows anatomical location, extent and physiological consequences of intracardiac mass by dynamic assessment during the cardiac cycle. Intracardiac mass needs to be distinguished from thrombus, which is more common. Absence of stalk, enlarged atrial chamber, low cardiac output stasis, response to thrombolytic therapy, and avascularity on contrast echocardiography favor thrombus. A giant organized thrombus can clinically mimic tumor due to immobility, close location near the wall, and poor response to thrombolysis. In difficult situations, MRI with Gadolinium is useful. Cardiac CT or MRI helps in precise anatomical delineation, characterization, and pre-operative planning of large cardiac mass. For guided biopsy of right-sided lesions, transesophageal echocardiography is preferred modality.



