

Atrial Flutter Leads to Diagnosis of Metastatic Melanoma Involving the Heart

Mostafa Abohelwa, MD¹; Mohamed Elmassry, MD²; Gaspar Del-Rio-Pertuz, MD¹; Jason Wischmeyer, MD²

¹Department of Internal Medicine, Texas Tech University Health Sciences Center, Lubbock, Texas

²Department of Cardiovascular Medicine, Texas Tech University Health Sciences Center, Lubbock, Texas

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Case Description

A 61-year-old male patient, who was previously healthy, presented to the emergency department with weakness. He had tachycardia at 180/minute with normal blood pressure. An electrocardiogram revealed atrial flutter. He was started on an intravenous diltiazem drip. Transthoracic echocardiography revealed 2 hyperechoic masses within the left ventricle; 1 measured 1.2×0.74 cm, and the other was 3×1.4 cm. The right ventricle also showed a mass of 1.1×1 cm (Fig. 1). The masses were suggestive of possible metastatic disease. A computed tomographic scan of the chest, abdomen, and pelvis showed diffuse metastatic disease to the lung, liver, spleen, and mesentery; erosive changes in the left scapula with a large left scapular mass; and hypoattenuating masses within the left ventricle (Fig. 2A and 2B). Skin examination revealed a lesion in the right axilla that was concerning for melanoma (Fig. 3). The patient had a biopsy that confirmed the diagnosis of metastatic melanoma positive for a *BRAF*^{V600E} mutation. The patient opted for comfort care after the oncology team discussed several treatment options.

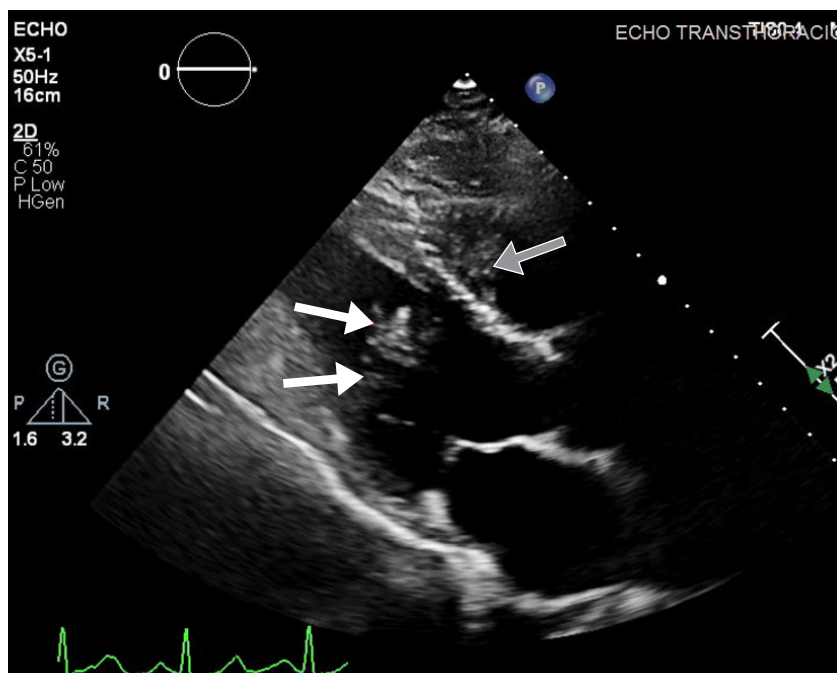


Fig. 1 Transthoracic echocardiogram with a long parasternal view shows 2 hyperechoic masses within the left ventricle that measure 1.2×0.74 cm (top white arrow) and 3×1.4 cm (bottom white arrow). The right ventricle shows a mass of 1.1×1 cm (gray arrow).

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Corresponding author: Mostafa Abohelwa, MD, Texas Tech University Health Sciences Center, 3601 4th St, Lubbock, TX 79430 (mostafa.abohelwa@ttuhsc.edu)

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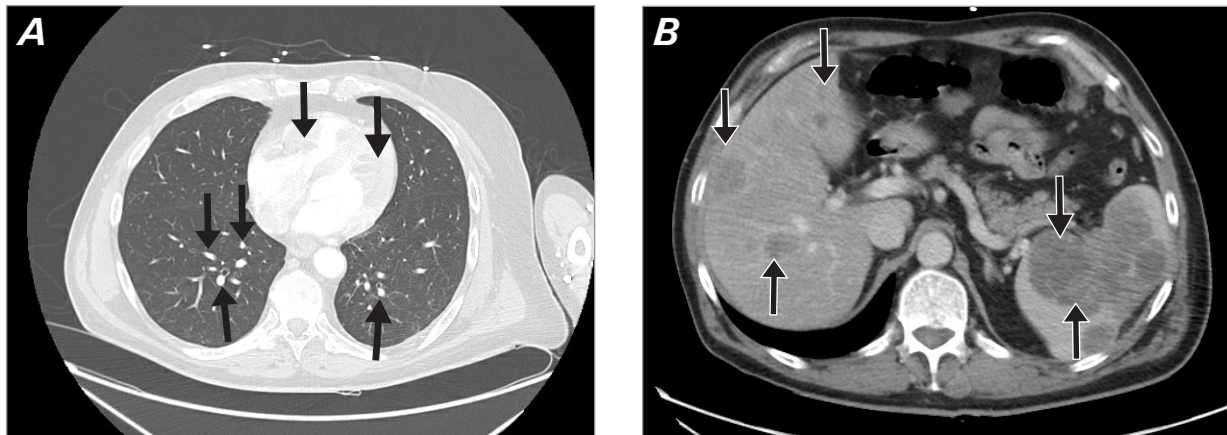


Fig. 2 **A)** Chest computed tomographic scan shows multiple pulmonary nodules without pleural effusion or pneumothorax nodules (3 arrows in the right lung and 1 arrow in the left lung indicate metastatic lung nodules). In addition, normal heart size is seen with a hypoattenuating mass in the left ventricle without pericardial effusion and a small mass in the right ventricle (arrows in the heart indicate metastatic hypoattenuating masses in both ventricles). **B)** Abdomen computed tomographic scan shows multiple small masses in the liver and the spleen (3 arrows in the liver and 2 arrows in the spleen indicate metastatic nodules).

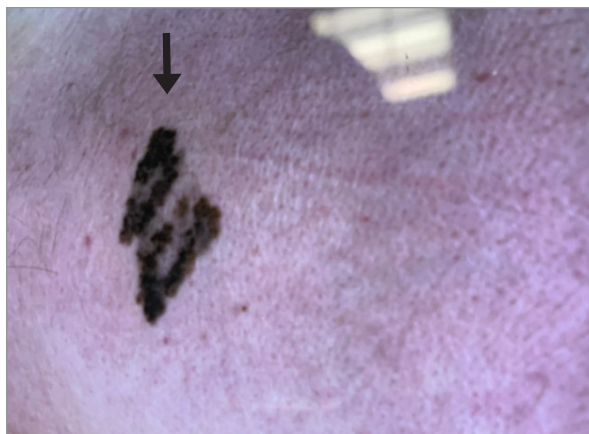


Fig. 3 Photograph of the patient's right axilla shows a 2- x 2-cm macular brownish skin lesion with darker speckles (arrow).

Comment

The heart's involvement by melanoma is not common on presentation and even goes unrevealed in some patients. Glancy et al¹ reviewed autopsies in 70 patients with melanoma and demonstrated that cardiac metastases occurred in up to 65%. In general, cardiac metastasis is unusual and has been described in less than 10% of melanoma cases.² Cardiac metastasis is not commonly revealed because most patients lack cardiac symptoms. Very few patients present with cardiac symptoms, such as this patient did, that reveal the diagnosis of metastatic melanoma.

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