

## CASE IMAGE

## Multimodality imaging and histopathological diagnosis of an insidious enemy: cardiac metastasis of malignant melanoma with unknown primary origin

*Sinsi bir düşmanın histopatolojik tanısı ve çoklu model görüntülenmesi:  
Primeri bilinmeyen malign melanomun kardiyak metastazı*

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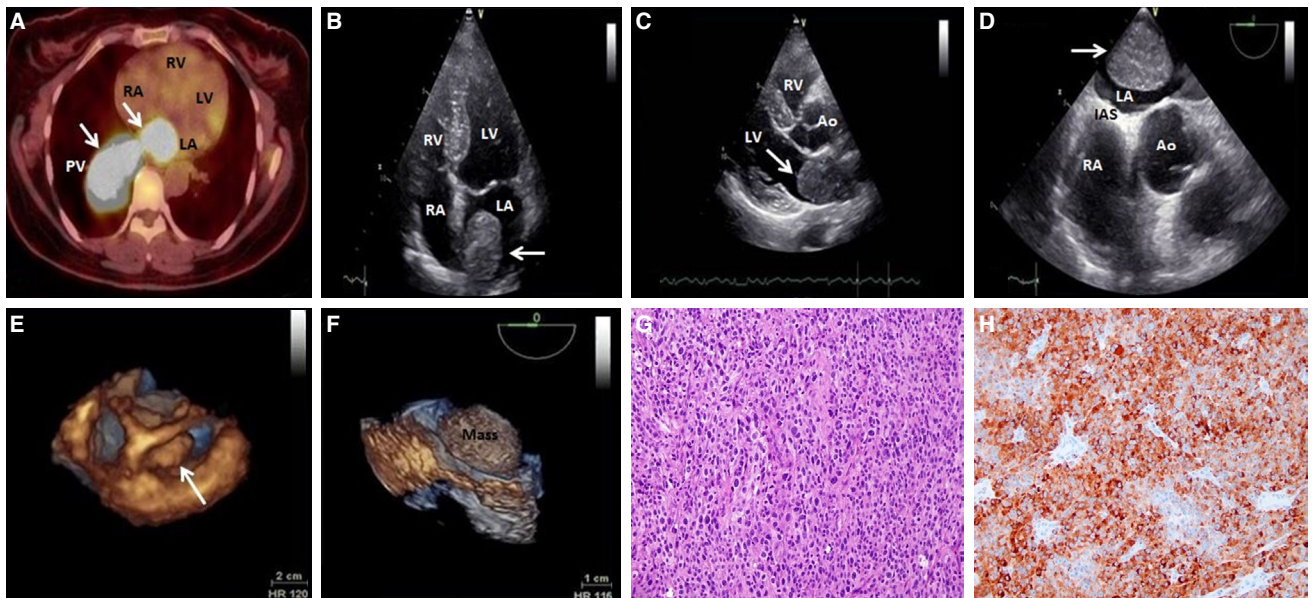
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A 41-year-old female patient presented to the neurology clinic with the complaint of headache. Cranial computed tomography (CT) image revealed a contrast-enhanced mass on the right basal ganglia plane, consistent with a metastatic lesion. To detect the primary origin, a fluorine-18-fluorodeoxyglucose-positron emission tomography/computed tomography (FDG-PET/CT) scan was performed. A hypermetabolic mass in the right inferior lobe of the lung and another hypermetabolic mass measuring 3.5x4.7 cm and indicating a high FDG uptake with a high maximum standardized uptake value (SUVmax) of 74.6 and spreading through the left atrium via the pulmonary veins were detected (Fig. A). Transesophageal echocardiography revealed a mobile mass measuring 3.3x2.5 cm attached to the lateral wall of the left atrium (Fig. B-F). CT-guided transthoracic needle biopsy of the lesion was performed to obtain a histopathological diagnosis. The histopathological evaluation showed pleomorphic tumor cells with a large nucleus and a high level of mitotic activity (Fig. G). An immunohistochemical evaluation revealed diffuse immunohistopathological staining in the tumor cells for S100 protein, melanoma antigen, and human melanoma black-45, consistent with malignant melanoma (MM) (Fig. H). Based on the histopathological diagnosis of MM, the patient was sent

for consultation with the dermatology clinic. She had no previous medical history of MM, atypical nevus, or nevus excision. A detailed dermatological examination was performed, which revealed no primary cutaneous lesion or atypical nevus. The patient was transferred to the oncology department with a diagnosis of metastatic MM with unknown primary origin; however, during follow-up, she died due to multi-organ failure.



**Figures-** (A) Fluorine-18-fluorodeoxyglucose-positron emission tomography/computed tomography (FDG-PET/CT) showing a hypermetabolic mass in the pulmonary vein and left atrium with a high FDG uptake; (B, C) Transthoracic echocardiogram demonstrating a mobile mass measuring 3.3x2.5 cm in the left atrium; (D-F) 2D and 3D transesophageal echocardiography revealing a mass attached to the lateral wall of the left atrium. (G) Histopathological and immunohistochemical analysis of a computed tomography-guided biopsy of the mass revealed pleomorphic tumor cells with a prominent nucleolus in a solid pattern and with a high level of mitotic activity (H&E, x200); (H) Cytoplasmic immunohistochemical staining with the melanoma antigen antibody (x200). (Ao: Aorta; IAS: Interatrial septum; LA: Left atrium; LV: Left ventricle; PV: Pulmonary vein; RA: Right atrium; RV: Right ventricle).