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## Unusual echocardiographic appearance of a cardiac metastasis

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Metastatic cancers to the heart are rare neoplasms. They are typically asymptomatic, and most cases remain undiagnosed until autopsy. We report a case of left ventricular metastasis from primary lung cancer.

The patient is a 71-year-old man with a history of COPD presents with acute shortness of breath and cough, diagnosed with acute bronchitis, and treated with an oral antibiotic without improvement of his symptoms. CT scan of chest showed a right lung mass. PET-CT scans obtained metastasis to bones, liver, and myocardium. Focal metabolic activity in the ventricular septum was apparent. 2-D echocardiography revealed two distinct echogenic densities attached to the posterior papillary muscle consistent with vegetation or metastasis. Underwent bronchoscopy with biopsy of lung mass. Pathology reported adenocarcinoma. The patient's clinical condition deteriorated, he was intubated and placed on mechanical ventilator. Palliative care was consulted, and a decision made to withdraw care.

Metastatic disease to the heart is much more common than primary carcinoma. Primary lung cancer accounts for 36% to 39% of cardiac metastases. Most common histological type is adenocarcinoma. The clinical manifestations are varied and depend more on the anatomic localization of tumor, the size of the tumor, and the degree of infiltration to adjacent tissues. Pericardial metastasis leads to pericardial effusion, cardiac tamponade, or constrictive pericarditis. Myocardial and endocardial metastasis lead to heart failure or arrhythmias. The possibility of cardiac metastasis should be considered in any patient with a malignancy and new cardiac symptoms, like heart failure, angina pectoris, embolism, arrhythmia, or a new heart murmur.

The treatment of metastatic cancers to the heart is limited to palliative treatment of symptoms and chemotherapy. In some cases, surgery is used to relieve symptoms. Pericardiocentesis reduce symptoms of pericardial effusion, and in rare cases single nodules may be resectable. The prognosis is typically poor.

### Biography

Haitham Mazek completed his Internal Medicine Residency and Geriatric Fellowship training from Texas Tech University Health Sciences Centers, Lubbock, TX. Currently he is an academic hospitalist and a faculty with the Department of Family Medicine at Texas Tech University Health Sciences Center, Lubbock, TX. He is interested for cardiovascular research, geriatric cardiology and heart failure and planning to do cardiology fellowship.

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