

A Hole in the Heart

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A 65-year-old man with stage IV adenocarcinoma of the lung first presented with a left pleural mass and malignant pleural effusion in December 2008. He underwent chest tube drainage and received carboplatin and pemetrexed with partial response, but in June 2009, he developed escalating shortness of breath, lower extremity edema, and left side chest pain for 1 week. Physical examination suggested decompensated heart failure. Computed tomography imaging of the chest revealed progression of disease including new pericardial and myocardial metastases invading the left atrium (Figure 1) and right ventricle (Figure 2). A moderate, loculated pleural effusion was present. The patient was admitted to the hospital for diuresis and chemoradiotherapy but

experienced cardiac arrest and died on the third hospital day. No autopsy was performed.

One large autopsy series reported a 21% prevalence of cardiac metastases on postmortem examination of 460 patients with adenocarcinoma of the lung.¹ However, symptomatic disease detected antemortem is quite rare, with only case reports described in the literature.^{2–5} There are no defined treatment standards for the treatment of this grave situation. One report describes ventriculectomy of an intracavitary pedunculated mass resulting in 7-month survival.² However, another report describes a patient similar to our patient, with a large right ventricular mass, who also died of hemodynamic compromise shortly after hospital admission.³

REFERENCES

1. Bussani R, De-Giorgio F, Abbate A, et al. Cardiac metastases. *J Clin Pathol* 2007;60:27–34.
2. Che GW, Liu LX, Zhang EY, et al. Left ventricular metastasis from a primary lung carcinoma. *Chin Med J (Engl)* 2007;120:2323–2324.
3. Hull JH, Usmani OS. Intra-cavity right ventricular metastasis. *Lancet* 2006;367:424.
4. Kasai T, Kishi K, Kawabata M, et al. Cardiac metastasis from lung adenocarcinoma causing atrioventricular block and left ventricular out-flow tract obstruction. *Chest* 2007;131:1569–1572.
5. Orcurto MV, Delaloye AB, Letovanec I, et al. Detection of an asymptomatic right-ventricle cardiac metastasis from a small-cell lung cancer by F-18-FDG PET/CT. *J Thorac Oncol* 2009;4:127–130.

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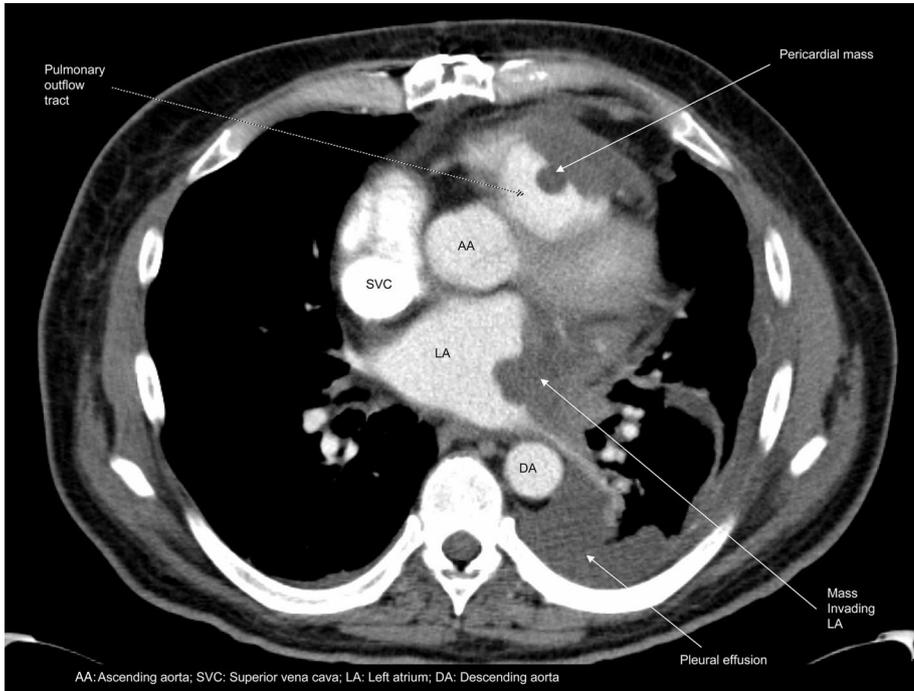


FIGURE 1. Myocardial metastasis invading the left atrium.

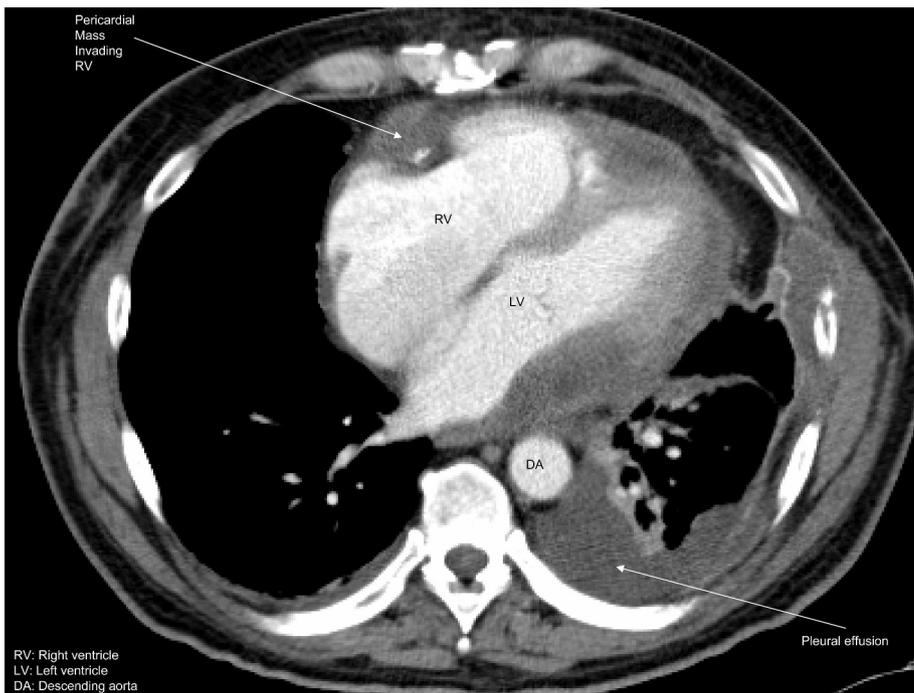


FIGURE 2. Myocardial metastasis invading the right ventricle.