

Cancer in the Left Anterior Descending Artery

A Therapeutic Aspect of Thrombus Aspiration?



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A 49-year-old male was admitted for surgical resection of a solitary pulmonary metastasis. A mixed germ cell testis tumor (mature teratoma and seminoma) was diagnosed 1 year before and treated with orchidectomy and adjuvant chemotherapy. Surgical resection of regional retroperitoneal disease progression during follow-up demonstrated transformation into high-grade sarcoma. Four days after lung surgery, he experienced chest pain. An electrocardiogram showed anteroseptal ST-segment elevation. Transthoracic echocardiography confirmed anteroseptal hypocontractility and revealed a large mobile left ventricular mass (Figure 1C, Online Video 1). Urgent coronary angiography demonstrated an occluded proximal left anterior descending coronary artery (Figure 1A). Evacuation of solid tissue during thrombus aspiration restored coronary perfusion with symptom relief and ST-segment normalization

(Figure 1B). Histopathology of the thrombus identified a high-grade sarcoma ex teratoma, suggesting embolization from an intracardiac metastasis (Figures 1D to 1G). The patient deceased shortly after due to therapy-resistant cerebral edema and intracranial compression attributable to 2 new brain metastases.

Reported incidences of cardiac metastases are variable, ranging from 2.3% to 18.3% in patients dying from or with cancer (1). Cardiac or pericardial metastases should be considered whenever patients with known malignancy develop cardiovascular symptoms. Myocardial infarction is a rare but known complication of cardiac metastases.

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REFERENCE

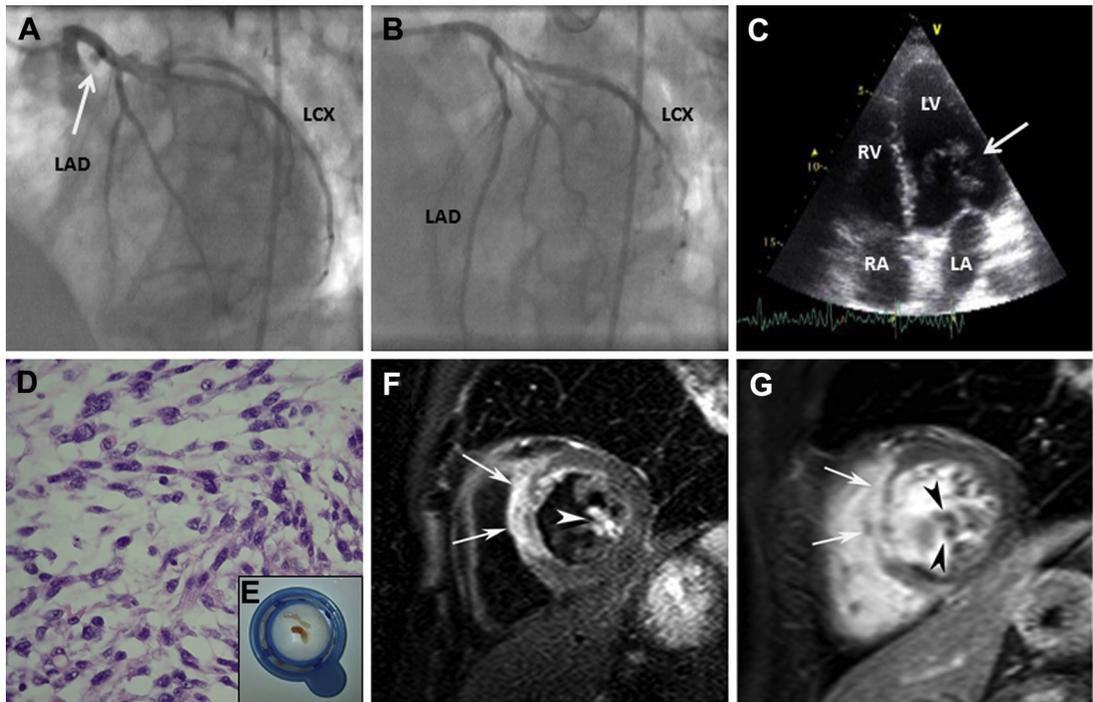
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KEY WORDS cardiac metastasis, intracardiac mass, myocardial infarction, sarcoma, thrombus aspiration

APPENDIX For supplemental videos and their legends, please see the online version of this article.

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FIGURE 1 Multimodality Imaging and Histopathology Confirming Malignant Etiology of Solid Tissue Coronary Thrombus

(A and B) Angiography demonstrated a total occlusion of the proximal left anterior descending artery (**arrow**), with reperfusion after thrombus aspiration. (C) Transthoracic echocardiogram (4-chamber view) revealed a mobile pedunculated intracardiac mass (**arrow**) ([Online Video 1](#)). (D) Cellular spindle cell proliferation in a myxoid background histopathologically documented high-grade sarcoma. (E) Thrombus aspirate. Cardiac magnetic resonance shows myocardial edema in the infarct region (**white arrows**) and hyperintense appearance of the intracavitary mass attached to the left ventricular lateral wall (**white arrowhead**) (F, T2-weighted STIR-TSE, short axis) and transmurular enhancement in the infarct region (**white arrows**) with irregular hypointense appearance of the intracavitary mass (**black arrowheads**) (G, LGE sequence, short-axis) ([Online Videos 2 and 3](#)). LA = left atrium; LAD = left anterior descending; LCX = left circumflex; LV = left ventricle; RA = right atrium; RV = right ventricle.