

Left ventricular myxoma: Hard to see, hard to hunt

This study presents the case of a 60-year-old woman with diplopia of embolic origin. On transthoracic echocardiography, she was diagnosed with a mobile pedunculated mass protruding in the left ventricular outflow tract (Fig. 1a). Parasternal long axis view revealed an intracardiac mass anchored in the postero-inferior interventricular septum close to the mitral tendinous cords without interference of aortic or mitral valve functionality (Fig. 1b). Cardiac tomography confirmed this diagnosis. The in-

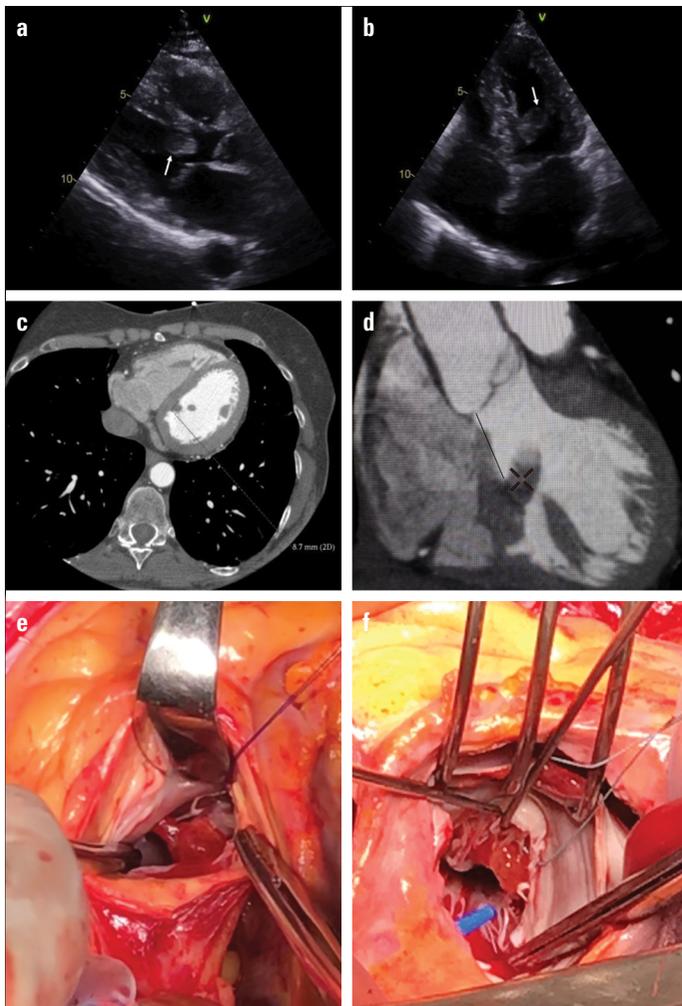


Figure 1. (a) Paraesternal long axis view: intracardiac mass anchored in postero-inferior interventricular septum, close to mitral tendinous cords (white arrow). (b) ETT: a mobile pedunculated mass protruding in left ventricular outflow tract (white arrow). (c, d) TAC: mass measured 20x9x10 mm attached by an 8.7 mm pedicle to the interventricular septum with a distance from aortic annulus to tumoral pedicle (4 cm). (e) Transverse aortotomy: mobile mass and revealed as inadequate access to resection. (f) Left atrial transeptal approach: pedunculated mass close to mitral subvalvular apparatus

tracardiac mass was located in the left ventricle, anchoring in the posterior part of the interventricular septum. The mass measured 20x9x10 mm (longitudinal, transverse and craniocaudal diameters, respectively) attached by an 8.7 mm pedicle (Fig. 1c and 1d). Cardiac surgery under cardiopulmonary by-pass was performed. Complete excision required a combined approach using aortotomy and transeptal left atriotomy. Initial transverse aortotomy revealed an inadequate access, given that it was difficult to achieve complete excision and safe the surgical resection margin because of the long distance from the aortic annulus to tumoral pedicle (4 cm) (Fig. 1e). Left atrial transeptal approach revealed a pedunculated mass close to the mitral subvalvular apparatus, as seen in the intraoperative image (Fig. 1f). The tumor was completely resected. Diagnosis of left ventricular myxoma was confirmed during intraoperative examination and subsequently by histological analysis. Postoperative course was uneventful. Surgical treatment of left ventricular septal myxomas through combined atrial and aortic approach is infrequent. Distance mayor than 3 cm between aortic annulus or proximity and the mitral subvalvular apparatus may complicate surgical removal from an empty left ventricle.

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Cardiac metastasis mimicking acute ST-elevation myocardial infarction

A 71-year-old male patient was admitted to our hospital to be operated for humeral metastasis of a left lung non-small-cell carcinoma including squamous cell carcinoma and adenocarcinoma parts. Routine pre-operative electrocardiography (ECG) revealed an abnormal pattern with marked ST-segment elevation in leads II-III-AVF (Fig. 1, Panel A). However, the patient had not suffered from any symptoms such as chest pain or dyspnea. Chest radiography showed a left hilar mass (Fig. 1, Panel B). First, cardiac enhanced computed tomography was performed. Coronary arteries had not been exposed to compression, and they exhibited no significant lesion that could lead to the above mentioned ECG

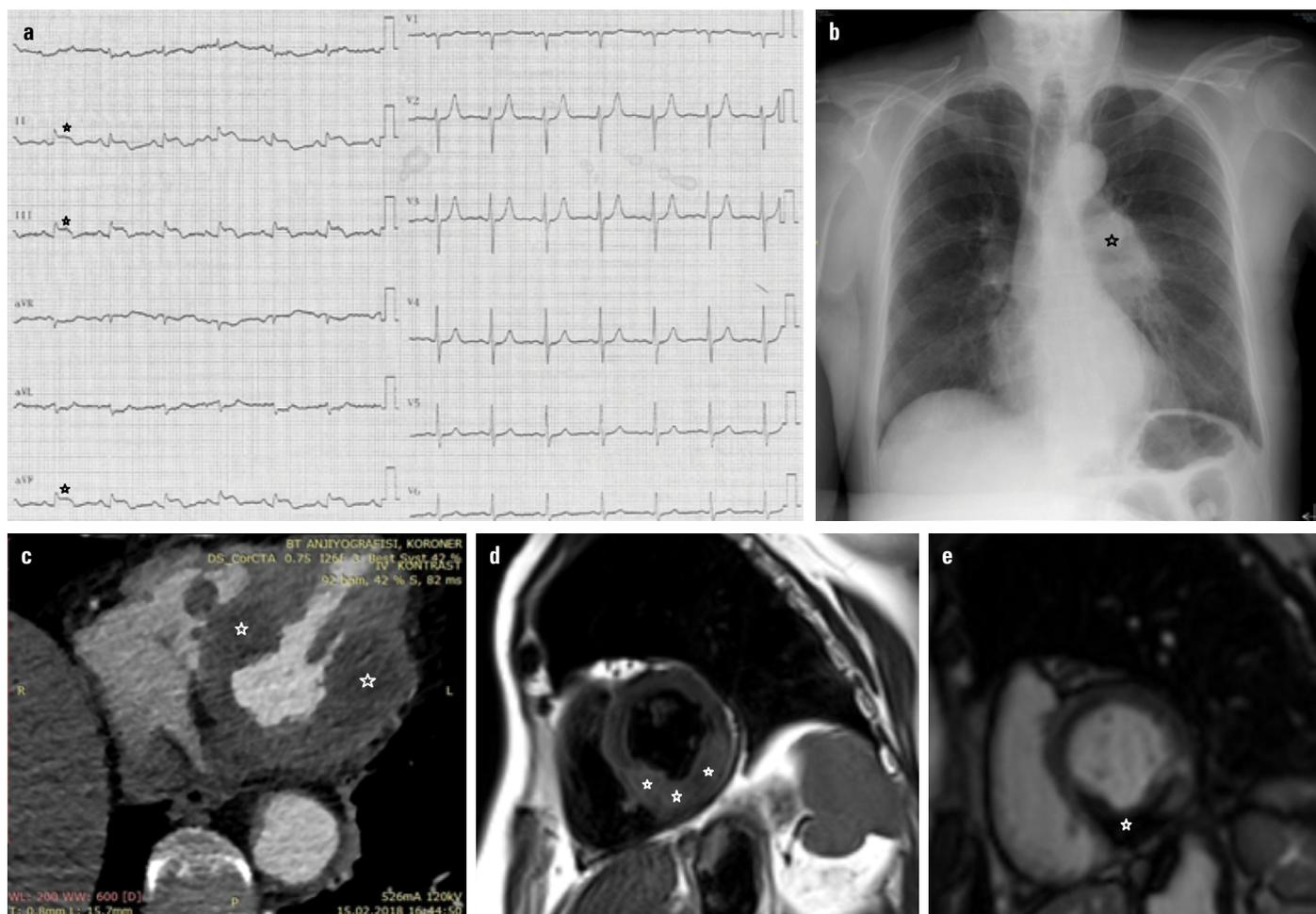


Figure 1. ST-segment elevation on ECG (Panel A, black asterisk) and primary lung cancer revealed on chest radiograph (Panel B, black asterisk). CT (Panel C, white asterisk) and MRI T2 series short axis (Panel D, white asterisk) views demonstrate metastasis. Delayed-phase MRI T2 series short axis (Panel E, white asterisk) view shows intratumoral hemorrhagic necrosis

changes. However, an intramyocardial mass involving left ventricular basal inferior part, inferoseptal and inferolateral walls, was observed; moreover, the mass extended into the right ventricular lumen (Fig. 1, Panel C) (Video 1). To clarify mass characterization, magnetic resonance imaging studies were performed. T2 series studies showed a mass with mildly increased signal intensity in the base of the heart (Fig. 1, Panel D). Delayed-phase T2 series clearly revealed remarkable hemorrhagic necrosis in the central part of the tumor (Fig. 1, Panel E) (Video 2). Thus, the course of diagnostic findings beginning with ST-segment elevation reached a diagnosis of cardiac metastasis of a lung cancer. We should keep in mind that ST-segment elevation might be related with cardiac metastasis in patients with cancer. To the best of our knowledge, this is a unique presentation considering the primary cancer type, cardiac metastasis localization, and ST-segment elevation on ECG.

Informed consent: Patient informed consent was obtained for publication.

Video 1. Cardiac enhanced CT shows an intramyocardial mass and its extension into the right ventricular lumen

Video 2. Delayed-phase MRI T2 series short axis shows hemorrhagic necrosis in the central part of the tumor

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