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CASE REPORT

Cardiac metastasis from epidermoid esophageal cancer mimicking anterior myocardial infarction

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KEYWORDS
Esophageal cancer;
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Abstract Cardiac metastases are more common than primary tumors. Several types of malignant tumors have been reported to metastasize to the heart, mainly lung cancer, but in the setting of esophageal cancer, myocardial metastasis is comparatively rare. We report a case of a cardiac metastasis from esophageal squamous cell carcinoma detected 9 months after surgically curative esophagectomy, which presented mimicking acute myocardial infarction. The use of different imaging modalities was fundamental to a correct diagnosis considering the challenging presentation.

PALAVRAS-CHAVE
Tumor esofágico;
Metástase cardíaca;
Enfarte agudo
do miocárdio

Metástase cardíaca de carcinoma esofágico mimetizando enfarte agudo do miocárdio

Resumo As metástases cardíacas são mais frequentes que os tumores primário. Tem sido descrito que diversos tipos de neoplasias apresentam capacidade de envolvimento do coração, particularmente os carcinomas do pulmão. No caso do carcinoma do esófago, a metastização miocárdica é comparativamente mais rara. Os autores descrevem o caso de um doente com uma metástase cardíaca proveniente de um carcinoma epidermóide do esófago diagnosticada 9 meses após esofagectomia com intuito curativo e que mimetizou um enfarte agudo do miocárdio. Face a esta forma de apresentação tão invulgar, o contributo de diferentes modalidades de imagem foi fundamental para o diagnóstico final.

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Introduction

Metastatic cardiac involvement, much more frequent than primary tumors of the heart,[1] occurs in up to 18% of all patients with malignancies.[2] Direct extension or regional lymphatic invasion is the most frequent route for invading the heart, while metastasis to the myocardium is less common.[2] The clinical presentation of these cardiac lesions can vary, including heart failure symptoms or pericardial effusion. Nonetheless, they can evolve silently and be discovered only at autopsy. Since most cardiac metastases appear in patients in advanced stages of the disease, prognosis is poor and therapeutic options limited. The authors report a case of a cardiac metastasis from esophageal squamous cell carcinoma which presented mimicking acute myocardial infarction. The use of different imaging modalities was fundamental to a correct diagnosis considering the challenging presentation.

Case report

A 81-year-old Caucasian man, with a history of esophageal squamous cell carcinoma diagnosed 9 months earlier treated by total esophagectomy (stage pT3, N0, Mx, R0), was admitted to our institution due to acute stroke. He had no known previous cardiovascular risk factors. The day after admission, he complained of chest discomfort and an electrocardiogram (ECG) was performed, revealing ST-segment elevation in leads V2–V4. Due to the suspicion of acute myocardial infarction (AMI), a coronary angiogram was carried out. No significant coronary artery lesions were found (Figure 1).

Transthoracic echocardiography revealed a large echogenic mass (66 mm × 60 mm), involving the ventricular septum and protruding anteriorly and to the right (Fig. 2). Biventricular systolic function and inflow pattern were normal.

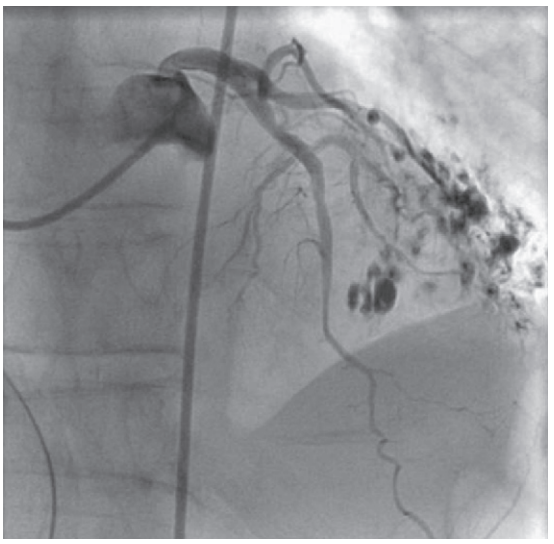

Figure 1 Coronary angiogram, right anterior oblique caudal view, with non-significant lesions in the left coronary artery. The opaque spots result from prior oral contrast aspiration during esophagography.

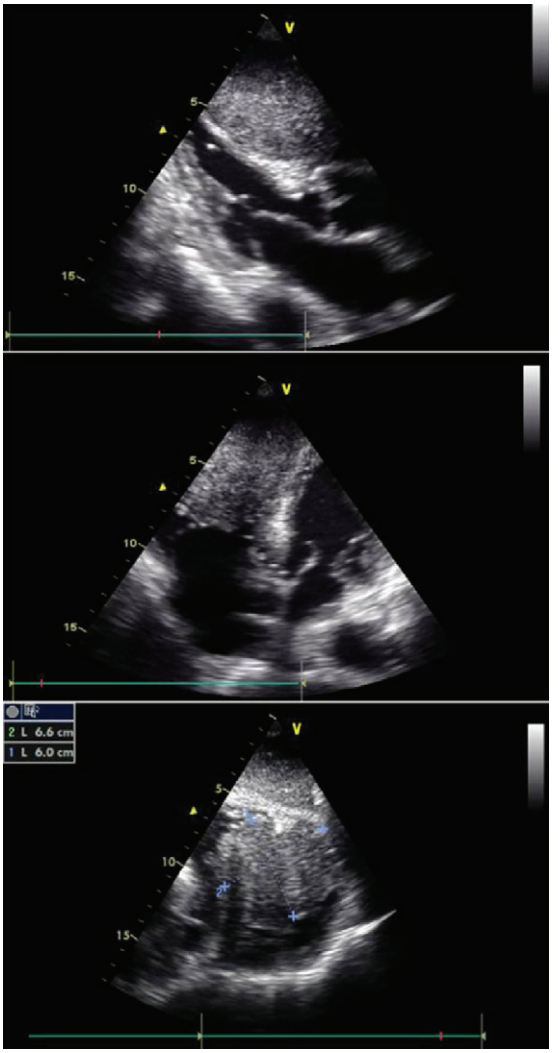

Figure 2 Two-dimensional transthoracic echocardiogram (top: parasternal long-axis view; middle: apical four-chamber view; bottom: subcostal view) showing involvement of the ventricular septum by the mass, which also protrudes into the right ventricular chamber. Maximum dimensions of 60 mm × 66 mm assessed in subcostal view.

For a better characterization of the cardiac mass, a computed tomography (CT) scan was performed, further confirming its large extension. The inferior and apical halves of the right ventricle were involved, invasion of the ventricular septum and pericardium was apparent, and it also surrounded the left anterior descending artery (LAD) (Fig. 3, arrow).

Since the mass was in close contact with the anterior thoracic wall, a CT-guided needle aspiration biopsy was carried out (Fig. 4), which showed large epithelial cells, arranged in nests, with irregular, pleomorphic, central nuclei with dense cytoplasm, and keratin pearls, secondary to cardiac metastasis from the former epidermoid esophageal cancer.

During hospitalization, the patient's clinical status gradually worsened and he ultimately died of pneumonia.