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A peculiar case of an acute pulmonary embolism

Campos I.; Azevedo P.; Pereira VH.; Costeira-Pereira A.; Salome N.; Vieira C.; Costa-Oliveira C.; Marques Pires C.; Medeiros P.; Flores R.; Mane F.; Marques J.

Hospital de Braga, Cardiology, Braga, Portugal

INTRODUCTION

Cardiac tumors represent a challenging diagnosis, since the heart is an unusual site of metastasis from any malignancy. Metastatic tumors usually arise from lung, breast, renal cancer, melanomas, and lymphomas but cardiac metastization from bladder urothelial carcinoma is an extremely rare event. Here, we report the case of an 82-year-old man in whom right ventricular extension of cardiac metastization was diagnosed after a pulmonary thromboembolism.

CASE REPORT DESCRIPTION

An 82-year-old male was admitted to our hospital with a history of cough with streaky hemoptysis, fever and anorexia for 2 weeks, and breathlessness on exertion for 2 day. He had a history of bladder urothelial carcinoma 3 months ago, with extensive areas of epidermoid differentiation, treated only surgically with cystectomy. On physical examination, he was afebrile with a blood pressure of 135/70, tachycardic at 115beats/min, and his respiratory rate was 26breaths/min. The room air oxygen saturation was 90%, and arterial blood gas analysis revealed hypoxemia with an elevated alveolo-arterial oxygen gradient. The blood test revealed a normocytic normochromic anemia and an elevated levels of D-dimer. The echocardiogram revealed a pediculated and mobile mass attached to the apex of the right ventricle. A CT pulmonary angiography was performed and found an acute and bilateral pulmonary thromboembolism, being the patient immediately hypo-coagulated. It was also performed a cardiac MRI (with and without contrast) that showed a large mass in the RV. It was arising from the RV free wall and was occupying almost half of the RV (mid and apical cavity). It had irregular edges with intermediate enhancement on T1 images and is hyperintense on T2 stir images. There was some evidence of contrast uptake on T1 weighted contrast images. It did not seem to have a significant fatty component on T1 weighted images with fat saturation. The cardiac MRI features were consistent with tumorous involvement of the RV. As part of the work for primary cancer, a colonoscopy was performed which also showed the presence of metastases in the proximal sigmoid colon from the bladder urothelial carcinoma. During hospitalization, the echocardiogram was repeated, showing an increase in the mass previously described, extending to the trunk of the pulmonary artery. Soon after, our patient died suddenly after an episode of sudden dyspnea and hemodynamic instability.

CONCLUSION: We experienced a very uncommon case of a metastatic cardiac tumor from urothelial carcinoma. To the best of our knowledge, only a small number of cases were reported and the reason for the rarity of cardiac metastasis from urothelial carcinoma is unclear. Although the echocardiography has become the gold standard for the diagnosis of intracardiac masses, cardiac MRI plays an important role in the evaluation of cardiac masses of non-neoplastic and neoplastic origin, allowing a comprehensive characterization of such lesions.

Abstract P1308 Figure. pediculated and mobile mass (20x56mm) at

