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A hybrid approach to a giant left atrial mass

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Topic(s):
Cross-Modality and Multi-Modality Imaging, Other

Citation:
European Heart Journal - Cardiovascular Imaging (2019) 20 (Supplement 1), i114

Introduction: Primary cardiac tumors are an extremely rare entity with a wide variety of clinical presentations. The vast majority are benign tumors.

Case report: We report a case of a 51-year-old woman with light smoking habits who presented with complaints of occasional palpitations. As requested by her family doctor, she underwent an electrocardiogram that showed sinus rhythm with right bundle branch block and left anterior hemiblock, and a transthoracic echocardiogram which revealed the presence of a large (78x70mm) mass in the left atrium, which was severely dilated. The mass was apparently attached to the interatrial septum and protruded through the mitral valve causing severe flow obstruction. A giant atrial myxoma was suspected. Based on this finding, she was referred to our tertiary care center for surgical excision of the mass.

For better characterization of the mass we performed a transesophageal echocardiography, which revealed a heterogeneous vacuolized mass with regular contours adherent to the fossa ovalis region, corroborating the diagnosis of atrial myxoma.

As part of her preoperative assessment, the patient underwent a coronary angiography which showed a richly vascularized atrial mass mainly supplied by a right coronary branch and, to a lesser extent, by a circumflex artery branch. There was no obstructive coronary artery disease.

For further elucidation of the tumor characteristics a cardiac MRI was conducted, which showed features and a contrast enhancement pattern compatible with the diagnosis of cardiac myxoma.

After a Heart Team discussion involving interventional and clinical cardiologists and cardiac surgeons, it was decided to perform a preoperative polyvinyl alcohol embolization of the tumor main afferent artery (a branch of the right coronary artery), which occurred without complications. The main goal was to minimize the risk of excessive surgical blood loss. In the next day she was submitted to surgical resection of the mass, followed by interatrial septum and left atrium base reconstruction with a bovine pericardial patch. The postoperative period was uneventful, and she was discharged 5 days later.

The anatomopathological examination of the resected tissue confirmed the diagnosis of cardiac myxoma.

Conclusion: Although benign in the majority of cases, cardiac tumors frequently represent a challenge to cardiac surgeons due to their location and size. This case illustrates the importance of multimodality cardiac imaging for the characterization of cardiac tumors and also shows the benefits of a hybrid approach, with percutaneous and surgical techniques combined, to provide a safer and successful surgical resection of cardiac masses, even in the case of benign entities such as myxomas.
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A hybrid approach to a giant left atrial mass

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