Two cases of right atrial myxoma in redo patients.
A mere coincidence?

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SUMMARY: Two cases of right atrial myxoma in redo patients. A mere coincidence?

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We describe two cases of right atrial myxoma in redo patients who had previously undergone to coronary artery by-pass grafting (CABGs) and mitral valve replacement respectively. Both of patients experienced effort dyspnea and were assessed by trans-thoracic echocardiography, revealing the right atrial masses. They were operated on for myxoma resection and postoperative course was uneventful. Our report deals with the interesting topic of the location of benign masses that are usually more common in the left atrium. Should we hypothesize that the right atrial manipulation during the previous surgery induces the onset of the right atrial mass? It is an interesting matter to debate.

KEY WORDS: Right atrial myxoma - Redo surgery - Pedicle - Effort dyspnea.

Introduction
Primary cardiac tumors are quite uncommon and rare compared to metastatic lesions. The incidence of primary cardiac tumors ranges from 0.0017% and 0.03% in autopsy series (1). Among benign primary cardiac tumors, myxomas and papillary fibroelastomas are the most common (2). Cardiac myxomas arise from pluripotent mesenchymal cells and are seen as intracardiac, glistening polypoid masses arising most frequently from the interatrial septum in the left atrium. They are composed of stellate to polygonal myxoma cells in a mucopolysaccharide-rich matrix. The usual location is into the left atrium (75%) and the right atrium is an unusual site (3).

Surgical treatment yields good results with a variable risk of recurrences related to the care of resection while in malignant lesions the treatment of choice should be carefully tailored on the extension and the localization of the lesion (4).

Case reports
We present the cases of two patients with right atrial myxoma diagnosed after previous cardiac surgery.

A 74 year-old female, operated for mitral valve replacement with bio-prosthesis eight years before, was admitted to the hospital for ongoing dyspnea (NYHA II) and peripheral edema. Clinical evaluation...
revealed a mild systolic murmur on the apex and chemistry did not show abnormalities. The echocardiography showed a normal bio-prosthesis and a diluted right atrium with a mass of about 4 cm in diameter attached by a thin pedicle to the inter-atrial septum, with a diastolic movement towards the tricuspid annulus, causing significant obstruction. Preoperative angiogram did not show coronary disease; The patient was re-operated through a median sternotomy. The right atrium was opened and the mass inspected: it was round, about 4 cm in diameter, with a wrinkled surface characterized by red color in the leaflet facing the inter-atrial septum and yellow in the surface facing the mitral prosthesis. It was attached to the inter-atrial septum by a thin pedicle of about 5 mm in length, grey in color, with a smooth surface. Histological evaluation confirmed the atrial myxoma and postoperative course was uneventful without recurrences over the late follow up.

A 58 year old male, operated for coronary artery bypass grafting on left anterior descending artery two years before, was admitted to the hospital for the diagnosis of a right atrial mass by echocardiography performed for effort dyspnea. The left ventricular function was preserved and patient had no symptoms related to the mass. He was operated through a right minithoracotomy at the 4th intercostal space and the right atrium opened in the usual manner. The mass was easily excised and the tissues around the pedicle were carefully cauterized. Histological evaluation confirmed the atrial myxoma and postoperative course was uneventful without recurrences over the late follow up.

Discussion

Cardiac myxoma is encountered in every age group and there is predominance of females (1). Clinical presentation is usually different. Frequently, diagnosis is achieved incidentally by echocardiography while in other cases, peripheral embolism may occur (5) or ongoing dyspnea due to mitral obstruction. The left atrium is typically involved in cardiac myxoma whereas the right atrium is most frequently affected by malignant lesions (1). Moreover, malignancies usually occur in younger patients where a quick diagnosis is mandatory for treatment option and survival (4).

Echocardiography is the most important diagnostic modality because it allows a preoperative diagnosis with a fair degree of accuracy regarding size, shape, attachment, and mobility. The usual location is into the left atrium (75%) and the right atrium is an unusual site (3). The recurrence of cardiac myxoma after a surgical excision depends on unclear mechanisms. Multifocal growth of a benign myxoma or malignant transformation, inadequate resection, intraoperative implantation or embolization, familial disposition, and the abnormal DNA ploidy pattern play an important role in development of recurrent myxoma.

Conclusions

The peculiarity of our report belongs to the occurrence of a right atrial myxoma in redo patients. Since the mechanisms of the onset of cardiac myxoma are unclear, we can speculate that the manipulation of the right atrium during the previous cardiac surgery should activate few pluripotent mesenchymal cells leading to the myxoma onset. It should be an interesting matter to debate.
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References