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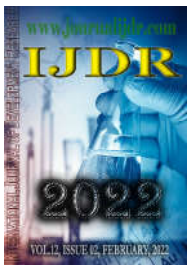

RESEARCH ARTICLE OPEN ACCESS

ATRIAL MYXOMA - A CASE REPORT

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ABSTRACT

Atrial myxomas are benign primary cardiac tumors. Although its etiology remains unknown, recent studies have suggested genetic relationships linked to the Carney complex. An early diagnosis of this comorbidity is very important to ensure a better prognosis for the patient. Cardiac tumors are not frequent, with myxoma being the main example, predominantly affecting women after the fifth decade of life. In these cases, the tumor may present asymptomatically or with various manifestations that lead to a late diagnosis, delayed treatment, and possible compromise of a favorable prognosis. Herein, we report a case of left atrial myxoma, describing the clinical aspects, diagnosis, treatment, and the possible risk factors.

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INTRODUCTION

Atrial myxoma is characterized as a primary benign tumor of the heart. Although it is considered as a rare condition and studies on atrial myxoma are scarce in Brazil and worldwide, its approach is of great importance, since it can evolve to embolic accidents, leading to severe complications, such as systemic embolization, pulmonary thromboembolism, and even sudden death (De Assis Reis, 2020). The current data on atrial myxoma do not provide certainty regarding its genesis. However, evidence suggests that genetic relationships are linked to autosomal dominant alleles, more precisely linked to the Carney Complex (familial multiple endocrine neoplasia). Usually with nonspecific manifestations, they can progress to the classic triad of symptoms, being constitutional, embolic, or obstructive. (Escobar *et al*., 2004). Herein, we aimed to provide a relevant scientific contribution to improve the understanding of this pathology, address a case report, and describe a rare neoplasm, the left atrial myxoma, correlating with clinical aspects, diagnosis, treatment, and possible risk factors, to establish health policies for an earlier and more accurate diagnosis and intervention. The data for the construction of this case report were obtained through the analysis of exams and medical records performed at Clinicore Clinic in the Anápolis-GO Midwest region of Brazil. The research was carried out faithfully following the determinations contained in resolution No. 466, on December 12, 2012, evidencing respect for human dignity and the protection due to participants in scientific research involving human beings, under statement number 4,769,651 of the Brazilian Research Ethics Council. E.O.C,62-year-old woman, retired teacher, who was widowed, was admitted to the CLINICORE clinic in Anápolis-GO for routine tests in 2019. The last check-up was performed in 2015, in which an electrocardiogram revealed a mitral valve prolapse. The patient presented with atherosclerosis in the carotid arteries, diagnosed by Doppler examination, with a prescription of Sinvastatin and Clopidogrel, which were suspended on their own, due to complaints of myalgia. She reported asthma with sporadic attacks;

however, without the use of continuous medications. Regarding family history and noteworthy comorbidities, her mother had systemic arterial hypertension and grandfather had diabetes mellitus (DM). During the evaluations and physical examination, the patient was apparently normal with regard to the cardiovascular system, with cardiac auscultation without alterations, normal blood pressure, and heart rate. Furthermore, a normal electrocardiogram with sinus rhythm and normal exercise test results. However, the echocardiogram showed a tumor mass adhered to the intra-atrial septum, partially obstructing the left ventricular inflow tract, and acarotid Doppler scan showed a plaque in the left carotid bulb, raising the possibility of an atrial myxoma. On 09/10/2019, cardiac catheterization was performed, confirming a left atrial myxoma (Fig. 1). Additionally, a coronary-cavitaryfistula, coronary arteries free of significant atheromatosis, left ventricle with preserved diastolic volume, and mild diffuse hypokinesia were also observed. On 10/30/2019, the patient underwent cardiac surgery for atrioseptostomy with removal of the atrial myxoma and interatrial septal graft, and was discharged on 11/07/2019. A subsequent biopsy confirmed a suspected diagnosis of atrial myxoma. Two months after the surgical procedure, the patient was hemodynamically stable and in good general condition. In addition, she presented with good evolution and satisfactory recovery, with an absence of symptoms and a normal Holter exam.

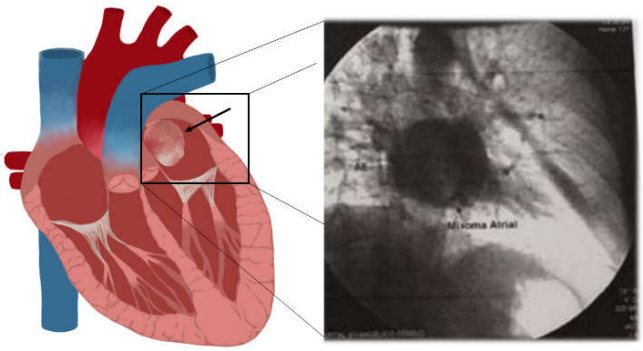

Figure 1. Atrial Myxoma Image.Left side: Illustration of a heart section with a myxoma in the left atrial cavity (black arrow). Right side: Actual image of the myxoma from the catheterization exam

Cardiac neoplasms are uncommon and have a low prevalence. They can be classified as primary (the most common subtype) or secondary (Braunwald *et al*., 2011, González *et al*., 2010). Despite being the most common, primary tumors of the heart and pericardium are infrequent, with an incidence ranging from 0.001 to 0.2% in autopsies; additionally, the main representative of primary tumors of the heart is the myxoma, corresponding to 50% to 80% of all clinical conditions and 70% of surgical cases (Cardoso *et al*., 2020; Endo, 1997). Myxomas are observed predominantly in women and may be familial or sporadic, with a peak incidence in the fifth decade (Braunwald *et al*., 2011). They are tumors that can present asymptomatically or with various manifestations, including cardiovascular manifestations, nonspecific, and even metastatic, which contribute substantially to the late diagnosis of this disease and, consequently, a delay in the surgical treatment (Abad, 1998).

It is observed to affect the left atrial location more frequently and its clinical manifestations of embolic or obstructive events vary with the shape, size, mobility, and location of the tumor; additionally, the symptoms are congestive heart failure, atypical chest pain, syncope, lethargy, malaise, weight loss, palpitations, peripheral edema, cerebral ischemia, transient ischemic attack, atrial fibrillation, atrial flutter, hemoptysis, systemic embolization, and infection with signs of bacterial endocarditis (Barbuto, 2006). Among the peculiarities of the reported case is the fact that the patient was asymptomatic, with no changes in auscultation, blood pressure, and heart rate, there was no family history of the disease, and no risk factors. A histopathological examination of the atrial myxoma shows a white, yellowish, or brownish mass, often surrounded by thrombi. In most cases, they are covered by a myxomatous stroma and differ from organized thrombi because they are surrounded by the endothelium (Barbuto, 2006). The best diagnostic method to assess the location and extent of myxomas is echocardiography with confirmatory histology, which is up to 100% effective, except in situations where the tumor is very small (less than 5 mm) (Peachell, 1998; Chakfé, 1997). In these cases, complementing the diagnostic evaluation with other tests, such as transesophageal echocardiography, computed tomography, and magnetic resonance imaging may be necessary (Peachell, 1998; Jardine, 1997). Thus, due to the risk of embolization, thromboembolic valvular obstruction, and sudden death due to decreased cerebral flow as a result of the obstruction, the best and most common treatment is excision surgery (Kavakli and Kavruk, 2018), as was performed in the present case report. The most common complications after tumor removal are atrial arrhythmias, whereas thromboembolic events are rare. Surgery usually has a good prognosis and long-term survival. Recurrence is rare; however, a follow-up with imaging examinations is of utmost importance (Kavakli and Kavruk, 2018). In the present case, the post-surgery evolution of the patient was acute atrial fibrillation, which was reversed with amiodarone. Currently, the patient is being monitored annually and is taking clopidogrel and rosuvastatin, with no tumor recurrence, and a good quality of life.

CONCLUSION

Atrial myxoma is a primary benign tumor, observed to be more common in the left atrium, and affecting mainly women, and may present symptomatically or asymptomatically. In the present case report, the patient had no symptoms, and a tumor mass was found during routine visits. Thus, it is important to perform periodic examinations to reduce the evolution and incidence of complications caused by the disease. The diagnosis was made by imaging examinations, with the echocardiogram being the gold standard. Due to the consequences of thromboembolic events and obstruction of blood flow, which can lead to death, the main treatment is total excision of the tumor. The recurrence rates are low, and the postsurgical prognosis is generally good.

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