Case Report

Tricuspid Papillary Fibroelastoma. Case report

Fibroelastoma Papilífero Tricúspide. Relato de Caso

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Introduction

Papillary fibroelastoma (PFE) is a rare and benign cardiac tumor, representing 8% of all benign cardiac tumor cases, and its prevalence at autopsy is 0.02%.[1,2] PFE is usually asymptomatic, and symptoms are either nonspecific or related to embolic phenomena. PFEs are often diagnosed during routine imaging examinations or valve surgery and autopsies.

This study describes the case of an asymptomatic patient with PFE in the tricuspid valve, which was detected during clinical assessment. The recommended approach was surgical resection, and the presence of PFE was confirmed by histopathology.

This case study shows the role of echocardiography in the diagnosis of primary cardiac tumors, especially PFE, and discusses the clinical characteristics and therapeutic options for this rare tumor.

Case report

A 63-year-old asymptomatic male patient had a history of diabetes mellitus, systemic arterial hypertension, and dyslipidemia. In March 2019, he underwent routine transthoracic echocardiography (TTE), which indicated a mass in the tricuspid valve. The patient was referred to transesophageal echocardiography (TEE), which revealed a 1.0 cm homogeneous mobile mass attached to the tricuspid valve (Figure 1; Video 1).

The patient underwent cardiac surgery in May 2019. The size of the heart was normal, and a 2.0-cm tumor mass was found in the tricuspid valve (Figure 2). The tumor was excised, the valve was reconstructed with autologous pericardium, and the valve ring was reconstructed with a patch of bovine pericardium. The procedure was uneventful. The results of histopathological examination showed the presence of PFE. TEE showed normal heart and valves (Figure 3).

Keywords

Papillary fibroelastoma; Echocardiogram; Diagnosis.

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Discussion

PFE is a rare disease entity, with embolic potential that can possibly lead to complications; therefore, its efficient diagnosis and treatment are crucial.[3] Most cases are characterized by single, small masses (less than 10 mm in diameter [less than 20 mm in 99% of cases]), with an aspect that resembles a sea anemone. These tumors are found in the aortic valve (44% of cases), mitral valve (35%), tricuspid vale (15%), and pulmonary valve (8%).

PFE tends to occur in areas of myocardial irritation, such as mitral valve prolapses, and areas of fibrocalcific degeneration and hypertrophic cardiomyopathy[1]; however, it is rarely found on cardiac walls.[4] The etiology and risk factors for PFE are still unknown.[5]

In contrast to vegetations secondary to infectious endocarditis, valvular function and structure are rarely impaired.[3] PFEs located on the right side are usually asymptomatic. The most common signs are embolization of tumor fragments, chest pain, heart failure, syncope, and sudden death.[4] Embolized fragments can originate from the tumor because of its friable texture.[6]

Surgical intervention is recommended in symptomatic patients with mobile tumors. Asymptomatic patients with pedunculated PFEs can be closely monitored with periodic clinical examination. However, elective surgical resection, even in asymptomatic patients, is recommended because pedunculated tumors are unpredictable.[5,6]

It is critical to differentiate cardiac papilloma from other cardiac masses, such as tumors, vegetations, and mobile thrombi, which can mimic the echocardiographic findings of PFE.

Recurrence occurs in 1.6% of cases, emphasizing the importance of patient follow-up using TTE. Echocardiography is the best initial diagnostic tool, with a sensitivity of 88.9% and specificity of 87.8%, and is crucial for planning of treatment strategy.[1]

This case report demonstrated that echocardiography, a non-invasive, cheap, accurate, and easily accessible technique, is a useful diagnostic tool for detection of cardiac tumors in cases with clinical suspicion of cardioembolic events.

Conclusion

PFE is a rare clinical entity and its diagnosis is difficult. Although this tumor is asymptomatic and benign, its detection is essential to avoid potential complications. TTE

Figure 1 – *Transesophageal echocardiogram of the transverse section at the level of the aorta showing a mass attached to the tricuspid valve.*

Video 1 – *Transesophageal echocardiography (TEE), which revealed mass attached to the tricuspid valve.*

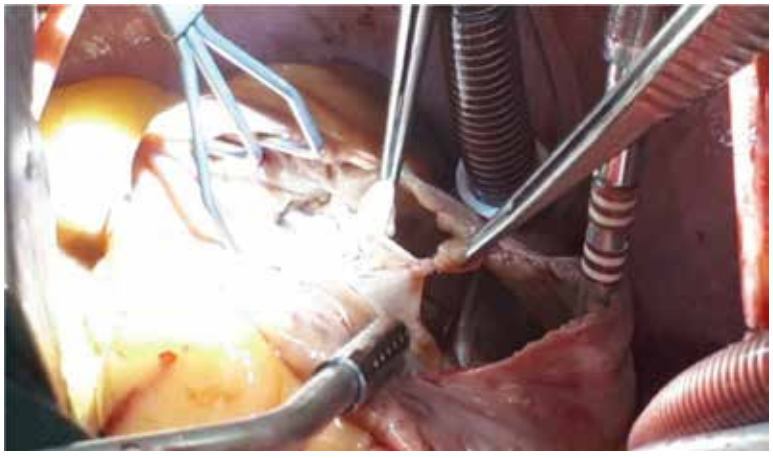

Figure 2 – *Presence of a tumor mass attached to the tricuspid valve.*

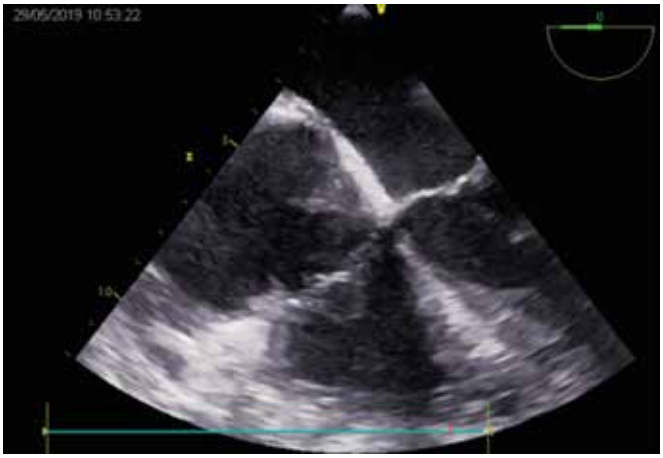

Figure 3 – *Transesophageal echocardiogram showing the absence of tumors. The tumor mass was excised during surgery, and the tricuspid valve was reconstructed.*

and TEE are fundamental techniques that can be employed for initial screening, and the treatment approach should be personalized.

Author contributions

Barros MVL and Araujo FR conceived and designed the study; Araujo FR, Gelape CL, Nunes ACM, Khoury LL, Santos ACB, and Barros MVL collected the data; Araujo FR and Barros MVL wrote the manuscript; Barros MVL and Gelape CL critically revised the manuscript for relevant intellectual content.

Conflict of interest

The authors have declared that they have no conflict of interest.

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