

IMAGE IN CARDIOLOGY

Papillary fibroelastoma of the pulmonary valve

Fibroelastoma papilar da válvula pulmonar



Paulo Fonseca^{a,*}, Paulo Neves^b, José Ribeiro^a, Helena Gonçalves^a, António Couceiro^c, Vasco Gama^a

^a Serviço de Cardiologia, Centro Hospitalar de Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal

^b Serviço de Cirurgia Cardiotorácica, Centro Hospitalar de Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal

^c Serviço de Anatomia Patológica, Centro Hospitalar de Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal

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A 42-year-old man with a history of hypertension, type 2 diabetes mellitus and obesity was referred to our center due to the incidental finding of a mass adjacent to the pulmonary valve on a routine transthoracic echocardiogram (Figure 1). He was asymptomatic and physical examination and laboratory values were unremarkable. The transesophageal echocardiogram (Figure 2) revealed a pedunculated, highly mobile hyperechogenic mass, measuring 8 mm × 7 mm, attached to the right pulmonary valve leaflet. The pulmonary valve was functionally normal, with no observed pulmonary regurgitation or stenosis, and no masses were visualized on any other valves or heart chambers. Computed tomography angiography excluded significant coronary stenosis and confirmed the presence of a mass at the level of the pulmonary valve (Figure 3). We concluded that it most likely represented a papillary fibroelastoma. Surgical excision of the mass was decided upon due to its mobility and location, resulting in high risk for embolization. It was successfully resected, with preservation of the valve apparatus. Histopathological examination confirmed the diagnosis of papillary fibroelastoma (Figure 4).

Papillary fibroelastomas are rare benign tumors of the endocardium that account for around 7% of all heart tumors.

* Corresponding author.

E-mail address: paulobarbosafonseca@hotmail.com (P. Fonseca).

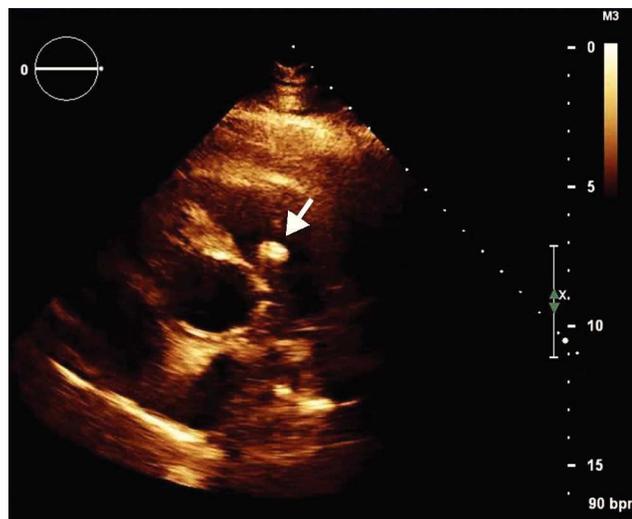


Figure 1 Parasternal short-axis view, transthoracic echocardiography, demonstrating the mass (arrow) attached to the right leaflet of the pulmonary valve.

They are located mainly on the left heart valves. Occurrence of these tumors on the pulmonary valve has rarely been reported. Although benign, papillary fibroelastomas can cause turbulent flow, thrombus, embolic events and death. Given these potential complications, surgical resection is recommended in the majority of patients.



Figure 2 Three-dimensional transesophageal echocardiogram (mid-esophageal view) showing the tumor (arrow) on the pulmonary valve.

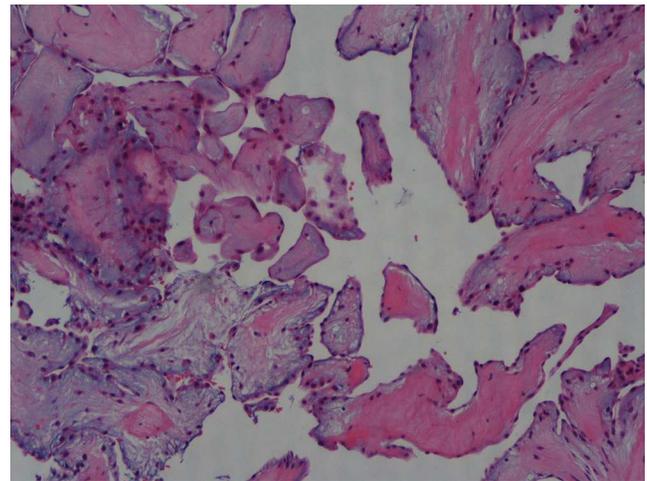


Figure 4 Histology of the resected mass showing papillary fronds with a central core of dense collagen surrounded by endothelial cells.

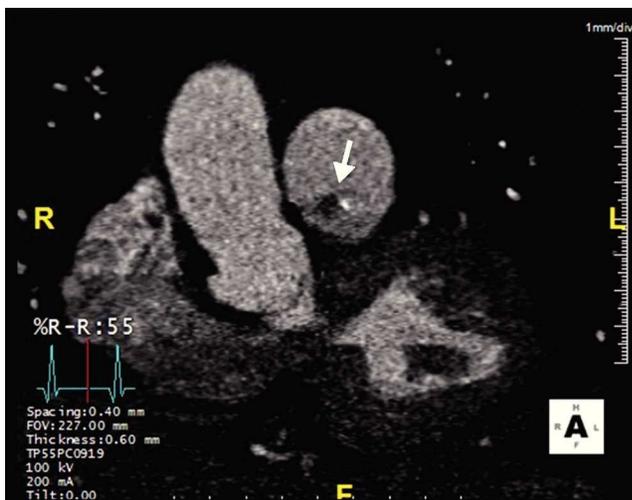


Figure 3 Coronal computed tomography angiography demonstrating a partially calcified mass (arrow) at the level of the pulmonary valve.

Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data and that all the patients included in the study received sufficient information and gave their written informed consent to participate in the study.

Right to privacy and informed consent. The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

Conflicts of interest

The authors have no conflicts of interest to declare.