

Giant Papillary Fibroelastoma Attached to the Left Atrial Septum,

Near the Foramen Ovale

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An asymptomatic 70-year-old woman was referred to our hospital because of hypertension and diabetes mellitus. A grade 3/6 systolic murmur was heard at the 2nd left sternal border. The only abnormal laboratory finding was a high plasma brain natriuretic peptide level (84 pg/mL). Transthoracic echocardiograms revealed moderate aortic regurgitation caused by sclerotic aortic valve changes, and also a mobile, low-echoic, 40 × 10-mm restiform lesion on the left atrial septum near the foramen ovale (Fig. 1). We suspected trapped thrombus in the foramen ovale. Computed tomograms showed no cerebral infarction, thrombus in the pulmonary artery or deep veins, or malignancy. Because of embolic risk, we surgically resected the 34 × 8 × 3-mm lesion, which had a short pedicle and multiple papillary fronds (Fig. 2). The histologic findings of multiple papillary fronds consisting of an acellular matrix surrounded by a single layer of endothelial cells led to the diagnosis of papillary fibroelastoma (PFE) (Fig. 3). Six years later, no recurrence was observed.

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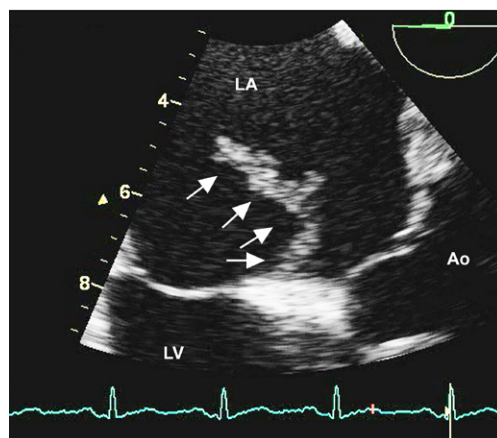


Fig. 1 Transesophageal echocardiogram (midesophageal 4-chamber view, 0° rotation) shows a mobile, low-echoic restiform lesion at the left atrium (LA) (arrows) and a stalk attached to the left atrial septum near the foramen ovale.

Ao = aorta; LV = left ventricle

Supplemental motion image is available for [Figure 1](#).

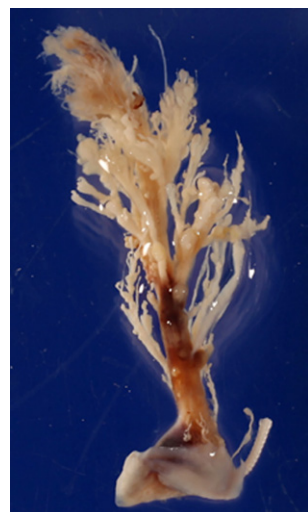


Fig. 2 Photograph of the resected 34 × 8 × 3-mm fibroelastoma shows multiple glistening, frond-like papillary structures.

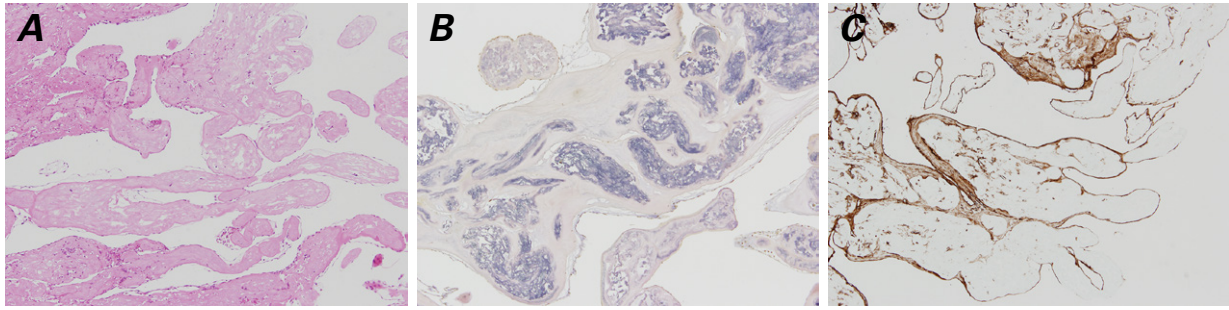


Fig. 3 Photomicrographs of the papillary fibroelastoma show **A**) elongated and branching papillary fronds, composed of central avascular collagen, and variable elastic tissue ringed by flattened endothelial cells (H & E, orig. $\times 100$); **B**) multiple papillary fronds with a dense core of connective tissue containing elastic fibers (Elastica van Gieson stain, orig. $\times 100$); and **C**) surface endothelial lining cells are positive for CD31 (immunohistochemical stain, orig. $\times 100$).

Comment

Papillary fibroelastoma typically originates from valvular endocardium; nonvalvular origin accounts for 16.4% of cases.¹ Most PFEs are <10 mm in size, and only 1% are >20 mm.² In our patient's case, the surface of the interatrial septum near the foramen ovale was an atypical location for a PFE; moreover, the lesion seems to have been larger than any PFE previously reported, which initially made us suspect thrombus trapped at the foramen ovale. However, histologic examination confirmed the lesion to be a PFE. Although PFEs are benign tumors, the risk of embolic complications is high,¹ and surgical excision is recommended in all symptomatic patients.

References

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