



## A Rare Cause of Cryptogenic Stroke

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### Clinical Image

A 79 year old woman presented with left hemiparesis and numbness. Magnetic resonance image showed a right cerebral cortical infarct in the distribution of the right middle cerebral artery. The cause of the stroke was unexplained despite computed tomographic angiogram, 2D transthoracic echocardiogram and coagulation studies. A cardiac monitor (Reveal LINQ) was implanted and a direct oral anticoagulant initiated as empiric therapy.

A recurrent Transient Ischemic Attack (TIA) was noted eight months later manifested as expressive aphasia that fully resolved over several hours. Transesophageal Echocardiogram (TEE) revealed no Patent Foramen Ovale (PFO) or left atrial thrombus but a small mobile mass attached to the aortic valve depicting of a papillary fibroelastosis tumor (Figure 1). The patient was referred for surgical resection using a minimally invasive thoracotomy approach. The tumor was excised with valve sparing and confirmed on histopathologic analysis.

As a rare and benign primary cardiac tumor papillary fibroelastosis, representing 10% of these primary cardiac tumors emanates from one of the heart valves or mural endocardium but more commonly from the aortic valve. Although variable in size and shape, it appears as a small, rounded and mobile pedunculated lesion and typically with an average dimension of less than 2 cm. It consists of numerous elongated and a vascular papillary fronds that avidly bind to fibrin thrombi on its surface. As a source of concealed systemic embolization-dislodged.

Thrombus or tumor fragment-it may account for an unexplained TIA, ischemic stroke, myocardial infarction, amaurosis fugax or sudden cardiac death. Surgical excision is curative and offers an excellent prognosis.

A comprehensive clinical assessment is warranted when the cause of an ischemic stroke is not identified as exemplified by a large artery arteriopathy, cardioembolic source or hypercoagulable disorder. In the realm of cryptogenic causes exclusive of silent atrial fibrillation, the association of a PFO looms as a leading cause (40% to 50%) particularly in stroke patients <55 years of age. Notwithstanding the rarity of the association of a papillary tumor and cryptogenic stroke, an accurate diagnosis and characterization of this lesion is less likely to be overlooked when TEE is utilized as the preferred imaging modality.

### OPEN ACCESS

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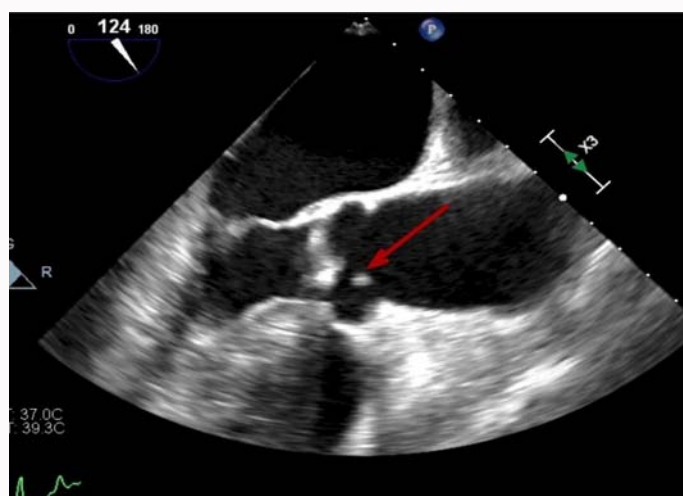
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**Figure 1:** TEE image shows a characteristic mobile, pedunculated 0.9 cm rounded papillary tumor attached to the aortic valve (arrow).

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