

Left Atrial Appendage Mass: Atypical Location of a Papillary Fibroelastoma in the Coumadin Ridge

Charles Q. Cui, Patrick Kietrsunthorn, John Lystash MD. *Carilion Virginia Tech School of Medicine*

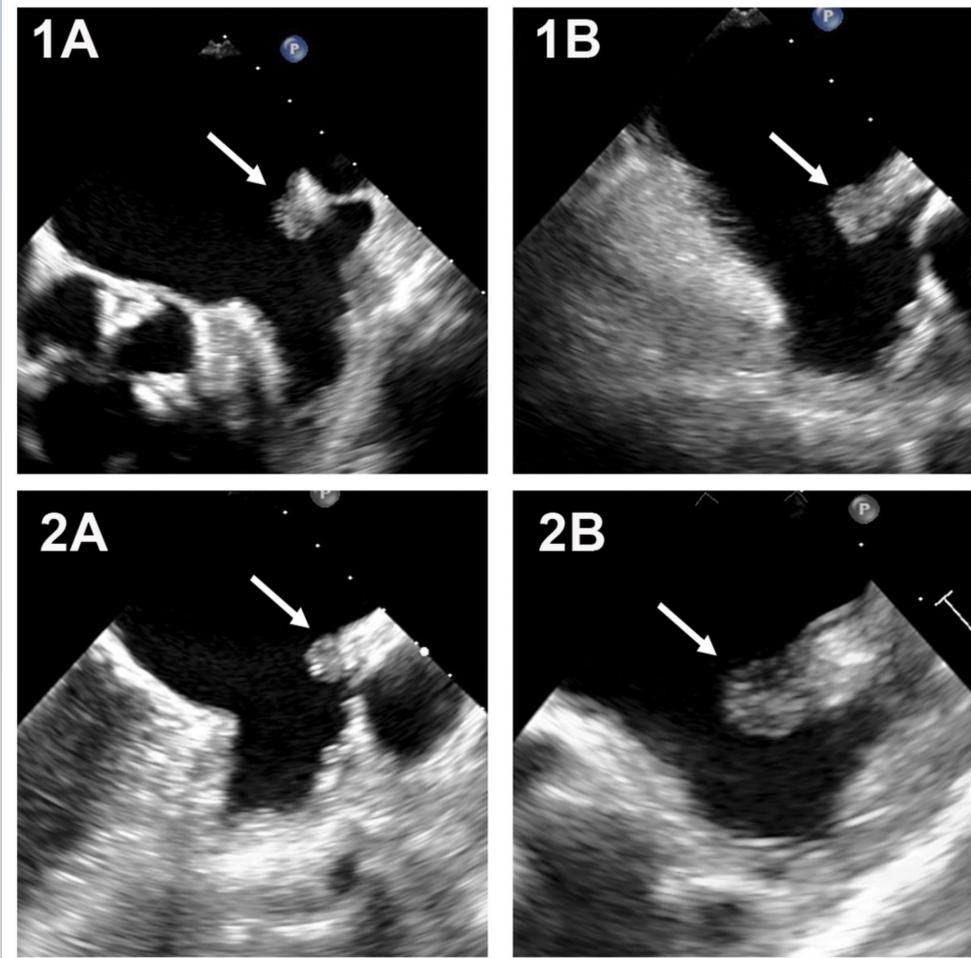
Clinical Presentation

An 83-year-old male with a history of diabetes and ascending aortic aneurysm was found to have **atrial fibrillation** during a routine endoscopy. He was initiated on Rivaroxaban and underwent an elective transesophageal echocardiogram (TEE) which showed **possible thrombus** in the proximal aspect of the left atrial appendage (LAA). Cardioversion was held given risk of embolization. Patient was continued on anticoagulation for six additional weeks with no change in the mass on repeat TEE. The mass was diagnosed as an atypical location of a papillary fibroelastoma (PFE) with subsequent cardioversion into sinus rhythm. Patient continued anticoagulation and showed no signs of embolization on follow-up clinical visits.

Image Findings

Initial TEE demonstrated a preserved left ventricular ejection fraction estimated at 60-65% with aortic root measured at 4.2 cm and an ascending aorta of 4.3 cm. Intermittent spontaneous echo contrast was seen in the LAA and left atrial cavity. Attached to the coumadin ridge at the ostium of the LAA, there is a **protruding mass measuring 0.9 x 1.0 cm** (Fig 1). Repeat TEE six weeks later again demonstrated the mass with a **shimmering appearance as well as frondlike trabeculations** (Fig 2). The mass is mildly mobile with a possible stalk on 2D imaging, but no definite stalk seen on live 3D and/or zoomed 3D images.

Transesophageal Echo Images



Role of Imaging in Patient Care

In patients with an unknown amount of time prior to diagnosis of atrial fibrillation, TEE is crucial in detecting thrombus in the LAA prior to cardioversion. **Misdiagnosis of a thrombus can lead to a delay or cancelation of cardioversion.** With an atypical location of a PFE, careful imaging is even more important to make the correct diagnosis.

Summary/Discussion Points

To our knowledge, there has **only been one prior report** of a PFE attached to the coumadin ridge also known as the ligament of Marshall. While most PFE's are found in the heart valves or the endocardium, atypical locations can be more challenging to diagnose particularly the left atrium. Details from TEE such as the shimmering appearance and trabeculations are helpful from imaging even in the absence of a clear stalk. This case confirms **the value of transesophageal echocardiogram** in the diagnosis of masses in the LAA.