Abstract: P670

Clinical and echocardiographic characteristics in patients with pathology proven cardiac papillary fibroelastomas

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Background: Papillary fibroelastoma (PFE) is a rare benign cardiac tumor with embolic potential. It is most commonly found on cardiac valves but can also be present on non-valvular endocardial surfaces. We sought to better understand the average PFE growth and recurrence rates, and characteristics that might be associated with embolization.

Purpose: To examine growth and recurrence rates and factors associated with embolization in patients with pathology-proven PFE.

Methods: Pathology-proven PFEs from 279 patients were identified at a single center between January 1995 and December 2018, and those with at least two transesophageal echocardiograms (TEE) more than 30 days apart were analyzed (n=62). Medical records were retrospectively reviewed for clinical characteristics and outcomes. In addition, intra-operative TEEs were manually reviewed and compared to previous TEEs at our institution to estimate overall size, location, and average PFE growth rates.

Results: The TEEs from 62 patients with pathology-proven PFE (mean age 65 ± 12 years, female 63%) were reviewed. PFE was discovered incidentally during cardiac surgery in 18% of patients. Most PFEs were located on the aortic valve (AV) (73%) followed by the mitral valve (MV) (16%). The majority of PFEs (71%) presented with a stalk versus a sessile configuration. Average maximal length for PFE (including stalk if present) on the AV was 8.5±3.3 mm, and on the MV 6.8±2.0 mm. The number of PFEs located in other locations was too small to be analyzed for growth. PFE growth varied depending on location and configuration. The PFE growth on the AV was an average increase of 0.47 mm/year, those on the MV was 0.115 mm/year. Valvular PFE was associated with significant functional valve abnormality in 15% of patients, and the abnormality was attributed to the PFE in 9% of patients. There were 25 patients (40%) who had a documented stroke/transient ischemic attack prior to PFE removal (46% located on AV, 44% on MV, 10% other locations). In addition, some patients had other documented embolic complications, such as myocardial infarction, amaurosis fugax, and peripheral embolization to the spleen and kidney. PFE size and location (up-/downstream of the valve) were not predictive of cardiovascular thromboembolic events. At a median follow up of 2 years, PFEs recurred in the same location in 7.5% of the patients.

Conclusion: PFE is highly associated with thromboembolic events and seem to grow slowly, with an average growth rate of 0.47mm/year on AV and 0.115mm/year on MV. Growth rates for PFE have not been previously described. PFE can be safely excised with preservation of the native valve and recurs in 7.5% of patients, suggesting that close follow-up maybe warranted.