**Pericardial Effusion After Left Atrial Appendage Occlusion Resulting from an Aortic Dissection**

Background:

Atrial fibrillation (AF) affects 2.3 million Americans. In those unfit for long-term anticoagulation, left atrial appendage occlusion (LAAO) is an alternative for stroke prophylaxis.

Methods:

A 68-year-old female with a history of AF, 4.3 cm ascending aortic aneurysm, hemoptysis on anticoagulation, and an aspirin allergy successfully underwent LAAO with a 27 mm Watchman device. Postoperatively, she developed a moderate pericardial effusion without tamponade physiology. The effusion and her 3.5 cm aortic root (Fig. 1A) remained stable after anticoagulation reversal and 48-hour observation. Warfarin and clopidogrel were restarted at discharge.

Results:

The patient was readmitted 48 hours later with back pain. She was diagnosed with a Stanford type A dissection from the aortic root to the renal arteries, with extension into the pericardial space without evidence of tamponade (Fig. 1B, C). Unlike previously reported post-LAAO effusions, this effusion was not caused by the LAAO device. With the computed tomography images and dilated aortic root, it is most likely that the anticoagulation and possible injury during catheter manipulation potentiated the propagation of a pre-existing aortic dissection. Cardiothoracic surgery was emergently consulted, but she suffered a cardiac arrest and expired prior to intervention.

Conclusions:

When evaluating a pericardial effusion after LAAO, the differential should extend past a procedural complication to include other life-threatening conditions, like the aortic dissection uniquely presented in this case. Peri-procedural echocardiograms should include an appraisal of the aortic root and ascending aorta.

