Aorta to Right Atrial Fistula Presenting as a Rare Complication of Native Bicuspid Aortic Valve Endocarditis

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Case Presentation

A 54-year-old male with a past medical history significant for mild pulmonic stenosis and bicuspid aortic valve presented with a 10-day history of fever, fatigue, and exertional dyspnea.

On physical exam, a grade 3/6 systolic murmur loudest at the right second intercostal space radiating to the neck was appreciated. Lab reports indicated leukocytosis of 9.5. Severe pulmonary hypertension, thickening of tricuspid leaflets with vegetation on the ventricular side, and severe aortic valve thickening and stenosis were noticed on echocardiogram. A flow from aorta to right atrium was also seen. Transesophageal echocardiogram confirmed an aortic annular abscess with aorto-right atrial shunt. At surgery, a bicuspid aortic valve with heavy calcification and acute infectious debris was noted. There was also an inflamed and indurated area found in the right atrium, which was debrided. The aorta to right atrial fistula was repaired with bicameral pericardial patch. The aortic valve was replaced with a bioprosthesis.

Figure 1. Left: Aorta to right atrium (RA). Arrows pointing at RA and aortic valve (AoV). Right: Doppler showing flow from aorta to RA.

Figure 2. Vegetation. Arrows pointing to right atrium (RA), aortic valve (AoV), and vegetation (Veg).

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