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Right Coronary Artery to Coronary Sinus Fistula by Transesophageal Echocardiogram, Cardiac Magnetic Resonance Imaging, and Coronary Angiography

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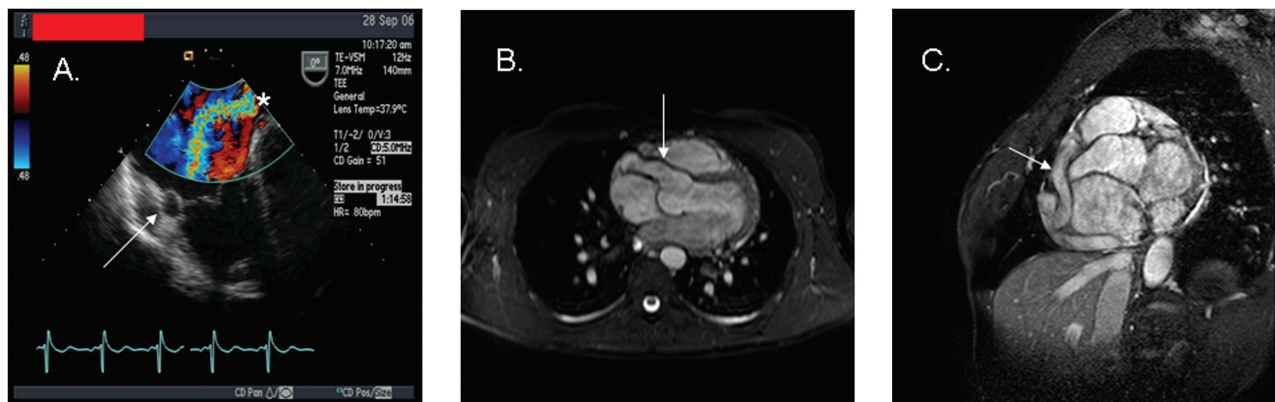


Figure 1. Transesophageal echocardiogram (A) and cardiac magnetic resonance imaging (B, C) demonstrating a markedly enlarged and tortuous right coronary artery (RCA). Arrows denote RCA at its origin from the aortic root (B) and as it travels through the atrioventricular groove (A, C). The (*) denotes turbulent flow traveling from the coronary sinus to the right atrium.

A 40-year-old male presented for evaluation of palpitations. On examination, a continuous murmur was noted along the inferior costal margin. A transesophageal echocardiogram demonstrated an enlarged right atrium, right ventricle, and coronary sinus (CS). Cardiac magnetic resonance imaging and coronary angiography demonstrated a markedly enlarged right coronary artery (RCA) with a fistulous connection to the CS1. The left coronary artery was normal; however, the distal RCA was

occluded and filled retrograde via left-to-right collaterals. Right heart catheterization showed normal right-sided filling pressures and a Qp:Qs of 1.6:1.0. The patient underwent surgical closure of the fistula and did well post-operatively.

Reference

1. Luo L, Kebede S, Wu S, Stouffer GA: Coronary artery fistulae. *Am J Med Sci.* 2006;332(2):79–84.

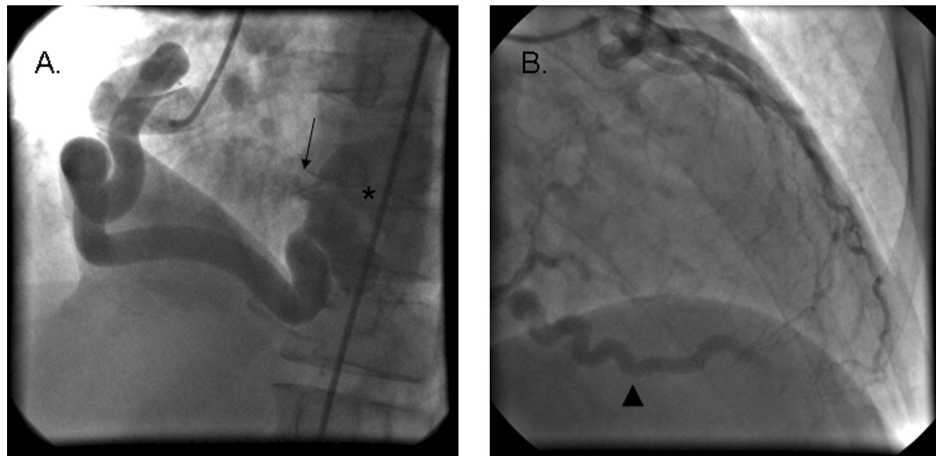


Figure 2. Angiographic images of right coronary artery (RCA) to coronary sinus fistula. (A) Left anterior oblique image of an enlarged RCA with a fistulous connection to a dilated coronary sinus (*). Note flow into the right atrium through the coronary sinus ostium (arrow). (B) Right anterior oblique image of left coronary artery demonstrates retrograde collateral flow to the distal RCA (arrowhead).