

Clinical Image

Management of a Large Basal Interventricular Septal Aneurysm

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An 82-year-old male with left internal mammary to left anterior descending (LAD) bypass (1991) and aortic valve replacement (AVR) with saphenous-right coronary bypass (2015) was admitted for progressive angina and dyspnea. Transthoracic echocardiogram demonstrated ejection fraction 40% with akinetic basal inferior wall, moderate mitral regurgitation, and 20x30 mm basal interventricular septal aneurysm (Figure 1). Angiogram revealed extensive multivessel disease (Figure 2). Computerized Tomography and Magnetic Resonance (Figure 1) confirmed significant aneurysm bowing into the right ventricle.

Aneurysms localized at the basal interventricular septum are rare, representing fewer than 10% of true ventricular aneurysms. This lesion is exceptionally large, and lack of rupture or other complications suggests an insidious evolution. Ischemia is the most likely etiology in this case as the coronary disease fits a posterolateral distribution. Given his unacceptable operative risk, we proceeded conservatively by revascularizing the native LAD and left circumflex. Aneurysm and symptoms were stable at 3-month follow-up.

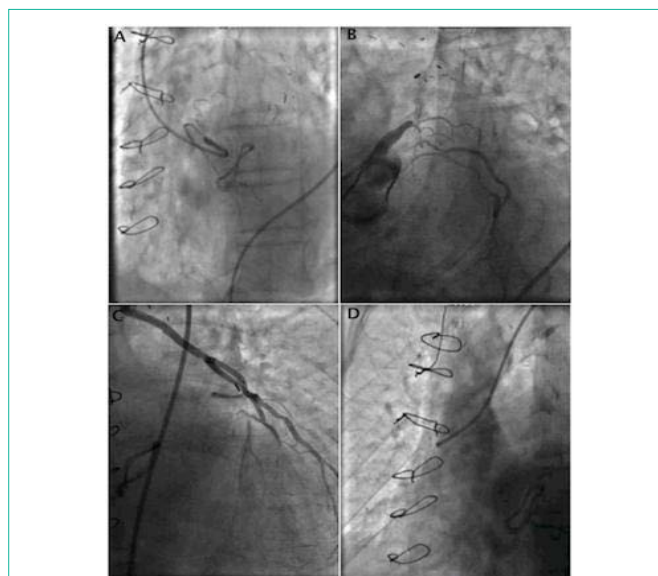


Figure 1: Diagnostic coronary angiography showing: (a) ostial occlusion of native RCA, (b) ostial occlusion of native LCA and proximal sub-occlusion of native circumflex artery, (c) patent LIMA-LAD graft with severe stenosis of the distal LAD, and (d) ostial occlusion of saphenous-RCA graft.

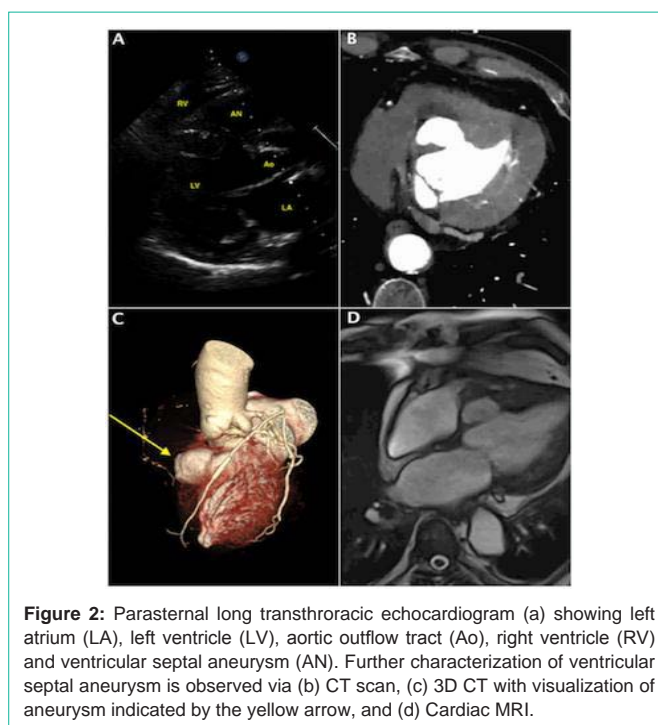


Figure 2: Parasternal long transthoracic echocardiogram (a) showing left atrium (LA), left ventricle (LV), aortic outflow tract (Ao), right ventricle (RV) and ventricular septal aneurysm (AN). Further characterization of ventricular septal aneurysm is observed via (b) CT scan, (c) 3D CT with visualization of aneurysm indicated by the yellow arrow, and (d) Cardiac MRI.