Isolated Left Ventricular Diverticulum in an Adult Patient Presenting With Acute Coronary Syndrome

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A 54-year-old man presented with acute coronary syndrome. Left heart catheterization found significant left anterior descending (LAD) artery disease and a critical lesion of the distal right coronary artery. Ventriculogram revealed extravasation of dye into a large cavity lateral to the left ventricle (LV) (A, Online Video 1). A stent was placed in the right coronary artery, resolving the presenting symptoms. An echocardiogram confirmed normal left ventricular systolic function and visualized a muscular, saccular structure communicating with the LV (B, Online Video 2). Magnetic resonance imaging demonstrated prominent trabeculation without thrombus (C, Online Video 3). Delayed enhancement images did not suggest scar. The man subsequently underwent elective mammary graft to the LAD artery and closure of the orifice to the diverticulum. The diverticulum was easily identified and entered, and had an organized muscular wall without fibrosis (D). D = diverticulum; LA = left atrium; RA = right atrium; RV = right ventricle.