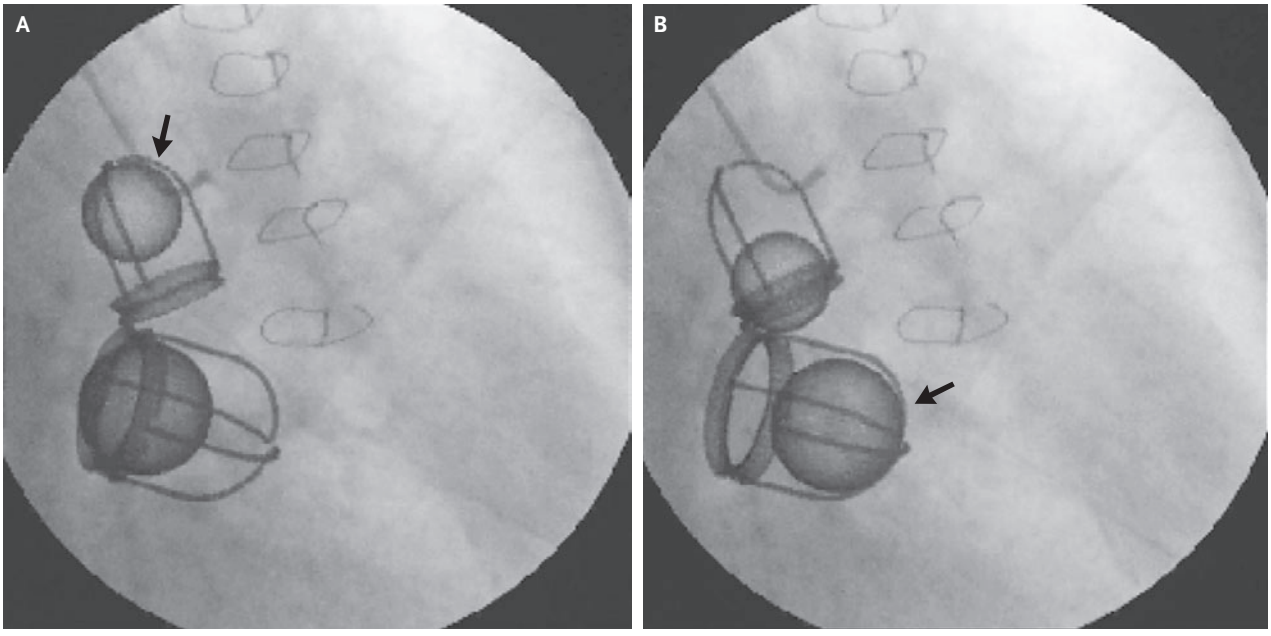
IMAGES IN CLINICAL MEDICINE

Starr–Edwards Heart Valves



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A 67-year-old woman presented with dyspnea and peripheral edema due to severe tricuspid regurgitation. Having had rheumatic heart disease, she had undergone replacement of the mitral and aortic valves with Starr–Edwards heart valves 38 years earlier. During her recent admission, echocardiography showed a transaortic valve gradient of 18 mm Hg, a transmitral valve gradient of 4 mm Hg, and elevated systolic pressure, at 70 mm Hg, in the pulmonary artery. She underwent a preoperative right and left heart catheterization for tricuspid-valve replacement; both mechanical mitral and aortic valves were functioning normally (Panel A, systolic phase, aortic valve open, arrow; Panel B, diastolic phase, mitral valve open, arrow; see video). In 1960, Dr. Albert Starr and Lowell Edwards, an electrical engineer, achieved successful implantation of the Starr–Edwards valve in the mitral position. As seen in this patient, the Starr–Edwards heart valve can function for well over three decades.