


A 74-year-old male with New York Heart Association (NYHA) Class IV heart failure, low-flow low-gradient (LFLG) aortic stenosis, and severe functional mitral regurgitation (MR) was referred for transcatheter aortic valve implantation. Medical history included permanent atrial fibrillation and complete heart block requiring dual-chamber pacemaker implantation. Coronary angiography showed no flow-limiting lesions. Transthoracic echocardiogram (TTE) showed a left ventricular ejection fraction (LVEF) of 27%, stroke volume index (SVI) of 26 cc/m², aortic valve area (AVA) of 0.77 cm², AV mean systolic gradient (MG) of 20 mmHg, and severe functional MR. At presentation, the patient was noted to have severe MR, AVA of 0.77 cm², and MG of 20 mmHg, diagnosed as ‘fixed LFLG severe aortic stenosis’. The patient was considered extremely high risk. Cardiac resynchronization-defibrillator therapy (CRT-D) was recommended as the next step for heart failure despite optimal medical therapy and ongoing need for continuous right ventricular pacing. After 1 month of biventricular pacing, the patient improved symptomatically to NYHA Class II, and TTE showed LVEF 33%, SVI 40 cc/m², AVA 1.1 cm², MG 25 mmHg, and trivial MR. At 9 months follow-up, only trivial MR was present, consistent with moderate aortic stenosis.

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Supplementary data are available at European Heart Journal—Cardiovascular Imaging online.