

Endoscopic repair of atrial functional mitral regurgitation in heart failure: long-term effects

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Introduction: In patients with heart failure and preserved ejection fraction (HFpEF), even mild atrial functional mitral regurgitation (AFMR) has been associated with poor outcome.

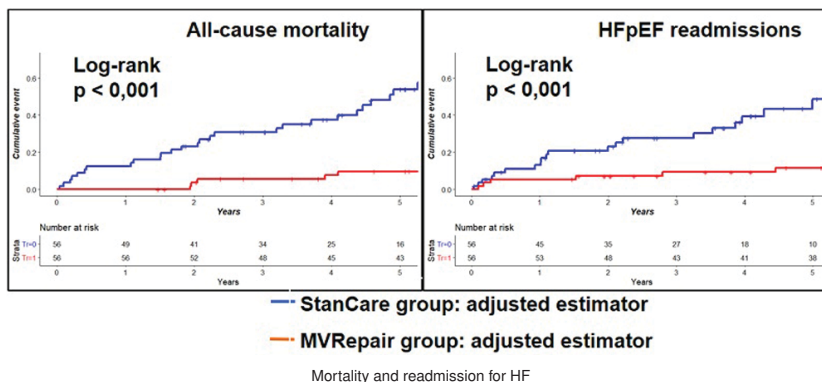
Objective: To describe long-term effects of endoscopic mitral valve (MV) repair on outcome in patients with HFpEF and AFMR.

Methods: The study population consisted of consecutive patients with HFpEF (LVEF \geq 50%, H2FPEF score \geq 5) and AFMR, who underwent isolated, minimally invasive (endoscopic), MV repair (MVRRepair group) (n=131) or remained on standard of care (StanCare group) (n=139). Patients with coronary artery disease or organic MR were excluded. Patients were matched using inverse probability of treatment weighting. Primary objective was all-cause mortality or HFpEF readmissions.

Results: The median follow up was 5.03 years (IQR 2.6–7.9 years). In the

MVRRepair group, the perioperative, 30-day, 1- and 5-year mortality was 0, 1% and 12%, respectively. Additional 13 (10%) patients were readmitted for worsening HFpEF, while 2 (1%) individuals underwent redo MV surgery for recurrent MR. MVRRepair compared with StanCare showed 21–29% (SE 6–8%) and 19–26% (SE 6–8%) absolute risk reduction of all-cause mortality and HFpEF readmissions, respectively (all p<0.05). MVRRepair emerged as the strongest independent predictor of all-cause mortality (HR 0.16, 95% CI 0.07–0.34, p<0.001) and HFpEF readmissions (HR 0.21, 95% CI 0.09–0.51, p<0.001). At 5-year follow-up, in the MVRRepair group, a total of 88% were alive and 80% were alive without readmission for HFpEF.

Conclusions: Endoscopic MV repair is associated with low perioperative mortality, high long-term efficacy and appears to improve clinical outcome in patients with AFMR and HFpEF.



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