FUNCTIONAL TRICUSPID REGURGITATION AFTER SURGICAL REPAIR OF PROLAPSE-RELATED MITRAL REGURGITATION: EARLY TO MID-TERM RESULTS FROM A LARGE PROSPECTIVE COHORT ANALYZED BY THREE-DIMENSIONAL TRANSESOPHAGEAL ECHOCARDIOGRAPHY

Poster Contributions
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Background: While experts agree that hemodynamically significant tricuspid regurgitation (TR) should be repaired at the time of mitral regurgitation (MR) surgery, evidence is less clear regarding patients with mild-to moderate TR and a dilated tricuspid annulus (TA). Retrospective studies suggest that the occurrence of TR late after surgery may vary depending on the etiology of MR; aim of this study was to prospectively investigate the incidence of new-onset TR after surgical repair of pure degenerative MR.

Methods: 706 consecutive patients with severe MR due to degenerative mitral disease and without significant TR underwent isolated mitral repair. Tricuspid annular antero-posterior (AP) and septo-lateral (SL) diameters were systematically measured before surgery by three-dimensional transesophageal echocardiography. All patients were followed for hard events and new-onset TR.

Results: After a mean follow-up of 24±15 months, 2 patients died and 14 displayed severe recurrent MR. A reduction of TR severity was observed in the general population (mean change: -0.28±0.6); 3 patients (0.4%) developed significant TR at follow-up. When stratifying patients based on quartiles of tricuspid annulus indexed diameters, no significant differences were found in terms of change in TR severity among patients with different degrees of TA dilation. Similarly, duration of follow-up and other pre-operative clinical and echocardiographic seemed to have no impact on the incidence of new TR. On the other hand, increasing TR was associated with significant recurrent MR (p < 0.01). Multivariate regression analysis identified recurrent MR and pulmonary hypertension at follow-up as the only significant predictors of TR severity.

Conclusion: Newly-developed significant TR is very rare after successful repair of degenerative MR, at least in the medium term. Changes in TR seemed independent of preoperative TA dilatation at three-dimensional transesophageal echocardiography; our findings support the concept that post-repair TR has a more benign course in this patient population compared to other settings, such as functional or rheumatic MR.