The Authors’ reply

We thank Gursoy and Hatemi for their interest in our article¹ and appreciate the editor for the opportunity to reply. Following the surgical correction of left-side heart valve diseases, persistent pulmonary hypertension predisposes to aggravation of tricuspid valve (TV) function; however, whether preoperative pulmonary hypertension is associated with postoperative TV dysfunction is controversial.² ³ In our practice, preoperative level of pulmonary artery pressure (PAP) might not have affected the decision to repair functional tricuspid regurgitation (TR) since preoperative PAP level was not different according to the performance of TV repair (p=0.20). With regard to changes in PAP in patients with untreated mild TR, preoperative estimated systolic PAP was 40.3±14.5 mm Hg and it decreased to 30.4±6.0 mm Hg on last follow-up (p=0.013). Similarly, prevalence of pulmonary hypertension (systolic PAP>45 mm Hg) decreased from 24.8% to 4.3%. This observation indicates that persistent pulmonary hypertension is not common in mild TR patients undergoing mitral valve (MV) replacement, and that preoperative level of PAP may not be an important determinant of late TV function. In our study, preoperative pulmonary hypertension was inversely related to late TR on univariable analysis, which was not relevant in multivariable models.

Several retrospective studies indicate that postoperative atrial fibrillation negatively affects TV function and the Maze procedure is protective against worsening of TR.⁴ In our study, however, the Maze procedure has not emerged as an independent predictor of TV function. This may be attributable to the relatively small number of postoperative TR cases (n=54) to include sufficient variables in multivariable models, although we used a stepwise elimination technique. Meanwhile, ‘concomitant Maze procedure’ was included in the propensity score model as one of baseline variables; therefore, the positive effects of TV repair on various clinical outcomes might not have been affected by postoperative rhythm status in our study.

Finally, in agreement with Gursoy, I believe the prevalence of functional TR is higher with rheumatic MV disease than with degenerative causes. This is perhaps related with the longstanding nature of rheumatic disease. Similarly, atrial fibrillation was combined in 87.7% (207/236) of patients in our study, which was much higher than the reported prevalence of 40–60% in patients undergoing MV surgery in general.

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