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Reply to the Editor:

I greatly appreciate Dr Bassano and his colleagues' interest in our article.¹ I read the results of their clinical data with interest as well. They found a steep increase in the rate of aortic expansion at an aortic diameter of 50 mm with strong statistical significance even in the analysis on a relatively small number of patients. This result is quite different from that of our previous study in which no significant correlation was found between preoperative aortic diameter and the aortic expansion rate after aortic valve replacement (AVR).¹ Perhaps these discordant results may be attributable to differences in the patient cohorts, but I believe they need to look back at their data to see whether any other plausible factors exist as confounders (eg, connective tissue disorder) behind their correlation.

There have been mixed conclusions in the literature on whether to replace a moderately dilated aorta or not during AVR, and controversies are ongoing.²⁻⁴ Our previous study showed that AVR alone seemed reasonable in a moderately dilated ascending aorta based on a low rate of clinical events and aortic aneurysm formation as well as the limited rate of aortic expansion, but the study was not meant to be conclusive; its results were believed to be provocative of further studies to define a more reasonable indication for concomitant replacement of the aorta. Safety in concomitant aortic surgery is another issue to be addressed. Although there was no operative mortality among 70 patients who underwent aorta replacement in our series, I don't agree that it can be performed "without significant

additional risks." Evaluations on tens of patients are not enough to determine the risk of a procedure, and I believe that any additional procedure always carries a certain level of risk. What is important is how great the risk is. Current risk calculating systems for cardiovascular surgery, EuroSCORE II for instance, also consider this "additional procedure" as the factor that increases early mortality calculated in a logistic function. Because a dilated aorta is a common finding during AVR, the recommendations we make may affect a huge number of patients, even if the increased risk of concomitant aorta surgery is small. Thus, risk-benefit assessments on concomitant aorta surgery should be made through large-scale studies such as multiinstitutional registry-based analyses.

We found that the rate of aortic expansion was -5.6 ± 8.0 mm/y in aortic stenosis, -2.6 ± 5.2 mm/y in mixed stenoregurgitation, and -1.4 ± 4.5 mm/y in aortic regurgitation; the differences were statistically marginal as shown in our previous study ($P = .083$ using the Kruskal-Wallis test).¹ When we compared the expansion rates only between aortic stenosis and aortic regurgitation, the difference was statistically significant ($P = .003$ using the Mann-Whitney U test), in concordance with Dr Bassano and colleagues' assumption. This is an unexpected finding in my view, and Dr Bassano's hypothesis may explain the mechanism behind this phenomenon, but other plausible mechanisms can be speculated as well. Further studies are also needed to address this issue, and I believe the study population should be extended to those with all sizes of aorta rather than confining it to a certain range to reach an appropriate conclusion on this.

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<http://dx.doi.org/10.1016/j.jtcvs.2013.12.035>

Reply to the Editor:

We appreciate much the interest in our report.¹ The issues raised by this letter can be summarized as follows: (1) what was the etiology of the tricuspid regurgitation (TR); (2) what was the pulmonary artery pressure (PAP) level; and (3) whether TR associated with a left-sided cardiac lesion will exhibit a poorer prognosis?

With regard to the etiology of TR, 8 patients had a history of blunt chest trauma, all of whom showed leaflet prolapse. For these patients, the etiology would probably fit into "traumatic" but that might not be confirmative. Another 12 patients had leaflet prolapse; however, a history of chest trauma was not evident. This could have been, in part, because some patients might not recall the traumatic event that happened long ago. Although the etiology, in these cases, could have been degenerative or traumatic, it would be better for it to remain as "unknown." Regarding rheumatic involvement, the presence