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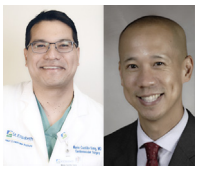

REPLY: THE PERFECT DECISION WITH IMPERFECT INFORMATION: PITFALLS OF GENERALIZING TO MANY WHAT WE KNOW OF FEW?

Reply to the Editor:

Secondary mitral regurgitation (SMR) remains a problem that affects many. The publication of 2 randomized controlled trials ontranscatheter edge-to-edge repair (TEER) for SMR with conflicting outcomes were followed with the designation of TEER as a IIa indication in the treatment of SMR alongside surgical mitral valve repair with reductive annuloplasty (RMA) plus revascularization in the American Heart Association/American College of Cardiology guidelines.[1-3] The final word on the best management of SMR is far from written. As Nappi and Singh[4] describe, the IIa indication for TEER in SMR comes with only 3 years of follow-up whereas the data condemning surgical mitral valve repair in SMR are limited by sample size, ventricular heterogeneity, length of follow-up, and the absence of concomitant guideline-directed medical therapy (GDMT).[5]

Nappi and Singh remind us that there are data supporting that RMA plus papillary muscle approximation (PMA) is better than isolated RMA.[4,6,7] While correction of the ventricular component of SMR plus an annular intervention seems logical, it has not shown improvement in patient survival compared with RMA alone, and therefore a broad generalization of its benefits cannot be made. We know that PMA + RMA in SMR improved recurrence of moderate plus mitral regurgitation, improved ventricular remodeling, and better restored valvular geometry when compared with RMA alone, without a difference in survival.[6] We also know that TEER plus GDMT improved survival compared with GDMT alone without improvement of left ventricular ejection fraction but proved inferior to RMA in reduction of mitral regurgitation and improvement of left ventricular function.[8] What we do not know is how the perceived "better surgical repair" for SMR (PMA + RMA) compares with TEER in the management of SMR.

Like Nappi and Singh, we previously acknowledged that the next evolution is the prospective comparison of these 2 therapeutics for patients with SMR with a distinction between dilated versus ischemic etiologies.[9] This new comparison should also occur in the context of GDMT with use of such drugs as sacubitril/valsartan, which were not available in previous trials and could conceivably erode the superiority of TEER over GDMT alone. To account for heterogeneity in mitral experience of cardiac surgeons participating in these clinical trials, standardization of repair techniques will be paramount.

As we move forward trying to find answers to the management of SMR, the collaboration between surgeon and cardiologist will be paramount, with candid conversations and careful patient risk stratification in a heart team setting. Finally, larger samples with longitudinal follow-up of at least 5 years will ultimately dictate if these lessons are applicable to the broader population.

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