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Commentary: Excellent outcome for mitral valve repair in asymptomatic patients—Does the surgery benefit the patient?

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Mitral valve repair at a heart valve center of excellence in asymptomatic patients with degenerative mitral valve regurgitation (DMR) is a Class IIa recommendation in the 2020 Focused Update of the American Heart Association/American College of Cardiology guideline.¹ However, surgery for this indication is uncommon.² Adoption of an “early-surgery” approach in this asymptomatic group remains controversial as we wait for the results of randomized trials ongoing in Europe.³ Given the increasing role that centers of excellence play in defining the risk–benefit balance of operative intervention for various indications, understanding contemporary outcomes at such centers is important, especially in this controversial group of patients with asymptomatic DMR.

In this issue of the *Journal*, Desai and colleagues⁴ describe excellent survival and long-term durability following mitral valve repair for asymptomatic DMR in a single-center, single-surgeon retrospective cohort study. We congratulate the authors for this important report. The study models and support the guideline criteria for intervention by a heart valve center of excellence with repair rate greater than 95% (99% in the study), 30-day mortality <1% (0% in the study), and long-term durability (reported 100% freedom from reoperation at 10 years; 99.4%

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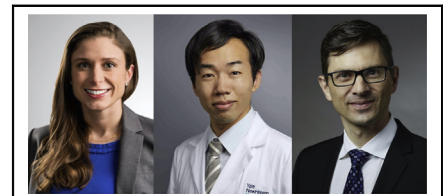
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CENTRAL MESSAGE

Proper phenotyping of asymptomatic DMR may help refine thresholds for surgical intervention and define the subgroup for whom early intervention is favored.

freedom from >2+ mitral valve regurgitation [MR] at 10 years; 79.9% freedom from >1+ MR at 10 years). In comparing surgical outcomes of patients with preoperative New York Heart Association (NYHA) class I status with NYHA class II and III/IV, the survival was expectedly superior in those with NYHA class I.

A key remaining question is in which patient subgroup with asymptomatic DMR is such an early intervention beneficial? The benefit of early intervention in asymptomatic patients is assumed on the basis of the average latent effect of chronic severe MR, including ventricular dysfunction and symptom exacerbation. NYHA class distinguishes asymptomatic patients from symptomatic patients, but the phenotypic distinction between class I and II may not be as clear as the classification implies. For example, objective measure of exercise capacity may be similar between patients with class I and II.⁵ Further phenotyping of asymptomatic DMR may help refine thresholds for surgical intervention that could improve upon an NYHA class–based indication. This would require studies of a broader cohort including comparable operative and nonoperative patient groups to estimate the effect of early operation.

As the authors appropriately highlighted, this study focused on patients who underwent surgery. Therefore, the benefit or harm of surgery in relation to the alternative, watchful waiting, could not be estimated. In the absence of compelling comparative effectiveness data, there must be a patient-centered conversation to choose the treatment approach in this otherwise extremely low-risk group. These excellent outcomes were achieved in a highly specialized environment and likely reproducible in only select centers

and therefore should be cautiously applied to general cardiac surgery practices.

Centers of excellence are critical vehicles to define best practices in terms of timing of surgical intervention and pre-operative surveillance to provide a timely operative intervention in patients with asymptomatic DMR.

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