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Commentary: In the hands of the experienced, do not fear anterior leaflet pathology

Makoto Mori, MD, and Arnar Geirsson, MD

With the rapid advancement of transcatheter alternatives to surgical approaches, the surgical community bears the responsibility of optimizing surgical outcomes to provide a fair benchmark against which novel, less-invasive approaches can be compared. Mitral valve repair is one of such operations that has a significant margin for advancement, both via system-level strategies for volume regionalization¹ and technical-level improvement to optimize the outcomes inherent to the operation itself.

Brescia and colleagues² address the latter aspect in this study by demonstrating that repair of anterior leaflet pathologies, which are repaired less frequently compared with posterior pathologies, may achieve excellent outcomes. In their single-center series, authors reported that the survival and freedom from reoperation were not significantly different between isolated anterior or bileaflet repair versus posterior leaflet repair. The finding is thought-provoking, because anterior leaflet pathology has historically suffered from lower rates of repair, likely owing to existing evidence suggesting that they are less durable.³ The report is an encouragement to not discard the repair option solely based on the presence of an anterior leaflet pathology.

The excellent outcomes should be contextualized to the fact that the operations were performed in a highly

Makoto Mori, MD (left), and Arnar Geirsson, MD (right)

CENTRAL MESSAGE

In experienced hands, anterior leaflet pathology may be repaired effectively and safely. The presence of an anterior leaflet pathology alone should not limit repair options in a specialized setting.

specialized setting, with one surgeon operating on the majority (85.3%) of this series. Presumably, anterior leaflet repair was performed at an even greater proportion by this operator. Therefore, this report demonstrates what can be achieved in a highly specialized condition, rather than widely generalizable outcomes of anterior versus posterior leaflet repair. Technical complexity of anterior repair would suggest that the 25 repairs/year surgeon volume threshold reported previously⁴ is likely greater when specifically considering anterior leaflet repair.

Caution must be exercised in interpreting the reported nonsignificant difference in the risk of reoperation, as David and colleagues⁵ demonstrated in a single-surgeon series that isolated anterior leaflet prolapse was a significant predictor of recurrent mitral regurgitation and reoperation during the median follow-up of 10 years.⁵ This may be in line with the competing risk analysis by the authors that also showed a nonsignificant but a greater cumulative incidence of reoperation in the anterior repair group (7.5% vs 4.9%).² Regardless, repair with an increased risk of reoperation

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may still yield survival and other outcomes favorable to those of replacement. Taken together, the report encourages expanding repair options to anterior leaflet pathologies at centers of excellence.

Under rigorous evaluation of comparative effectiveness between surgical and less-invasive alternatives, it is all the more critical that the surgical community fulfills the maximal benefit that surgical approach can offer. The authors must be congratulated for challenging the conventional wisdom and encouraging us to critically evaluate potential options for repairing anterior leaflet diseases.

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