Valve repair for mitral despair

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Central Message

Mitral valve repair may offer improved patient survival and reduced operative morbidity over valve replacement in the setting of infective endocarditis.

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Mitral valve endocarditis represents a formidable surgical challenge fraught with significant postoperative morbidity and mortality.¹ Carpentier's pioneering valve repair techniques for degenerative disease were extended to mitral endocarditis in the early 1990s, confirming the feasibility of mitral repair to avoid prosthetic replacement.² The surgical experience has subsequently progressively increased, with compiled data suggesting improved survival and lower rates of recurrent endocarditis with valve repair over replacement.³ Similar findings were reported from large US state registries driving repair rates for mitral endocarditis to almost double over a decade.⁴ In the current issue of the *Journal*, Lee and colleagues⁵ present a national cohort of patients with mitral endocarditis who underwent mitral valve replacement or repair over a 13-year period in Taiwan. In a propensity-matched analysis of 352 patient pairs, the authors found mitral repair to be associated with reduced operative and late mortality and lower perioperative stroke rates and transfusion requirements. This large-scale study with excellent follow-up represents a substantive contribution and corroborates prior reports. The operative mortalities of 6.3% and 10.8% for mitral repair and replacement, respectively, closely reflect the 5% mortality for mitral repair and 10% mortality for replacement reported from pooled data.³ It is noteworthy that the achieved repair rates are reflective of those reported from statewide databases in the United States.⁴

The strength of these national data lies in patient numbers and long-term follow-up, yet important details are not retrievable. Echocardiographic assessment of ventricular function, degree of mitral insufficiency, and size and quality of the vegetation are not available but very pertinent. It is feasible that acute patients with poor ventricles preferentially underwent expedient and reliable valve replacement, thus skewing operative and distant survival outcomes. It is unknown whether mitral replacements were performed using chordal preservation techniques,

again potentially influencing survival. Technical descriptions of mitral valve repair would provide a better clinical gestalt for the reader, and in their absence, the presented data offer little surgical guidance because it is unknown how repair rates could be maximized and which patients should not undergo repair. A substantial proportion of patients (23%) in the study underwent operative intervention after discharge from the index hospitalization and outpatient antibiotic therapy. Repair rates in this subpopulation were substantially higher than in those patients intervened upon during active endocarditis (29.8% vs 18.9%), but this approach preferentially selects lower-risk patients for mitral repair. This strategy also should be balanced with mounting clinical evidence suggesting better outcomes with early operative treatment of acute endocarditis.⁶ As in mitral repair for degenerative valve disease,⁷ surgeon volume was a significant factor potentiating the putative advantages of mitral valve repair in the setting of endocarditis, underpinning the prerequisite technical experience and clinical judgment.

Lee and colleagues⁵ demonstrate that mitral valve repair for infective endocarditis may be superior to valve replacement in the hands of experienced mitral surgeons. However, mitral replacement in many of these acutely ill patients should not be viewed as a failure or capitulation of surgical acumen. These data add to the growing clinical evidence that in select patients and centers, mitral repair for infective endocarditis is preferential to valve replacement, yet much remains to be learned to identify the optimal candidates.

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