within cardiac surgery for the treatment of MV endocarditis to meet our patients' expectations of the best possible outcomes.

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MITRAL VALVE REPAIR VERSUS REPLACEMENT FOR INFECTIVE ENDOCARDITIS, AGAIN

Reply to the Editor:

In a letter to the Editor published in this issue of the *Journal*, Nappi and Spadaccio,¹ from Paris and Glasgow, comment on an earlier article by Lee and colleagues,² from Taiwan. In that article, Lee and colleagues² analyzed a series of 1999 adult patients in their country who had undergone first-time mitral valve surgery because of native valve endocarditis and found that “mitral valve repair for infective endocarditis has better perioperative results and lower rates of late mortality and composite end point outcomes than mitral replacement, and is recommended whenever possible, even for patients with an active infection status.” This analysis, which was based on their country's database, also showed that “patients were more likely to undergo valve replacement (78.8%) than repair

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(21.2%), but with a trend to increasing repair rate during the period.”² Nonetheless, “in low-volume centers, the repair rate was significantly lower and the beneficial effect of repair was less apparent.”² Lee and colleagues,² concluded with a plea for repair rather than replacement of the mitral valve in this setting.

In an editorial accompanying that article by Lee and colleagues,² I³ then supported this plea but raised the point that mitral valve repair requires experience that may not be present in most institutions and individual surgeons of the “real world.” This is also implicitly acknowledged by Lee and colleagues.² This was also an indirect comment in an earlier article on the same subject published by the New York group of David Adams,^{4,5} well known for their expertise in mitral valve repair, that indicated a repair rate that increased from 10.7% to 19.4% toward the end of their experience, a rate not much different from that reported by Lee and colleagues.²

Preference for repair is obvious in patients in whom the infectious process is either healed or limited to a localized area of the valve leaflets or chordal apparatus. And it is in this respect that the letter from Nappi and Spadaccio¹ is pertinent. They emphasize the value of using homografts and autografts or other homologous tissues to preserve valves with a more extensive infectious process, techniques that they and other authors have mastered and proposed before. Whether some of these methods can be considered in the repair category is debatable, but they still achieve the main objective of avoiding the implantation of a prosthesis, which should be used only in grossly destroyed valves and in those colonized with highly aggressive microorganisms, such as *Staphylococcus aureus* and fungi.

In conclusion, it is now widely accepted that mitral valve repair, whenever feasible, yields better short and long-term results than replacement, even in infected native valves. Surgeons should therefore become acquainted with and master the multiple techniques that have proved useful in this setting. Otherwise, these patients should perhaps be referred to more experienced surgeons and centers.

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DO NOT DESPAIR, AND CONTINUE TO IMPROVE REPAIR

Reply to the Editor:

I read with interest the astute commentary of Nappi and colleagues¹ regarding the underutilization of mitral valve repair in infective endocarditis (IE) reported in the study by Lee and associates.² Nappi and colleagues¹ point to the heterogeneous approaches to mitral valve endocarditis, driven mostly by hospital and operator experience, and call for consideration of referral to highly specialized centers. As increasing clinical evidence suggests improved outcomes with mitral repair in IE,³ these considerations should not go unheeded. What is optimal, however, should be balanced against that which is practical and attainable. It is important to remember that surgical IE mitral valve disease carries a mortality risk of approximately 10% for valve replacement,^{2,3} representing high-risk pathology. Although perioperative survival may be better with valve repair, the sickest patients usually undergo replacement because of the degree of valvular destruction or hemodynamic compromise. In the absence of randomized data, one can conjecture that mitral repair is optimal, yet the patient substrate may be substantially different. Regionalization of subspecialty services or referent centers may offer a viable solution in centralized health care delivery systems; in the United States, however, this may be difficult to achieve. In a report from the Society of Thoracic Surgeons on mitral valve surgery in the United States from 2000 through 2007, Gammie and colleagues⁴ reported that 7967 operations for mitral IE were performed across the study period by 910 US centers. This approximately equates to 1 mitral IE operation per center per year. High-volume centers with extensive experience in complex mitral valve repair may not be in immediate proximity, and delay of treatment must be counterbalanced against emerging data suggesting that early surgical treatment of mitral IE provides improved outcomes.⁵ The more telling data from the Society of Thoracic Surgeons

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report elucidated mitral valve repair rates for isolated primary mitral operations that ranged from 51% to 69% across the study period when patients with mitral stenosis were excluded. Perhaps here is where the surgical community's efforts should be focused to increase repair rates for more common and less challenging pathology, to standardize the surgical experience, and to equip the individual surgeon better to face the complexity of infective pathology. Partial homograft replacement of the mitral valve may be performed at few centers throughout the world,⁶ but facility with the most common repair techniques will suffice for most repairable valves with IE. This process appears to be progressively taking shape, because mitral repair rates for IE have doubled during a span of 12 years in New York State according to statewide data.⁷ The solution to realizing the potential of mitral valve repair in IE may therefore be education and exposure, rather than compartmentalization and subspecialization.

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