fit” for each patient. Although therapeutic modalities may evolve, the expectations called upon the MV specialist remain the same: proficiency, mastery, and equipoise.

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Commentary: Mitral valve surgery in the new paradigm

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Badhwar¹ provides a comprehensive review of contemporary transcatheter mitral valve (MV) therapy and its context within the various types of MV disease. With the emergence of new transcatheter MV technology there will soon be alternatives to the majority of traditional surgical treatments for MV disease. There are several points that are particularly important when considering the future of therapy for MV disease.

The multidisciplinary societies have suggested minimum volume requirements for the institution of transcatheter MV programs. Although these volume requirements are not a perfect proxy for quality, they are essential so that both new and traditional techniques will be offered in equipoise

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CENTRAL MESSAGE

Surgeons should embrace emerging transcatheter mitral valve technology. The emergence of mitral valve specialists and heart team collaboration will improve transcatheter and surgical results.

to the right patients. Mechanisms (such as a rapid access referral pathway to larger centers) must be in place for those hospitals that fall below the threshold volumes to ensure that appropriate patients have access to these innovative transcatheter therapies.

Within the past 5 years, a multitude of landmark trials have compared surgical, transcatheter, and medical therapy for those with moderate to severe functional mitral regurgitation.²⁻⁵ These trials (eg, the National Heart, Lung, and Blood Institute Cardiothoracic Surgical Trials Network, the Cardiovascular Outcomes Assessment of the MitraClip Percutaneous Therapy for Heart Failure Patients With

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Functional Mitral Regurgitation [COAPT], and Percutaneous Repair with the MitraClip Device for Severe Functional/Secondary Mitral Regurgitation [MITRA-FR]) have considerably increased our understanding of these complex pathologies causing MV dysfunction. The concept of proportionate versus disproportionate mitral regurgitation can help explain the differing results of the COAPT and MITRA-FR studies and should assist patient selection for either transcatheter or surgical management of these complex patients.⁶ The rigorous goal-directed medical therapy required for eligibility for randomization in the COAPT trial likely contributed toward the excellent results.² The importance of the therapy studied in COAPT and MITRA-FR highlights the importance of including a heart failure specialist on multidisciplinary heart teams. Whether such rigor is applied in the real world, and the requirements placed by the Centers for Medicare and Medicaid Services in their national coverage determination, remains to be seen.

There is opportunity for surgeons to improve the surgical options that we are able to offer. For example, only a minority of centers offer complex repairs utilizing minimally invasive MV techniques. We must not deviate from our gold standard of an excellent durable surgical repair, yet surgeons should understand patients' general desire not to undergo sternotomy. The desire for less-invasive therapies has led to dozens of new technologies for the treatment of mitral regurgitation. Because current transcatheter technologies provide only 1 technique for repair, the chances for surgery-like repair remains a challenge. Dissimilarly, a surgeon may utilize 4 to 5 intraoperative techniques for a durable repair of a MV. However, a patient may choose to undergo a (potentially inferior) transcatheter treatment for their MV disease to avoid a sternotomy if a minimally invasive approach is not available. Offering patients surgical solutions that they consider more acceptable will prevent this.

Those surgeons in training, or at an early stage of their career, who have an interest in MV surgery should pay close attention to the description offered by Badhwar¹ of the future mitral specialist. This specialist needs to not only master the techniques of surgical MV repair, but also hybrid endovascular and imaging techniques. This more broadly trained surgeon may ultimately choose not to lead the transcatheter procedure in the catheterization lab, but is likely to better select patients for the various therapies, improving surgical outcomes in this new paradigm. This specialist is also more likely to contribute to contemporary heart teams.

A surgeon with hybrid surgical interest and experience will improve transcatheter outcomes just as interventional and heart failure cardiologists will improve outcomes of patients undergoing surgery. Failure to collaborate with the new valve specialists will result in inferior outcomes for novel transcatheter therapies and undertreatment with surgery. Never before has it been more important for heart teams to work together.

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