Expert contributions enhance knowledge of valvular heart disease

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The American Association for Thoracic Surgery family of journals are among the leading scientific publications for the specialty of cardiothoracic surgery. Published in late 2020 and early 2021, 16 invited expert contributions in the field of valvular heart disease will appear in the *Journal of Thoracic and Cardiovascular Surgery (JTCVS)*, *JTCVS Techniques*, and *JTCVS Open*. These important peer-reviewed selections will summarize important innovations in the areas of aortic valve replacement, aortic valve repair, and the surgical and transcatheter management of mitral and tricuspid valve disease.

The map of clinical decision-making for aortic valve stenosis has been redrawn by transcatheter aortic valve replacement (TAVR). Patients of increased risk and complexity are now routinely managed by TAVR, and the role of surgical aortic valve replacement (SAVR) is being refocused.¹⁻⁴ Some have advocated for a TAVR-first strategy for all, but clinical equipoise remains for many patients of varying anatomy and risk profile. Five-year evidence is emerging to suggest that for patients of lower risk, SAVR may be superior to TAVR in this specific patient cohort. Controversy also exists regarding the management of patients with bicuspid valve disease and for those with anatomic features that may be predictive of worse outcome and paravalvular leak following TAVR.⁴ Contributions in *JTCVS* and *JTCVS Techniques* will highlight the merits of redo SAVR,¹ options for reoperative treatment following failed TAVR/SAVR,^{2,3} and the introduction of a new technique of robotic SAVR, or RAVR.⁴

Aortic valve repair for patients with primary degenerative pathology and insufficiency has existed for decades. However, there are emerging techniques that may facilitate primary valve repair without root-remodeling techniques. Upcoming contributions in *JTCVS Techniques* will highlight cusp repair, reimplantation valve-sparing root repair, and new insights and alternatives available to manage both tricuspid and bicuspid insufficiency.⁵⁻¹⁰ Furthermore,

Reviews examine existing controversies and new valvular techniques.

CENTRAL MESSAGE

Expert reviews thoughtfully explore recent developments in surgical and transcatheter valve therapy.

aortic valve repair can even be extended to patients with previous Ross procedures to eliminate pulmonary autograft aneurysms and repair autograft regurgitation from annular and sinotubular dilation.¹⁰

Finally, the management of mitral and tricuspid disease has continued to evolve with transcatheter innovations. Although surgical management, for now, remains the gold standard, patients of high-to-prohibitive risk will soon have access to transcatheter therapies. For cases of severe mitral annular calcification, left ventricular rupture remains a rare but real concern.¹¹ Transcatheter mitral valve replacement is currently undergoing randomized trial investigation with several devices, the majority of which are transapical.¹² Although the performance of concomitant tricuspid valve repair at the time of left-sided surgery is not without some controversy, increased evidence based clarity is emerging.¹³ For those with severe tricuspid regurgitation without a viable surgical option, transcatheter options are in the early stages of innovation and may one day be available.¹⁴⁻¹⁶

The *JTCVS* journals consider Invited Expert Opinions a valuable manner in which to summarize key areas of the literature or present advances in a focused way. The 2021 contributions highlighted aim to inform and inspire future innovative therapies and approaches to valvular heart disease.

Conflict of Interest Statement

The authors reported no conflicts of interest.

The *Journal* policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

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