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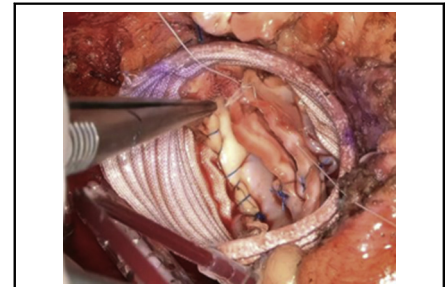


Commentary: Aortic valve reconstruction: Embrace it and master it ... for your patients' sake ... and your future

James Quintessenza, MD

In their report “Valve repair for aortic regurgitation of a bicuspid aortic valve with root dilatation late after an arterial switch operation,” Nakaji and colleagues¹ from Nagasaki University Hospital describe their technique for David root replacement and bicuspid valve repair. Their technique uses some novel maneuvers as well as more traditional steps which result in a very competent and nonobstructive valve. They provide very beautiful imaging, perform a precise valve analysis, and include a high-resolution, nicely edited video that shows the critical steps of the procedure.

This report provides support for many valuable tenets in aortic valve reconstructive surgery, especially for our younger patients. The precise and very detailed analysis of the valve using echocardiography and 3D computed tomography reconstruction allows advanced planning in a very thoughtful and comprehensive manner. Imaging has come a long way as shown by a recent article by Izawa and colleagues.² The modern concepts of aortic valve reconstruction have undergone continuous improvement over the years. Although there are multiple subtle technical differences among the different publications in the literature, there are fundamental concepts, which when adhered to, allow for a more standardized approach and a more



Intraoperative photograph of reconstructed bicuspid valve.

CENTRAL MESSAGE

With adequate valve leaflet tissue and using current reconstructive techniques, patients should enjoy a well-functioning and durable aortic valve repair.

durable outcome than ever before.³⁻⁶ In general, if there is adequate surface area and quality of valve leaflet tissue, and one uses precise preoperative imaging and intraoperative assessment and current reconstructive techniques, a competent/nonobstructive valve with very reasonable durability can be obtained. From a patient's perspective, the opportunity to retain one's own tissue, whose biologic behavior far exceeds that of any other biologic substitute at this time, will be much preferred if durability can be achieved. It is imperative that surgeons embrace this new reconstructive technique, else the only option for patients (and surgeons), will be a transcatheter valve with subsequent valve-in-valve repetitive procedures, patient valve mismatch, and ultimately, very challenging reoperations.

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Disclosures: The author 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.

Received for publication Nov 8, 2021; revisions received Nov 8, 2021; accepted for publication Nov 12, 2021; available ahead of print Nov 17, 2021.

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JTCVS Techniques 2022;11:62-3

2666-2507

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