by the challenge of unknown long-term benefits (eg, survival and quality of life, including from spinal cord injury) of more aggressive root or arch operations. The central question of acute aortic dissection surgery as far as extent of repair remains: Is the added risk of more definitive repairs at the index procedure justified to influence better long-term survival (as noted)? Only a 4-arm, randomized trial with a comparison of conservative versus aggressive arch repair or conservative versus aggressive aortic valve surgery, would better inform us. Even then, conservative surgery may have better outcomes at 30 days but not better long-term outcomes. True benefits can only be concluded following restricted means analysis of late survival benefits comparing arm groups, say at 5 years, if not 10 years.

Like so many unanswered questions, it will remain a mystery that will unlikely be definitively answered in our lifetimes. If the authors can access long-term follow-up data from this valuable data set, additional conclusions may be imputed supporting a universal theory of best cardiac surgery practice, particularly for aortic dissection.

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Commentary: Short-term outcomes following type A repair: A small step or a giant leap?

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With the continued growth of robust, acute type A aortic dissection databases, the preponderance of outcomes-based analyses in the literature over the past decade has increased substantially. In a recent examination of the Japanese experience published in the *Journal*, Okita and

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CENTRAL MESSAGE

Short-term results following repair of acute type A aortic dissections have improved dramatically. It is imperative, however, to understand the long-term effects of intraoperative decision making.

colleagues¹ reviewed nearly 30,000 dissection patients who underwent repair over a 6-year period. Although the authors' conclusions largely mirror a number of similar

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studies in regard to the impact of patient- and disease-specific risks on surgical outcomes, one of their most intriguing findings is more subtle. Namely, the in-hospital mortality, although consistent throughout the study period, was impressively low at less than 11%.

The surgeons contributing to this registry should be commended on these outstanding results in an especially challenging cohort, but is reporting short-term outcomes without consideration of the long-term effects of surgical decision-making sufficient? The authors acknowledge 2 critical distinctions that could have conflicting implications on late valve and/or aortic reinterventions. The incidence of formal root procedures, whether valve-sparing or a conventional composite replacement, was exceedingly low (5%) when compared with several other large series (25%-35%).^{2,3} The ultimate influence of this intraoperative decision on short- and intermediate-term outcomes is controversial⁴ but could adversely affect long-term rates of reoperation.⁵ Conversely, the use of a more extensive arch replacement, which has been advocated by many groups in China and Japan in particular, occurred in upwards of 30% of patients. The strategy of a total arch solution is admittedly aggressive by their own account, particularly if a hard indication for such an approach is lacking as the long-term data following hemiarch alone are acceptable.⁶ Furthermore, as a frozen elephant trunk was employed regularly in this series (14%), the additional benefit of a total arch replacement over transverse hemiarch is disputable.⁷

While outcomes following surgical repair of acute type A dissections are driven by multiple factors and risk adjustment is likely inadequate as it represents a complete aortic catastrophe, a thorough evaluation of late events is critical. While many of the national and international databases provide ample numbers to enable a meaningful analysis of peri-operative morbidity and mortality, the long-term influence of operative decisions is dependent on comprehensive follow-up.

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