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Commentary: Moving the goalposts

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During the past several decades, advances in prehospital care and operative techniques have been systematically instituted in the care of patients with acute type A aortic dissection (TAAD). The resulting improvements in short-term mortality have led to a focus on extending operative techniques to improve mid- and long-term outcomes. Much of this attention has been paid to the prevention of distal degeneration, with antegrade stenting becoming routine at several centers.¹⁻³ In contrast, fewer studies have focused on long-term changes in aortic root and valve geometry. Freedom from proximal reoperations has been characterized as high, at 96% to 99% at 5 years and 91% to 98% at 10 years in Dohle and colleagues,⁴ and 96.1% at 8 years in the Nordic Consortium Registry.⁵ However, reoperation may not be an exact proxy for aortic root/valve degeneration due to selection bias.

Kim and colleagues⁶ examine the fate of aortic regurgitation after TAAD repair, comparing outcomes of patients who had root replacement with those who had preservation of the root and valve. As described by the authors, the size criterion for root replacement was >55 mm. The data reported in the study are of value, with 100% clinical follow-up at 8.6 years and 89% echocardiographic follow-up at 7.9 years. This type of longitudinal echocardiographic data is typically absent in the large aortic dissection registries. What is known from registry data is that aortic regurgitation of at least moderate degree is not rare, occurring in 18.9% of TAAD patients in the Society of Thoracic Surgeons database⁷ and 23.3% of patients in the German Registry for Acute Aortic Dissection Type A,⁸ similar to the 20% found in the population studied by Kim and colleagues.⁶ This remains then a persistent clinical question for surgeons treating TAAD. The most common approach remains the supracoronary aortic replacement with commissural resuspension.⁹ Still, root replacement in

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CENTRAL MESSAGE

Although proximal reoperations after acute type A dissection repair have been characterized as rare, patients at risk for midterm valve dysfunction might be considered for a more aggressive approach.

the United States remains fairly frequent at >25% in the Society of Thoracic Surgeons database⁷ and even higher in the more recent years of IRAD data.⁸

The article by Kim and colleagues⁶ suggests a slightly different approach reflected in the root replacement rate of only 17%. In the nonroot replacement group, the more conservative approach was associated with respectable short-term mortality outcomes of 9.8%, but a 12.3% risk of significant aortic insufficiency (AI) and 8.1% root reoperation at 10 years. Perhaps not surprisingly, preoperative 3 to 4+ AI and postoperative 2+ AI were significant predictors of AI and root reoperation at late follow-up, and AI progression was rapid. From this, the authors concluded that careful echocardiogram surveillance is warranted in patients with postoperative 2+ AI. It is curious that the study findings appear not to have prompted the authors to consider changes to their surgical approach, as others have.^{10,11} Given the authors' similarly respectable operative outcomes with root replacement, it would be a missed opportunity not to consider lowering the threshold for root replacement in patients with severe preoperative AI and significant root dilation. Ro and colleagues¹¹ found the cutoff for prediction of late AI to be a diameter of 47 mm. In experienced centers, the extent of proximal operation in TAAD has not been found to be a risk factor for short-term mortality. Another consideration would be avoidance of the use of biogluue, for which increasing data suggest its etiology as a mode of failure.¹⁰ At the very least, The study by Kim and colleagues⁶ should prompt aortic surgeons in general to consider operative strategies to reduce long-term risk of

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root pathology, just as the field has trended toward reduction of late distal aortic events.

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Commentary: Progressive aortic valve regurgitation after replacement of the dissected ascending aorta: An unsolved dilemma

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Despite significant improvements in surgical outcomes during the past 2 decades, type A acute aortic dissection (AAD) remains a life-threatening disease linked to a substantial mortality and morbidity. In a recent overview article

CENTRAL MESSAGE

This single-center retrospective analysis provides new insights of long-term durability of ascending aortic replacement in patients presenting with type A acute aortic dissection.

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from the investigators of the International Registry of Acute Aortic Dissection (IRAD) that was initiated in 1996 and prospectively analyzes outcome data from more than 50 international sites with, so far, more than 7300 patients with acute type A and B aortic dissection, a significant temporal decline of surgical mortality rate from 25.0%