Commentary: An equal opportunity to survive—Previous cardiac surgery is not a contraindication to type A dissection repair

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Acute type A aortic dissection (ATAAD) repair remains a challenging operation, no matter in what circumstances the patients present. Previous cardiac surgery (PCS) leads to mediastinal adhesions, which add further technical difficulties to an already complex procedure. Time is of the essence with type A dissections to prevent fatal rupture, cardiac tamponade, or malperfusion syndrome (MPS). PCS and the associated need for sternal reentry and dissection of mediastinal structures serve only to increase the time to actual aortic repair. Single-center studies have reported mortalities as high as 16.8% to 31% for ATAAD repair with PCS.¹⁻³ This is not very different from the overall mortality with ATAAD repair in the International Registry of Acute Aortic Dissections database, however, which ranges from 18% in the recent era to 25% in previous years.⁴ Given that the mortality with medical management of ATAAD remains in excess of 50%, it makes sense that patients with PCS should be offered a chance with surgical repair.

In this issue of *The Journal of Thoracic and Cardiovascular Surgery*, Norton and colleagues⁵ examine their outcomes with ATAAD repair in the presence of PCS, and they should be recognized for their great outcomes in this particularly tough patient population. Importantly, although the PCS group had more preoperative risk factors, there were no significant differences in postoperative outcomes in the PCS and no PCS groups, and operative mortalities were statistically similar at 12% and 8.3% ($P = .42$), respectively, highlighting the importance of giving these patients a chance at surgery.

The success of the Michigan group in managing these patients stems in part from their algorithm for managing patients with malperfusion syndromes with emergency endovascular fenestration followed by delayed open type A repair. Although it can be argued that this type of strict selection introduces bias in outcomes by eliminating a

Type A dissection after previous mitral valve replacement.

Central Message

Patients with acute type A dissection after previous cardiac surgery should be offered surgery. Outcomes are like no PCS in experienced centers and better than medical management in all settings.

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subset of very sick patients with MPS, PCS actually supplements this type of delayed strategy well, because the mediastinal adhesions help to decrease the risk of rupture and cardiac tamponade in the interim time when the MPS is resolving. In this analysis, there was less cardiac tamponade or rupture in the PCS group, despite an increased incidence of MPS and significantly longer waiting time to operation.

The other key point is that almost all of the cases in this series were performed by experienced aortic surgeons. The volume-outcome relationship with ATAAD is quite apparent at both the surgeon and hospital levels, and the operative mortality in less experienced hands can be double that of experienced aortic surgeons.^{6,7} In the setting of PCS, it is possible these findings may be amplified.

It is clear that patients with ATAAD who have had PCS should be offered surgical repair of their aortas. Regardless of whether the mortality at any particular center is 12% or 31% with reoperative type A repairs, these outcomes are still better than the more than 50% mortality associated with nonoperative management.

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