Furthermore, the acceptable aortic characteristics were quite stringent and excluded any patients with malperfusion or aortic insufficiency, meaning that no dissection involved the aortic root. This subset is at lower risk in terms of aortic characteristics, and it is not surprising that good operative outcomes are achievable with stringent patient selection. Perhaps with stringent selection, even medical management can achieve good outcomes for a specific, well-defined subset of patients, including those chosen for aortic wrapping in this study. In the International Registry of Aortic Dissection database, medical management in an unselected group had a mortality of only 57%, so nearly one-half of those managed without surgery survived.⁶

Aortic wrapping is used by a limited number of surgeons who have experience in the technique and only for a specific subset of patients presenting with ATAAD. Although short- and mid-term outcomes are acceptable, careful monitoring is required to manage early complications, and long-term durability remains in question. The

ideal population for aortic wrapping needs further clarification.

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Commentary: Urgent aortic wrapping for acute type A aortic dissection: New hat for an old trick?

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Wrapping of the ascending aorta as a method of treatment for aneurysmal dilatation was first reported by Bahnson and Nelson in 1956.¹ After partially excising a large ascending aortic aneurysm, they used a Scultetus binder

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CENTRAL MESSAGE

Aortic wrapping may be a suitable option for treatment of acute type A aortic dissection in elderly and high-risk patients, but more patients and longer follow-up are needed.

to encircle the ascending aorta. Two of the 4 patients in whom the technique was used had chronic type A aortic dissections. Since that time, wrapping of the ascending aorta, with or without concomitant partial excision of the aortic

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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 5, 2020; revisions received Nov 5, 2020; accepted for publication Nov 8, 2020; available ahead of print Nov 19, 2020.

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0022-5223/\$36.00

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<https://doi.org/10.1016/j.jtcvs.2020.11.025>

wall (reduction ascending aortoplasty), has been used by a number of surgical groups to treat ascending aortic aneurysms. Enthusiasm for widespread application of aortic wrapping has been tempered by reports of pseudoaneurysm formation, late aortic rupture, and histological evidence of aortic wall atrophy and necrosis beneath the wrap.²⁻⁵ There is some evidence to suggest that mesh wraps rather than woven or knitted aortic grafts provide greater elasticity and porosity, and may lower the risk of migration and aortic wall injury.⁶

In this issue of the *Journal*, Vento and colleagues⁷ provide an update of their novel experience with aortic wrapping in 35 patients with acute type A aortic dissection. The patients were deemed to be at high risk for conventional aortic repair because of comorbidities and advanced age (80% were age ≥ 70 years). The procedures were completed in all but 1 instance without the use of cardiopulmonary bypass. The ascending aorta, and in 60% of cases the entire aortic arch and ascending aorta, were wrapped with a sheet of Teflon mesh to attain an average aortic diameter of 38 mm. The 30-day mortality was 9%, and actuarial survival at a median follow-up interval of 36 months was 82%. The overall dissection-related mortality was 11%. Given the advanced age of the majority of patients and their comorbidities, these outcomes could be considered highly satisfactory.

It is noteworthy however, that 2 of the 3 hospital deaths and presumably 1 of the late deaths were due to aortic rupture. Interventions before hospital discharge were required in 11 of the patients (31%). In 4 of these patients, the interventions were necessary to address malperfusion of the lower extremities (2 patients), kidney, and abdominal viscera. Since acute limb, renal, and mesenteric ischemia were not present preoperatively, this raises the question as to whether the malperfusion observed postoperatively was somehow related to the procedure itself. An additional 4 patients required placement of noncovered stents in the ascending aorta to prevent retrograde progression of the dissection toward the aortic root. One additional patient

required stenting of the ascending aorta at 5 months postoperatively for the same indication. These rates of aortic rupture and subsequent interventions appear higher than those reported after conventional open repair.

There is little question that elderly patients with acute type A aortic dissection, particularly those with major comorbid conditions, are at increased risk for open repair, and the role of open repair in elderly patients, particularly those age >80 years, continues to be debated. The large experience from the International Registry of Acute Aortic Dissection suggests that these patients should continue to be offered open repair because of the high mortality associated with conservative management.⁸ Although the experience of Vento and colleagues⁷ in a small group of high-risk patients suggests that wrapping may be a satisfactory alternative to open repair, longer follow-up of larger numbers of patients and comparison of the outcomes with similar patients treated with open repair are necessary before concluding that aortic wrapping represents a suitable method of management.

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