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Commentary: Working downstream: Distal endovascular repair for retrograde type A aortic dissection

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Open surgical repair has long been the standard of care for Stanford type A aortic pathologies, including intramural hematomas and both primary and retrograde dissections. Evidence is growing that suggests some of these patients may be adequately treated with less-invasive initial management.¹⁻³ Nishi and colleagues⁴ present a case of thoracic endovascular repair for acute retrograde type A aortic dissection (TAAD) and demonstrate its feasibility in the setting of acute spinal cord ischemia.

The authors discuss multiple factors that guided their decision to perform an endovascular repair in this patient, including a primary entry tear at the T8 level, acute onset paraplegia, ascending aortic diameter <50 mm, thrombosed false lumen in the ascending aorta <10 mm, and lack of aortic regurgitation, pericardial effusion, or connective tissue disorder.

The report prompts further questions about which patients with acute retrograde TAAD are appropriate candidates for endovascular repair. Generally accepted criteria for emergent surgery include cardiac tamponade, aortic insufficiency, and underlying connective tissue disorder, but factors that identify patients as good endovascular candidates are less clear. Nonrandomized registry data of patients with acute retrograde TAAD analyzed by Nauta

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CENTRAL MESSAGE

Endovascular repair may be an acceptable treatment option for acute retrograde type A aortic dissection with noncardiac complications in carefully selected patients.

and colleagues² showed that those with limb ischemia and smaller ascending aortic diameters are more likely to be selected for endovascular repair and have comparable outcomes compared with surgically managed counterparts. The single-center experience of Chen and colleagues³ also demonstrated that endovascular treatment of thrombosed retrograde TAAD or type A intramural hematoma is feasible with favorable early outcomes, although the sample size of six patients limits generalization of their outcomes. An additional dilemma is that most currently available data involve patients with spontaneous acute aortic injury, and the applicability of these results to patients with retrograde tears after previous endovascular aortic repair are unclear.

Although no objective criteria currently exist for identifying optimal endovascular repair candidates for acute retrograde TAAD, lessons can be learned about candidacy for conservative management from experience with type A intramural hematoma. Kitai and colleagues¹ report that in 66 patients at their institution, patients treated with emergency surgery had similar outcomes as those undergoing initial medical management with close imaging follow-up. They recommend patients with complications, including cardiac tamponade, myocardial ischemia, and aortic regurgitation undergo immediate repair, but also suggest those with an ascending aortic diameter ≥ 50 mm be considered for emergency surgery to reduce the risk of mortality and longer hospital stay.

Nishi and colleagues⁴ report excellent early results in a single patient with acute retrograde TAAD treated with

thoracic endovascular repair. Moving forward, it will be important to investigate objective criteria for endovascular repair and to follow long-term patient outcomes. This might lead to practice changes in a field where open surgery currently remains the gold standard.

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