Total aortic repair for acute type A dissection: Not every patient; not every surgeon

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In this issue of the *Journal*, Matalanis and Ip¹ report their management paradigm for total aortic repair for the treatment of acute type A dissection (ATAD). Matalanis and Ip¹ advocate a total arch repair for “the majority” of patients with ATAD. Those with evolving malperfusion, rapidly enlarging false lumen, or collapsed true lumen would proceed to stenting of the entire thoracoabdominal aorta, with a proximal covered stent, distal bare metal stents, and balloon rupture of the septum. Of the 72 patients who underwent surgery for ATAD in the report of Matalanis and Ip,¹ 12 patients (16.7%) underwent total aortic repair with the described technique in the acute setting; an additional 3 patients had endovascular completion in the chronic phase. The results reported are outstanding, with no early deaths and a low rate of neurologic and other complications.

Matalanis and his group are to be commended for developing an intriguing approach to ATAD that should reduce the need for late aortic intervention. They have described this approach in several papers,²⁻⁸ however, many pertinent details remain missing. Of particular interest are the following unanswered questions: (1) What were the clinical features, initial management, technical details, and outcomes of *all* patients presenting with ATAD? (2) Which patients received total arch (as opposed to hemiarch) repair, and what were the outcomes for the index arch operation? (3) Which patients had an indication develop for distal aortic intervention? (4) How did the radiologic features of the dissection evolve during follow-up?

Some technical aspects deserve commentary. We contend that the general cardiac surgeon with limited aortic experience should perform the standard operation and save the patient's life.⁹ Many have advocated more extensive repairs, including total aortic repair from the valve to the bifurcation, initially described 30 years ago.¹⁰ For those who require extended repair, a total arch repair with a frozen elephant trunk would have the additional advantages of

Dr David assisting Dr Ouzounian on her first ruptured thoracoabdominal aneurysm.

Central Message

We discuss the importance of patient selection when considering more extensive distal aortic repairs for the treatment of acute type A dissection.

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covering any primary or large reentry tears in the proximal descending thoracic aorta, improving hemostasis by depressurizing the false lumen at the distal anastomotic site, and reexpanding the collapsed distal true lumen to alleviate any distal malperfusion.¹¹⁻¹³ Although one could then add bare metal stents down to the abdominal aorta, only a small minority of patients treated with a frozen elephant trunk will need reintervention. Furthermore, we find that the frozen elephant trunk provides the ideal platform for subsequent endovascular interventions by providing a longer, straight segment landing zone that does not require traversing the arch. Anatomic reimplantation of the arch vessels facilitates cannulation visceral branches from above more readily than does a trifurcated arch graft that has been implanted (by necessity) close to the sinotubular junction.

We suspect that in carefully selected case, a more extensive primary operation for ATAD performed by an aortic specialist that facilitates subsequent distal interventions would be ideal. We look forward to a detailed report with late imaging and clinical outcomes of all patients with ATAD managed at the unit of Matalanis and Ip.¹ Only then will we be better positioned to understand which patients may benefit from this aggressive strategy. For the surgeon practicing today, we advise this: know your patient and know yourself.

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