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Commentary: Time will tell

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De León Ayala and colleagues¹ tackle the controversial topic of type Ia endoleaks after thoracic endovascular aortic repair (TEVAR) of the proximal aorta (zones 1-3).¹ Their analysis commendably adds perspective to the current literature, examining the fate of aortic arch stenting in view of the rapidity of endoleak. The denouement of their analysis was that all slow endoleaks resolve spontaneously within 1 year from TEVAR. However, we ought to avoid falling into the danger of not seeing the forest for the trees. The fact that slow endoleaks resolved at the 1-year mark is of relative importance compared with considerations that ought to question the appropriateness of treatment in terms of hard clinical end points like survival. TEVAR has experienced a relentless increase since approval by the Food and Drug Administration in 2005, surpassing open repair for aneurysm in 2006 and for dissection in 2010 according to a pool of 155,187 patients from the National Inpatient Sample.² Contrary to what is seen in the natural development of most procedures, the mortality of TEVAR in the United States has actually been increasing from 6.6% in 2004-2006 to 8.8% in 2013-2014. This paradoxical effect is due to the fact that, as operators become more familiar

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CENTRAL MESSAGE

Although appealing, endovascular repair has not met yet the benchmark set by modern open replacement for the treatment of aortic arch pathology.

with the procedure, TEVAR is employed to treat patients with higher risk profiles.³ A National Inpatient Sample cohort of 11,669 patients highlighted that, whilst TEVAR had less procedure-related complications (odds ratio, 0.39; $P < .01$) and length of stay (by 1.3 days), open repair had substantially lower hospital cost (by \$6713). Most importantly, open and endovascular repair had equal risk-adjusted operative mortality nationwide (2.3% for both).⁴ Whilst such figures apply to conventional TEVAR, when the latter is employed in the aortic arch its results are more sobering. Indeed, the operative mortality of the cohort presented by De León Ayala and colleagues¹ was 24%, which has to be seriously pondered both in light of the young mean age of its patients (57 years), and in comparison to the mortality of modern open arch replacement for all-comers (5.3%).⁵ Additionally, a median follow-up of 4 years is likely insufficient to reveal the true consequences of endovascular stenting in such young patients. Indeed, a propensity-matched comparison of 15,305 Medicare

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Disclosures: The authors 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 June 23, 2020; revisions received June 23, 2020; accepted for publication June 24, 2020; available ahead of print July 11, 2020.

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J Thorac Cardiovasc Surg 2022;163:2023-4
0022-5223/\$36.00

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<https://doi.org/10.1016/j.jtcvs.2020.06.096>

patients showed that TEVAR had a worse survival than open repair in the medium term (5-year: 62% vs 72%; $P < .01$).⁶ Again, long-term results of proximal TEVAR can be expected to be even more grim because the shear forces in the arch are more daunting than in the descending aorta. Whilst it is nice to read that slow endoleaks in the arch are seemingly benign in the short term, time will tell what is the aftermath for patients with a longer life expectancy.

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