outcomes over this time period, independent of a modified technique. Additionally, distal aortic dilation occurs in a significant portion of patients after type A dissection repair; however, this is a chronic process, and an average follow-up of 3.9 years is not adequate to assess the success of the modified elephant trunk in preventing distal aortic complications. Another important question when considering this article is whether the control group is appropriate. Comparing differences between traditional elephant trunk and modified elephant trunk would have been more appropriate, but perhaps they did not have enough of these patients to use as a control.

Finally, in the current era, any discussion regarding aortic pathology and treatment would be remiss to neglect the mention of endovascular therapies. With the advent of branched stent grafts for aortic arch pathology and the relatively low morbidity of thoracic endovascular aortic repair (TEVAR),^{5,6} it is valid to ask if adding the complexity of a frozen elephant trunk, with total or hemiarch replacement, is reasonable given the relative ease and feasibility of future TEVAR. TEVAR also has the benefit of being able to perform endovascular ultrasound to ensure that the stent graft remains in the true lumen.

Berdajs and colleagues⁴ have presented an appealing technique for the management of acute type A dissection that may afford the benefits of antegrade stent grafting with the relative straightforwardness of a hemiarch replacement. This technique adds to the armamentarium of the aortic surgeon who must constantly balance the risk and complexity of the surgery at hand with the need for future interventions.

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Commentary: Proximal aortic dissection repair—when have things gone too far?

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The Stanford classification denotes “type A” to be any dissection involving the proximal aorta regardless of the entry flap. The DeBakey classification system terms dissections involving the whole aorta type I.¹ It then mirrors

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CENTRAL MESSAGE

Evidence supports modified elephant trunk to treat patients with type 1 DeBakey dissections. Care must be taken evaluating the anatomy of a patient's dissection when selecting a therapeutic approach.

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the Stanford classification, with those limited to the ascending aorta type II, and limited to the descending, type III. Beyond semantics, the anatomic location of the dissection and related intimal tear is of critical importance. Improvements in imaging (computed tomography, magnetic resonance, echocardiography) and technology (endovascular therapy) treatment have moved to an anatomic classification, such as the DISSECT mnemonic and Society of Thoracic Surgeons Society of Vascular Surgery classification system.^{2,3}

It is uniformly agreed that dissections of the ascending aorta (ie, Stanford A, DeBakey I and II) require urgent intervention regardless of the location of the initial tear. Contemporary opinion advises to repair aortic dissections extending into or beyond the transverse arch, theorizing that residual disease in the more distal aorta could contribute to subsequent morbidity and further procedures. In this edition of the *Journal*, Berdajs and colleagues⁴ use an inverse probability of treatment weighting (IPTW) as part of their propensity analysis of their DeBakey I aortic dissection cohort, some of whom underwent a modified elephant trunk procedure.

Multivariate analysis is one way to evaluate the effect of a treatment while controlling for other variables. Alternatively, IPTW serves to mathematically “normalize” treatment groups, given the decision to treat one way or another is based on preoperative criteria. As seen in Table 1 of the present study, IPTW results in nearly identical preoperative risk profiles of those treated with standard

repair compared with the modified frozen elephant trunk procedure (mFET). The present paper shows that an anatomic repair of a transverse arch tear with a mFET, as opposed to a hemiarch procedure, provides improved survival.

In the application of these data to clinical practice, it's important to recognize for which patients it is relevant. IPTW was based on “standard” preoperative risk factors, including myocardial function, age, and previous surgery. The characteristics that influenced the decision for mFET included: “signs of visceral malperfusion, documented, entry tear in the distal arch, multiple re-entry tears in downstream aorta, and collapsed true lumen in the downstream aorta.” Future studies should include more recent classification system measures as part of the normalization, in addition to standard preoperative risk factors, to better correlate anatomy with outcome. Berdajs and his group should be congratulated for their work.

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