OPTIMAL ARCH REPAIR IN ACUTE TYPE A AORTIC DISSECTION: STRIKING A BALANCE BETWEEN SAFETY AND EFFICACY

To the Editor:

With great interest we read the study by Elbatarny and colleagues,1 which analyzed hemiarch vs extended arch repair (EAR) in settings of acute type A aortic dissection (ATAD) repair. We congratulate their comprehensive analysis of national data to address optimal strategy for arch repair in ATAD. We have several questions to better understand their study.

DEFINITION OF EAR AND OUTCOME

In this study, use of the Ascyrus Medical Dissection Stent (AMDS) (Cryolife) was classified as EAR, which comprises 17% of the EAR cohort. This technique is technically similar to hemiarch repair except for AMDS insertion and anastomosis. Conversely, partial or total arch repair (TAR) requires reconstruction of supra-aortic vessels that usually requires longer cardiopulmonary bypass time or circulatory arrest time of the lower body. Another important aspect when discussing EAR is the rate of spinal cord ischemia (SCI). In a large meta-analysis,2 SCI was not negligible after TAR with elephant trunk procedures, with an incidence of 2.6% for ATAD. In the present study, there was a trend that EAR, which includes AMDS, showed a higher SCI rate (EAR, 3.8% vs hemiarch, 1.7%; P = .059). This is among the potential drawbacks of using frozen or classical elephant trunk technique because mortality after permanent SCI is significant. On the other hand, AMDS use for ATAD repair showed excellent results of SCI (0%) in a multicenter trial.3 We wonder if outcomes could be different regarding SCI if the authors did a subanalysis excluding the AMDS group from the EAR group or regrouping patients who received reconstruction of supra-aortic vessels and regrouping.

DISTAL ANASTOMOSIS

Among the challenges of EAR compared with ascending or hemiarch repair is deeper distal aortic anastomosis. Proximization of distal aortic anastomosis in EAR, instead of Zone 3 distal anastomosis, seems reproducible and safe in EAR for ATAD repair.4,5 Takagi and colleagues4 reported Zone 0 TAR using frozen elephant trunk technique with excellent outcomes. We reported simplified Zone 2 arch repair without elephant trunk insertion,2 which provides similar technique and cardiopulmonary bypass time with an endovascular option if necessary. In the EAR group, especially in patients who underwent TAR, it would be great to add information about the level of distal anastomosis to demonstrate the extent of repair in this group.

CANNULATION SITE

Arterial cannulation site is a crucial part of ATAD repair.5,6 A growing body of evidence suggests that axillary artery cannulation is superior to other cannulation strategies. Compared with femoral artery cannulation, the axillary artery is free from atherosclerosis, facilitating perfusion of the true lumen and easy transition to selective antegrade cerebral perfusion if necessary. It would be of interest to explore if cannulation site is similar between the hemiarch and EAR groups in this cohort. If the authors could comment on these points, it would add significant insights on their suggestive data.

References

4. Takagi D, Yamamoto H, Kadoshima T, Kiyu K, Wada T, Igarashi I. Optimal stent length and distal positioning of frozen elephant trunks deployed from the aortic


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