Author has nothing to disclose with regard to commercial support.

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REPLY: KEEN QUESTIONS APPRECIATED

Reply to the Editor:

We thank Bugan and colleagues for their kind comments regarding our recently published article examining the clinical effectiveness in the real world of a simple algorithm for ascending aortic aneurysm decision making.¹ Our algorithm triaged to surgery those patients with (1) ascending aortic size greater than 5.0 cm or (2) smaller aneurysms accompanied by chest pain, a strong family

history, severe connective tissue disease, or associated bicuspid valvular disease requiring treatment (Figure 1). Other patients were triaged to medical treatment.

Regarding the points on which Bugan and colleagues request clarification, we have the following specific comments:

1. They note a difference in aortic size between the medical and surgery noncompliant and overwhelming comorbidities groups. Yes, the medically triaged patients had smaller aortas. Size is indeed the core criterion for medical versus surgical treatment. That is the fundamental cornerstone criterion of the evaluated algorithm.
2. They wonder about the regression equation inclusion groups. Regression looked at triage only of the patients included in the study—those triaged to medical management and those triaged to surgery who did not actually undergo surgery (surgery noncompliant and overwhelming comorbidities group).
3. They ask, was there better medical therapy in one group? Bugan and colleagues point out the importance of decreasing blood pressure and shear stress in the medical treatment of aneurysm disease. They wonder whether the quality of medical treatment of the surgery noncompliant and overwhelming comorbidities group potentially biased the results. We wish that medical treatment could decrease adverse events in the dilated ascending aorta. We have reviewed the literature multiple times, and we find that there is simply no conclusive evidence that medical treatment is effective in decreasing aortic events.²⁻⁵ Furthermore, Bugan and colleagues point out that one group had more

Time for a Left-ward Shift in Ascending Aortic Guidelines?

FIGURE 1. Is it time for a leftward shift in intervention criteria for ascending aortic aneurysm? Reprinted with permission from: Ziganshin BA, Zafar MA, Eleftheriades JA. Descending threshold for ascending aortic aneurysmectomy: is it time for a “left-shift” in guidelines? *J Thorac Cardiovasc Surg*. 2019; 157:37-42.

Dr Elefteriades is a cofounder of CoolSpine, a consultant for CryoLife, a member of the Data/Safety Monitoring Board for Terumo, and a member of the Data/Safety Monitoring Board for Jarvik Heart. All other authors have nothing to disclose with regard to commercial support.

hypertension, coronary artery disease, and chronic kidney disease—and they may therefore have required and received better medical treatment. That group, however, was the surgery noncompliant and overwhelming comorbidities group. So, this is contrary to their concern raised that disparate medical treatment (ie, insufficient attention to medical management) may have biased against the surgery noncompliant group.

We appreciate the focus of Bugar and colleagues on these important details. In our study, the demonstrated real-world effectiveness of the simple size and symptom-based algorithm adds confidence to contemporary management of the dilated ascending aorta.

John A. Elefteriades, MD, PhD (hon)

Mohammad A. Zafar, MD

Ayman Saeyeldin, MD

Bulat A. Ziganshin, MD, PhD

Aortic Institute at Yale-New Haven Hospital

Yale University School of Medicine

New Haven, Conn

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THE OPTIMUM ARTERIAL CANNULATION SITE DURING OPEN AORTIC ARCH REPAIR: IS IT THE AXILLARY ARTERY?

To the Editor:

I read with interest the article by Kim and colleagues¹ about axillary artery (AA) cannulation in open aortic arch repair. Their propensity-matched, retrospective

analysis included 116 patients in each cohort of AA and non-AA cannulation. The primary outcome from the study was early postoperative embolic stroke, whereas the secondary outcomes were in-hospital mortality and major operative complications. They concluded a lower rate of embolic stroke in axillary cohort (2.6% vs 8.5%, $P = .46$), as well as lower in-hospital and 30-day mortality rates ($P < .05$).

As reported by the authors in Figure 1, B in their report, the matched cohort of AA had only 57% ($n = 66$) of patients with pure axillary cannulation whereas 43% ($n = 50$) of the patients had combined axillary with femoral or ascending aorta cannulation and this serves a strong reporting bias about the reported outcomes. The data in this cohort represents the outcomes of such combined cannulation techniques rather than just AA cannulation; therefore, I wonder if the authors tried to compare the figures between pure AA cannulation versus non-AA and whether the event rates and statistical figures will remain significant?

Furthermore, there is no clear description of why the patients in AA cannulation had femoral and ascending aorta cannulations as well. An explanation should be provided to make it clear to the readership of the journal the logic behind dual site cannulations and possibly its effect on the reported outcomes.

I am a bit surprised that there is no innominate artery (IA) cannulation used among the cohort. Currently, IA cannulation is gaining momentum in aortic arch and complex thoracic aorta surgeries with satisfactory outcomes.² In our recent systematic review,³ we showed that IA cannulation in thoracic aorta procedures has a postoperative stroke rate of 1.25%, which is much lower than what is reported by Kim and colleagues¹; additionally, the all-cause 30-day mortality rate with IA cannulation was 2.7% versus 2.6% with AA cannulation. A further meta-analysis comparing AA versus IA cannulation reported no superiority of either techniques in terms of mortality or neurological outcomes.⁴ Currently, there is an ongoing randomized controlled trial in Canada comparing the outcomes of AA versus IA cannulation in proximal aortic arch repair, we anticipate the results to be published this year aiming to establish the equality or superiority of either technique.⁵ One should not forget the use of ascending aorta cannulation in the setting of acute dissection; studies have shown that central cannulations can have better outcomes over peripheral access.⁶

The key indications for AA cannulation includes redo aortic surgery, complex pathologies, and in the settings of acute aortic dissection; however, the main contraindication remains a diseased AA that makes the cannulation not safe. Although the indications for IA cannulations remains the same, the exclusions are involvement of IA in the dissected aorta, severely calcified or unfavorable anatomy of the IA.³ Nevertheless, this remains choice of the surgeon on choosing AA or IA cannulation in such circumstances, and to date there is no evidence of confirming the