

Commentary: Ascending Aortic Aneurysm: The Best Way Out Is Always Through

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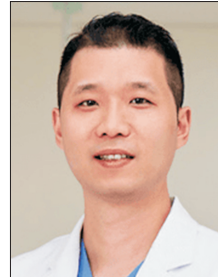
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The paper written by Shin et al. [1] is very interesting.

Indications for surgery are always an important issue and have changed slightly over time. Publishing indications for surgery as a guideline means that we can compare the risk of surgery versus the risk of not performing surgery and predict which choice is likely to lead to a better outcome.

It is interesting to read the authors' conclusions and see their approach to bucking the trend of these guidelines. However, I think we need to be careful in interpreting their results, and I do not entirely agree with their conclusions. The main change in the 2022 American Heart Association/American College of Cardiology guideline is the introduction of lower cut-off values for surgical indications [2]. This reflects a gradual decrease in the surgical risk (i.e., postoperative mortality and complications), accompanied by a plateau in the overall performance of surgery. The second reason is that we know empirically that the traditional cut-off of 50 to 55 mm is not appropriate for all patients. In other words, given that we have seen many patients presenting with aortic rupture or aortic dissection at sizes smaller than 50 to 55 mm, it would be reasonable to feel that a more appropriate standard is needed.

Borger et al. [3] reported a composite outcome and overall survival for patients with ascending aortic aneurysms

larger than 45 mm during more than 10 years. However, in this study, the authors only included 75 patients with aneurysms 45 mm or larger, and the median follow-up duration was just 59.1 months [1]. We believe that this patient number and follow-up duration are insufficient to refute the results of Borger et al. [3]. In addition, Borger et al. [3] suggested a cut-off value of 45 mm through survival analysis for overall survival and the composite event, while the authors of this paper argue against the guideline based on evidence of the aortic expansion rate being inversely related to the baseline aortic dimensions and the absence of documented aortic rupture/dissection [1]. The authors' report of 12 sudden deaths would certainly include aorta-related mortality, and in the absence of an accurate endpoint evaluation of aorta-related events, it is difficult to fully accept their conclusions.

The authors state that the aortic expansion rate is inversely related to the baseline aortic diameter, but this is also difficult to understand, and even if it is true, a decrease in the aortic expansion rate is not a sufficient basis for avoiding ascending aorta graft replacement. The outcomes of aortic surgery have continued to improve and have leveled off, and we do not believe that the addition of ascending aortic graft replacement to aortic valve replacement (AVR) significantly increases the risk compared to

AVR alone. The aorta continues to stretch, not shrink, and redo sternotomy with aortic rupture or aortic dissection still poses substantial risk. It is questionable whether the additional risk of performing AVR with ascending aortic graft replacement exceeds the expected risk of performing redo sternotomy and ascending aorta with or without arch replacement in an aortic emergency (risk expectation = probability of aortic events \times risk of emergent ascending aorta \pm arch replacement surgery under redo sternotomy).

The authors of this paper do not discuss these risk expectations, making it difficult to accept their conclusions at face value. We look forward to more data and further analyses in the future.

When considering AVR with ascending aorta graft replacement versus isolated AVR, the best way out is always through.

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