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REPLY: SMALL AORTIC ANNULUS: CAN WE DISPEL ALL THE HAMLETIC DOUBTS?

Reply to the Editor:

The great merit of Derrick Tam and the Toronto University Group¹ was to turn the spotlight on aortic root enlargement (ARE) during aortic valve replacement, as demonstrated by the letter of De Martino and colleagues.² The latter rightly pointed out the matter of surgical technique used for ARE. In 2014, the same group published the very long-term results of a small cohort of 53 patients undergoing aortic valve replacement (AVR), where enlargement of the aortic annulus was achieved using the Manouguian technique,^{3,4} extending so the aortotomy to separate the commissure between the left and noncoronary sinuses into the anterior mitral leaflet and closing the resulting defect with an adequately tailored patch of bovine pericardium; no case of severe patient–prosthesis mismatch (PPM) and no late aortic root aneurysm were recorded. However, the safety and efficacy of ARE have been already demonstrated in a very large single-center experience⁵ where 1854 patients undergoing ARE were compared with 5185 patients receiving lone AVR. In the last decades, we have witnessed an overwhelming number of AVRs performed each year, with a significant shift from mechanical toward bioprosthesis implantation due to the reluctance of even younger patients to take oral anticoagulants.⁶ Subgroup analysis in mismatch studies suggest that PPM is most detrimental in younger patients⁷ and in patients with depressed left ventricular function,⁸ both of whom are becoming more and more prevalent in cardiac surgery. Therefore, if the evidence is by now clearly in favor of ARE to avoid PPM, dispelling one of the many Hamletic doubts in cardiac surgery, the advent of sutureless bioprosthesis may raise a new question: is it better to use a rapid-deployment bioprosthesis, easily to manage even for younger surgeons, or to perform a more technically demanding procedure that, even as safe as AVR, needs most experience? A small-cohort study addressed this topic,⁹ with the authors concluding that “sutureless valve implantation is an alternative to conventional ARE to treat a small aortic annulus and avoid PPM, especially in geriatric patients who benefit from the quick implantation process.” However, further large-



cohort studies deserve to solve definitively this arising doubt.

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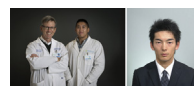
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REPLY FROM THE AUTHOR: AORTIC ROOT ENLARGEMENT—MORE IMPORTANT THAN EVER?

Reply to the Editor:

We thank Martino and associates for their letter and interest in our study comparing early and late outcomes in those who underwent isolated aortic valve replacement (AVR) versus those who underwent AVR with concomitant aortic root enlargement (ARE) in 11

