

## Letters to the Editor

anastomosis of a coronary graft to the aorta. The results presented by Emmert and colleagues<sup>1</sup> for the HEART-STRING device are equivalent to their aortic no-touch technique. Although we believe that anaortic OPCAB with total arterial revascularization should be the criterion standard, we also appreciate that some surgeons prefer not to perform a T or Y graft anastomosis to the left internal thoracic artery. In this case, the use of a device for proximal anastomosis (rather than use of a side clamp) should be considered for anastomosis of the graft to the aorta.

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### Reply to the Editor:

We thank Edelman and colleagues for their comments and additions to our article.

The ROOBY trial, as the largest available prospective, randomized trial has been criticized for its limitations with regard to its significant selection bias, for mainly including low-risk patients.<sup>1</sup> The low off-pump coronary artery bypass grafting (OPCAB) case load of the involved

surgeons was reflected by a conversion rate as much as 10-fold higher, less complete revascularization, and lower patency rates than the data from high-volume OPCAB centers. Another randomized trial focusing on graft patency after OPCAB and on-pump coronary artery bypass grafting confirmed that OPCAB was associated with a significantly lower overall graft patency rate and did not rule out a potential benefit for OPCAB with regard to major adverse cardiac and cerebrovascular events and neuropsychologic functioning.<sup>2</sup>

As pointed out by Edelman and colleagues, however, and as also presented in most of the available studies, the ROOBY trial importantly failed to use aortic no-touch, total arterial grafting strategies. The significant value of combining OPCAB and aortic no-touch, total arterial revascularization techniques has been repeatedly highlighted in several studies, which have reported significantly decreased rates for stroke, ranging from 0% to 1%.<sup>3</sup> In addition, in their recent meta-analysis, Edelman and associates<sup>4</sup> have demonstrated the potential benefit of aortic no-touch techniques relative to both conventional on-pump coronary artery bypass grafting and to partial clamping techniques during off-pump coronary artery bypass grafting.

We agree that the use of in situ grafts or composites should be the criterion standard whenever possible. The use of free grafts requiring a proximal anastomosis is preferable in some patients, however, and may be the preferable revascularization strategy for some surgeons as well. In this situation, the proximal anastomosis can be efficiently carried out by using a clampless anastomotic technique to avoid any aortic manipulation, yielding similar results for stroke as achieved with a no-touch, all arterial grafting approach.<sup>5</sup>

The risk of neurologic complications cannot be completely eliminated, even if a no-touch, total

arterial off-pump approach is used. This risk also applies to interventional revascularization strategies, such as percutaneous coronary intervention, and seems to be associated with the underlying, individual risk profile defined by the general health condition and comorbidities of the patient. A no-touch, total arterial off-pump approach yields similar neurologic outcomes to those reported with percutaneous coronary intervention, and the often used argument of inferior neurologic outcomes after surgery can therefore be invalidated.

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## IS ANNULOPLASTY ENOUGH FOR FUNCTIONAL TRICUSPID REGURGITATION?

### To the Editor:

Congratulations to the authors for this study.<sup>1</sup> We benefited from this report, but we want to emphasize some