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EDITORIAL COMMENTARY

The emperor's new clothes

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The fairy tale “The Emperor’s New Clothes”¹ has origins that can be traced back as far as Aesop. However, in the version most of us are familiar with, weavers appeal to their emperor’s vanity and inflated ego by describing a nonexistent new suit as invisible to those who are unfit for their positions, stupid, or incompetent. It takes a child unconcerned with position in society to point out that the emperor is naked.

In “Impact of off-pump coronary artery bypass grafting on long-term percutaneous coronary interventions,” Barili and colleagues² analyze data from the Predicting Long-Term Outcomes after Isolated Coronary Artery Bypass Surgery project, which included 11,021 patients. After adjustment, they found that off-pump coronary bypass grafting (OPCABG) demonstrated a 42% higher risk for subsequent percutaneous coronary intervention than on-pump coronary artery bypass grafting (ONCABG) without a difference in mortality. One of the distinguishing aspects of this article is longer follow-up than other articles—up to 8 years.

There seems to be growing evidence that in large populations, the results of OPCABG may be inferior to ONCABG, especially in terms of complete revascularization and graft patency. I recently wrote a commentary for this journal that cited commentaries by Sabik³ and Lazar⁴ suggesting that ONCABG be the preferred approach to surgical

revascularization. Even some OPCABG proponents, such as Smith,⁵ have acknowledged that OPCABG may lead to higher early graft failure.

Surgeons have cited repeat revascularization as the Achilles’ heel of percutaneous coronary intervention. In fact, without repeat revascularization as a hard end point and part of the major composite end point, it is unlikely that the SYNTAX trial or any future stent versus CABG comparison will favor surgical revascularization.⁶ We cannot have it both ways. We have to see repeat myocardial

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Central Message

This article addresses the emerging evidence for higher repeat revascularization in patients undergoing OPCABG.

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revascularization as a critical failure regardless of how that revascularization was achieved.

Admittedly there are some data with single-surgeon short-term follow-up (1 year) that demonstrate equivalent results between OPCABG and ONCABG, most notably the randomized trial by Puskas and colleagues.⁷ This is likely due to the extensive experience of the surgeon. Unfortunately, it also leaves out the learning curve, which is necessary for each and every surgeon for each and every procedure. I was trained during the introduction of OPCABG to cardiac surgery. I watched practice change from low-dose heparin to full-dose heparin, from full reversal of anticoagulation to no or half-dose reversal, and from no aspirin to immediate aspirin and clopidogrel. There are no great data to support this evolution, but it was likely at the expense of several grafts and possibly several patients.

There is no doubt in my mind that OPCABG is technically more challenging. Perhaps some gifted surgeons are as proficient with it as with ONCABG without a learning curve. Alternatively, perhaps they would achieve even better results if they only chose to do ONCABG. We are unlikely to ever know. I do recognize that in high-risk populations, such as patients with an atheromatous aorta, there are clearly benefits to OPCABG performed by talented surgeons. I personally continue to use it in select situations.

Perhaps as a field we should define those indications for OPCABG via guidelines that also include metrics of competency as well as the surgical volume required to maintain

proficiency of the skill. We already do this for other procedures. This type of monitoring may even include long-term follow-up in the Society of Thoracic Surgeons database. As new reimbursement paradigms evolve, this type of evidence of efficacy will likely be mandatory. It would be in our best interest to actively lead the reform.

As I reflect on the fairy tale, I wonder why the emperor would ever wish to be seen naked, even by those who were undeserving. I believe that we should strive to identify which patients will look the best to all viewers, “dressed” in clothes of OPCABG and which surgical tailors ought to make them.

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