Another win for multiarterial bypass grafting: What's next?

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Multiple arterial coronary grafting continues to be studied both retrospectively and prospectively. In a population-based observational study of 20,076 patients by Pu and colleagues,¹ multiarterial grafting was associated with reductions in mortality, repeated revascularization, myocardial infarction, and heart failure relative to single internal thoracic artery grafting. The advantage of this revascularization strategy has been demonstrated in the nonobese population; however, the optimal revascularization for patients affected by diabetes or obesity remains inconclusive. The report by Schwann and colleagues² in the current issue of the *Journal* helps to address this gap in the literature.

In line with their group's previous reports on multiple arterial coronary grafting with the use of radial artery as the second-choice arterial conduit, Schwann and colleagues² have added impetus to the choice of multiarterial grafting as the standard in surgical coronary revascularization. Their report focused on a controversial subset of patients requiring coronary revascularization, retrospectively studying 6102 patients with 2536 (41.6%) who were obese, subdivided into body mass index categories (mild obesity and morbid obesity). This grouping differs from their group's previous publication on the topic³ and other reported classifications on obesity.⁴ There were differing characteristics between the left internal thoracic artery with saphenous vein bypass grafting group and the radial artery in multiple arterial coronary grafting group, who were younger, were more likely to be male, and had a higher revascularization index. Of note, no data were reported on where the radial artery was anastomosed. Of interest would be an analysis of arterial graft end targets to investigate whether there were any significant differences in study end points. Their study displayed long-term survival benefit from 0 to 15 years in both obese (hazard ratio, 0.85; 95% confidence interval, 0.74-0.98) and nonobese (hazard ratio, 0.91; 95% confidence interval, 0.80-1.03) patients, although, the survival advantage in obese patients was principally driven by a significantly lower mortality hazard ratio in mildly obese patients in

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Central Message

Multiarterial coronary revascularization provides increased long-term survival in the general population and now the obese. Will this coronary revascularization strategy become the criterion standard?

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the intermediate interval (0.5-5 years). Nonetheless, and to a large extent, this report has addressed the debated optimal revascularization strategy for the obese patient population.

Bilateral internal thoracic artery use was an exclusion criterion; Schwann and colleagues² hint at increased sternal wound complications in their discussion. When looking at the Arterial Revascularization Trial, a prospective randomized trial on bilateral internal thoracic artery use, sternal wound complications were higher with bilateral internal thoracic artery grafting⁵; in post hoc analysis, however, the method of dissection of the bilateral internal thoracic artery graft in a skeletonized fashion was associated with decreased rate of sternal wound complications.⁶ Going forward, a randomized trial with true complete arterial revascularization with skeletonized bilateral internal thoracic artery and radial artery grafts may be worthy of investigation.

With another study in favor of multiarterial revascularization, why has it not been adopted more broadly throughout the country?

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