Correspondence

Letter by Edelman et al Regarding Article, “Second Internal Thoracic Artery Versus Radial Artery in Coronary Artery Bypass Grafting: A Long-Term, Propensity Score-Matched Follow-Up Study”

To the Editor:

We congratulate Ruttmann and colleagues on their propensity score analysis comparing the right internal thoracic artery and radial artery (RA) as the second-best conduit in coronary artery bypass grafting.1 The study raises several interesting points.

The neurological event rate was significantly lower in patients receiving bilateral internal thoracic artery (BITA)/saphenous vein graft (SVG) in comparison with those receiving left internal thoracic and RA/SVG (unmatched, BITA 0.4% versus left internal thoracic artery/RA 2.5%, P = 0.027; propensity matched, BITA 0.4% versus left internal thoracic artery/RA 3.6%, P = 0.01). The authors conclude that this is the result of less aortic manipulation with fewer aortic anastomoses in the BITA group. There is a direct relationship of aortic manipulation with neurological event rates. The lowest stroke rates occur in patients undergoing an aortic off-pump coronary artery bypass grafting, performed without any manipulation of the ascending aorta, 0.34% in 7345 patients.2 The 0.4% stroke rate in 277 patients receiving BITA/SVG compares very favorably with stroke rate for on-pump coronary artery bypass grafting in the contemporary literature (1.8%–2.2%).3,4 However, avoiding aortic manipulation altogether may have improved this rate of stroke, especially in patients with heavily calcified aorta in whom the group used a single-cross clamp technique.

This study contributes significantly to the mounting evidence of superiority of the right internal thoracic artery to the RA.4 We acknowledge the recently published study by Goldman that questions the superiority of RA versus SVG, and we await the results beyond the short follow-up beyond. The majority of evidence shows high failure of SVG in the long term because of intimal and subintimal hyperplasia (<50% patency at 15 years).5 Tatoulis and colleagues reported 8-year survival of 92% in patients undergoing total arterial revascularization in comparison with 74% in those that received left internal thoracic artery with SVG.3 Ruttmann and colleagues suggest prospective, randomized trials to settle the question of “second-best conduit.” Perhaps we should accept the superiority of the right internal thoracic artery as second-best conduit and determine whether total arterial revascularization (performed ideally as an off-pump coronary artery bypass grafting) is superior to the use of any SVG?

Disclosures

None.

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References

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