Use of the left internal thoracic artery (LITA) to bypass the left anterior descending coronary artery provides a long-recognized survival benefit in coronary artery bypass grafting.1,2 Less consensus exists regarding the choice of conduit for targets in addition to the left anterior descending coronary artery. In this issue of the Journal, Chang and colleagues3 present an interesting small randomized study in 2 groups of 13 patients each, seemingly focused on comparing results between the use of upper and lower leg saphenous vein segments as components of a LITA–saphenous vein composite graft.

Aside from smaller luminal diameters in the lower leg segments, both the reported histologic and immunohistochemical findings and the excellent early and 1-year graft patency rates were similar between the groups. This study is not, however, simply about the location of origin of the vein segment. The surgical approach described includes an upper or lower leg saphenous vein harvested with a no-touch technique, fashioned into a composite Y-graft with the LITA, passively dilated by LITA inflow, and used in a sequential fashion during off-pump multivessel coronary artery bypass grafting. Discounting considerations of the quality of the vein, the arterial target, and the technical proficiency of the surgeon, is there some hierarchy of benefit to the multiple steps involved in this process?4

A number of previous reports, including from the same group, have championed what are referred to as “no-touch” and “minimally manipulated” vein harvesting techniques.5-9 Is this vein harvesting technique then the critical step? Do we need to know how much touch is too much touch? Saphenous vein is now procured with an endoscopic vein harvesting technique in more than 90% of cases.10 This broad adoption of endoscopic vein harvesting has been associated with a very real decrease in harvest site wound complications, the true incidence and associated morbidity of which was likely much higher than previously acknowledged or reported. Even granting that earlier concerns for graft patency with endoscopic vein harvesting may not yet be fully adjudicated, I doubt there would be much enthusiasm for a return to routine open vein harvesting.11,12

Further, and despite growing recommendations to increase the use of multiarterial grafting,13-15 in a recent Society of Thoracic Surgeons Adult Cardiac Surgery Database report, bilateral internal thoracic artery and radial artery conduits were used in only 4.9% and 5.0% of cases, respectively.10 This, then, would appear to present an opportunity to obtain patency rates and outcomes consistent with the advantages of multiarterial grafting more directly by increasing the use of multiarterial grafting.

Chang and colleagues’ are to be commended for their comprehensive and painstaking analysis of saphenous vein properties, their dedication to this technique, and the quality of their results. Longer term follow-up in a larger cohort of patients is needed; even with that, however, wide adoption of this approach seems unlikely. We can certainly harvest a saphenous vein more carefully (and we should), and we can sew a saphenous vein to the LITA (and we could)—but it is, nonetheless, still a saphenous vein.

References


