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REPLY: NO-TOUCH SAPHENOUS VEINS AND RADIAL ARTERIES SHOULD QUALIFY FOR THE SAME CORONARY

ARTERY BYPASS GRAFTING TEAM

Reply to the Editor:

Dashwood and colleagues¹ discuss the controversy regarding the best second conduit of choice for coronary artery bypass grafting (CABG). We believe it is more important to raise the question: what are the best principles and practice in CABG?

The key message of Dreifaldt and colleagues² in 2019 is that both the no-touch (NT) saphenous vein (SV) and the radial artery (RA) are excellent conduits and have similar

advantages. They should be seen as complementary, and not competitive, to each other. The RA may be used if it is of good quality, the target vessel is large, and it has a stenosis of >90%. Alternatively, if the RA is small or has moderate atherosclerosis, or the target vessel has a stenosis of <90%, an NT SV graft may be preferred.

Another aspect is that clinical factors may also suggest that prolonged conduit longevity is not always the primary concern. Older age, female sex, left ventricular dysfunction, smoking, obesity, and diabetes are some of the factors that negatively impact on survival.³ Consequently, the benefits of extensive arterial revascularization in CABG can be short-lived in these patients. This concept is even more important, given that the age and comorbidities of the CABG population are increasing.⁴

Our intention is not to compete with arterial conduits. The exclusive use of arterial grafts can be an excellent alternative when used reasonably. It's known that the great advances in percutaneous coronary intervention are due to the poor outcome of CABG and in particular the SV grafts. Indeed, our intention is to improve the results of CABG together with arterial conduits.

The SV is still used in the majority of CABG surgeries; therefore, every effort should be made to improve the results of this graft. The NT SV harvesting is just one attempt to do so.^{5,6} Our humble message to surgeons accustomed with arterial conduits is to wisely choose the target vessels suitable for arterial grafts, and, if necessary, use a NT SV for the remaining targets to reach complete revascularization⁷ (Figure 1).

Dashwood and colleagues¹ have legitimate concerns in raising the issue of a short-term increase in leg wound complications with the NT harvesting technique. These concerns may be an obstacle in embracing the technique despite considerable evidence of improving the results of CABG. An ideal situation would be to have a superior conduit combined with minimal risk of harvesting site complications. Hence, it is crucial to develop a minimally invasive or endoscopic technique to harvest the NT veins rendering it more acceptance, particularly in the United States.

The left internal thoracic artery, the NT SV, and the RA will conquer the podium in the coming CABG Olympics. Which stands higher will most likely vary depending on the characteristics of each individual patient.

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FIGURE 1. Coronary artery bypass grafting 8 years postoperatively with a LITA to the left anterior descending artery, an RA to the posterior descending artery, and a sequential NT SV graft to a diagonal artery and an obtuse marginal artery. RA, Radial artery; LITA, left internal thoracic artery; NT, no-touch; SV, saphenous vein.