Oh, father, where art we? Left internal mammary artery with greater saphenous vein grafts still rules surgical coronary revascularization after 30 years

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To answer the question, “where are we and where are we going?,” we must first look at where we have been. Bakaeen and colleagues¹ answer that question well in this historical review commemorating the 50th anniversary of Dr Rene Favaloro’s monumental performance of his first coronary artery bypass grafting (CABG) operation. As part of this historical review, we are reminded not only of Dr Favaloro’s contributions to the surgical treatment of coronary artery disease, but also of the contributions of many other pioneers of coronary revascularization.

In the wake of accidentally, but fortuitously, performing the first coronary angiogram, Dr F. Mason Soles Jr, along with Dr Favoloro, set the stage for the current collaborative model of cardiovascular care. Dr Favaloro reflected on this in 1999: “I am pleased to see that at present, the devastating effects of AMI have been ameliorated by the combined efforts of the clinician, the interventional cardiologist, and the cardiovascular surgeon.”² Their approach to patient care was the first “heart team” approach long before the concept of multidisciplinary treatment teams gained traction and popularity. We rely on this model heavily today and will continue to rely on it in the future to ensure delivery of the best and most advanced care to our patients. Structural heart disease seems to have taken the lead in this arena with valvular heart disease, but treatment of coronary artery disease is close behind, with the advent of heart teams for the management of patients with coronary artery disease. Furthermore, surgeons and interventionalists continue to refine their approaches for treating coronary disease, including the use of multiple arterial grafts, percutaneous treatment of chronic total occlusions, minimally invasive CABG, and hybrid coronary revascularization. Dr Favaloro’s fingerprints remain evident on this hybrid procedure in the form of left internal mammary artery (LIMA) to left anterior descending artery (LAD) grafting, a technique that he

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Central Message

Dr Favaloro performed his first coronary artery bypass 50 years ago, and it remains the gold standard for surgical coronary revascularization and the most commonly performed cardiac surgical procedure.

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pioneered and his colleagues solidified as the standard of care in 1986.³

Today, 50 years later, Dr Favaloro retains the title of “father of CABG.” His standardized operation, including the LIMA to the LAD, allows for reliable performance of CABG with impressively low rates of morbidity and mortality. Despite the plethora of research into multiple arterial conduits, today CABG with a LIMA to LAD graft and multiple saphenous vein grafts still reigns as king of surgical revascularization. In the United States, the rate of bilateral internal mammary artery use for CABG is <10%, and >80% of all bypass grafts are performed with greater saphenous vein.⁴

As surgeons, just as Dr Favaloro did, we must constantly examine our practice and our patient population to optimize treatments, interventions, and surgical techniques. As his progeny, our mission is to use his innovation, perfection, and collaborative attitude to carry coronary revascularization into the next generation while continuing to improve outcomes.

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