Total arterial revascularization with left internal mammary artery

Carlos M. Osorio Gómez, MD, MSc; Francisco J. Vázquez Roque, PhD; and Yuri Medrano Plana, MD, MSc

Department of Cardiovascular Surgery. Cardiocentro Ernesto Che Guevara. Villa Clara, Cuba.

Key words: Surgical myocardial revascularization, Arterial grafts, Mammary artery

A 65-year-old male patient, with a history of insulin-dependent diabetes mellitus, hypertension, ischemic heart disease and smoking, underwent a coronary angiography that showed proximal and distal lesions in the left anterior descending artery, and proximal in the diagonal branch (Panel A, arrows). It was decided to perform a coronary artery bypass graft surgery, on a beating heart, without the use of cardiopulmonary bypass. The left internal mammary artery (LIMA) was dissected, skeletonized, to obtain its maximum length.
and preserve sternal perfusion (Panel B, the left arrow shows the preserved mammary vein and the right arrow the skeletonized LIMA). Sequential grafts were performed: first a latero-lateral anastomosis to the first diagonal artery, and then, by jumps, a latero-lateral anastomosis to the middle segment of the anterior descending artery. Finally, an end-side anastomosis to the distal segment of the anterior descending artery was performed, achieving complete arterial revascularization with the use of a LIMA (Panel C, the clamps show the site of the three sequential grafts). Six months later, the patient continued showing a satisfactory outcome.