Electron Beam Computed Tomographic Angiography and 3-Dimensional Reconstruction of a Stented Saphenous Vein Graft

Jonathan S. Reiner, MD; Richard J. Katz, MD; Alan G. Wasserman, MD

A 70-year-old man with exertional angina presented for cardiac catheterization. The past medical history was significant for coronary artery bypass graft surgery in 1984 with placement of a left internal mammary artery (LIMA) graft to the left anterior descending coronary artery and a single saphenous vein graft, sequentially, to 2 obtuse marginal vessels and the posterior descending coronary artery. At catheterization, the patient was found to have a patent LIMA graft; however, the saphenous vein graft was occluded mid vessel. The graft was subsequently repaired percutaneously with angioplasty and placement of a 5-mm-diameter, 50-mm-long stent. Three months later, the patient returned for electron beam computed tomographic angiography. Images were acquired as 3-mm slices taken with a single breath-hold and intravenous administration of 120 ml of iodinated contrast. Three-dimensional reconstruction of the heart and grafts (Figure) demonstrated a widely patent saphenous vein graft (small arrows). The proximal and distal margins of the stent are also seen (large arrows). The patient remains asymptomatic.

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Circulation encourages readers to submit cardiovascular images to Dr Hugh A. McAllister, Jr, St Luke’s Episcopal Hospital and Texas Heart Institute, 6720 Bertner Ave, MC1-267, Houston, TX 77030.

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