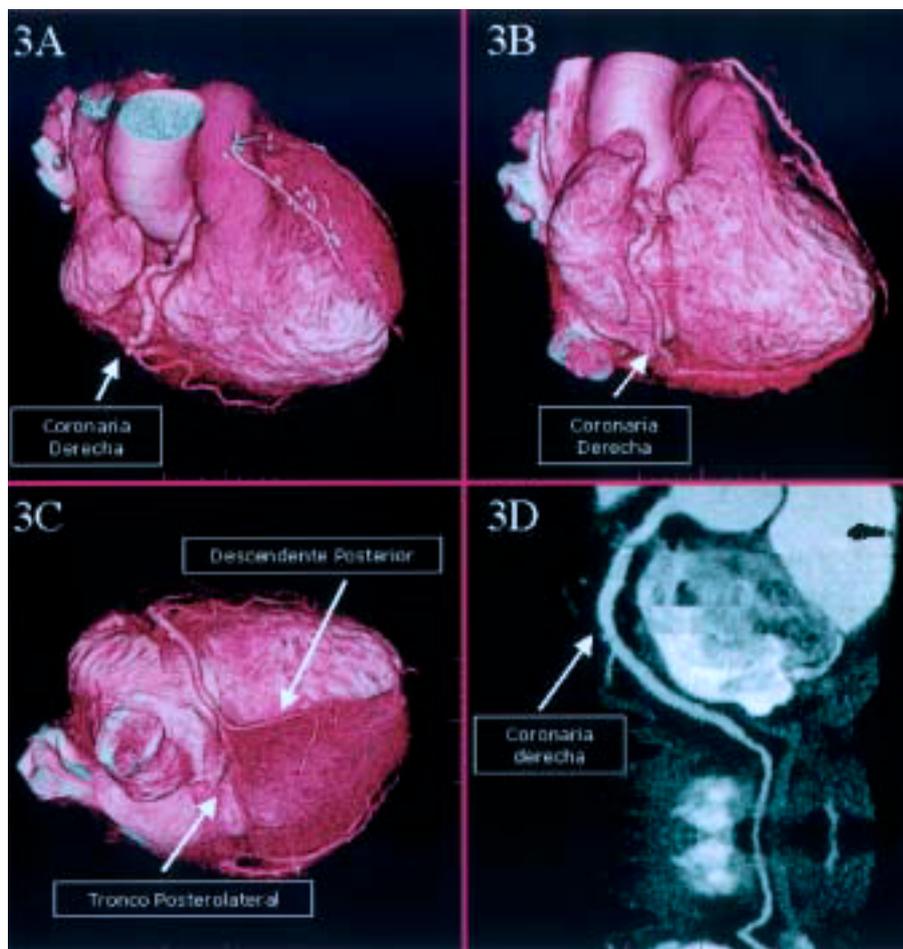


Assessment of Coronary By-Pass Grafts With Multislice C

A patient who underwent coronary revascularization surgery was examined with computed tomography (CT) to assess graft patency. The procedure consisted of a

graft from the internal mammary to the anterior descending artery, which was occluded in the medial portion, and a mammary-radial artery Y-graft to the second oblique marginal, affected by circumflex stenosis before its origin.



Data acquisition was synchronized to the cardiac cycle and was carried out during a breath-hold of 32 s, which began 25 s after injecting 120 mL of iodinated contrast material in an antecubital vein at an infusion rate of 7 mL/s. The scanner (Light Speed Ultra, GE®) obtained 1.25-mm-thick slices in 500 ms of rotation time.

The axial images were reconstructed in end-diastole (70% of the RR interval), and 3-D images were generated by VR (volume rendering) and MIP (maximum intensity projection) postprocessing on a workstation (AW 4.0, GE®) with dedicated cardiac software (CardIQ®).

The grafts were seen to be patent in VR (Figures 1A and B) and MIP (Figures 2A and B) reconstructions;

the lumen diameter of the distal portion of the anterior descending artery was decreased. The right coronary showed no significant lesions on VR (Figures 3A, B, and C) and MIP (Figures 3 D) reconstructions.

Multislice CT is a new diagnostic technique that is useful for the noninvasive assessment of coronary grafts in patients with sinus rhythm who are able to maintain breath-holding.

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