

## Cardiac Imaging

# Grossly Dilated Vein Graft Evaluated by X-Ray Coronary Angiography and Contrast-Enhanced Magnetic Resonance Angiography

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**Key words: Vein graft, contrast-enhanced magnetic resonance angiography, X-ray coronary angiography.**

*Manuscript received:*  
February 10, 2005;  
*Accepted:*  
October 25, 2005.

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**A** 62-year-old man, with a history of coronary artery bypass twenty years previously, presented with recent onset angina. During coronary angiography he was found to have a grossly dilated vein graft in the left anterior descending (LAD) coronary artery. Magnetic resonance angiography (MRA) was subsequently performed with intravenous injection of gadolinium-DTPA, using a 1.5 Tesla Philips scanner (Intera). Both contrast-enhanced MRA and three-dimensionally reconstructed images showed the presence of the dilated vein graft in the LAD. The magnetic resonance angiography was particularly helpful, since the conventional coronary angiography could not fully depict the aneurismal vein graft because of the slow flow. A week after the diagnosis the patient had a second co-

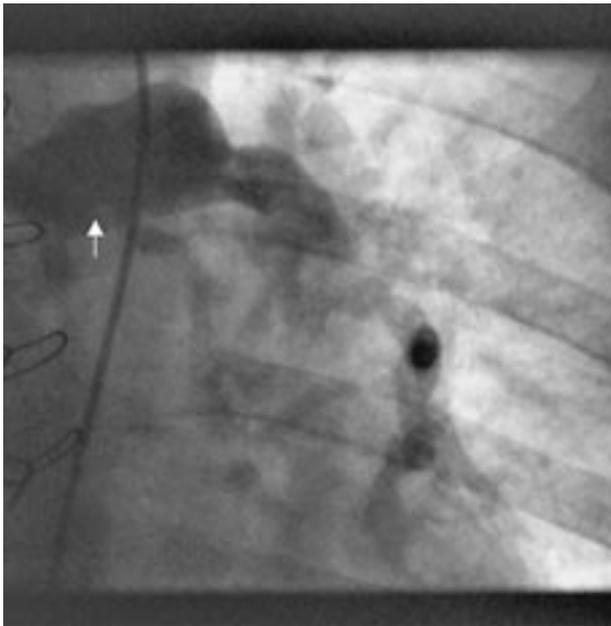
ronary artery bypass surgery, with implantation of a left internal mammary artery graft to the LAD, and thereafter remained asymptomatic.

The clinical role of MRA in the evaluation of coronary vessels<sup>1</sup> and vein grafts<sup>2</sup> is well known. In this case, the use of contrast agent allowed the better visualization of the grossly dilated vein graft.

### References

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2. Galjee MA, van Rossum AC, Doesburg T, et al: Value of MRI in assessing patency and function of coronary artery bypass grafts. An angiographically controlled study. *Circulation* 1996; 93: 660-665.

Panel A



Panel B



**Figure 1.** Conventional X-ray coronary angiography (panel A) and the three-dimensional representation of contrast-enhanced magnetic resonance angiography (panel B), illustrating the grossly dilated vein graft in the left anterior descending coronary artery (LAD) (white and black arrows). Contrast-enhanced magnetic resonance angiography using gadolinium-DTPA clearly shows the presence of the dilated vein graft in the LAD.