Image in cardiology

Myocardial Ischemia Amelioration Reducing Venous Outflow

Mejora de la isquemia miocárdica reduciendo el flujo venoso

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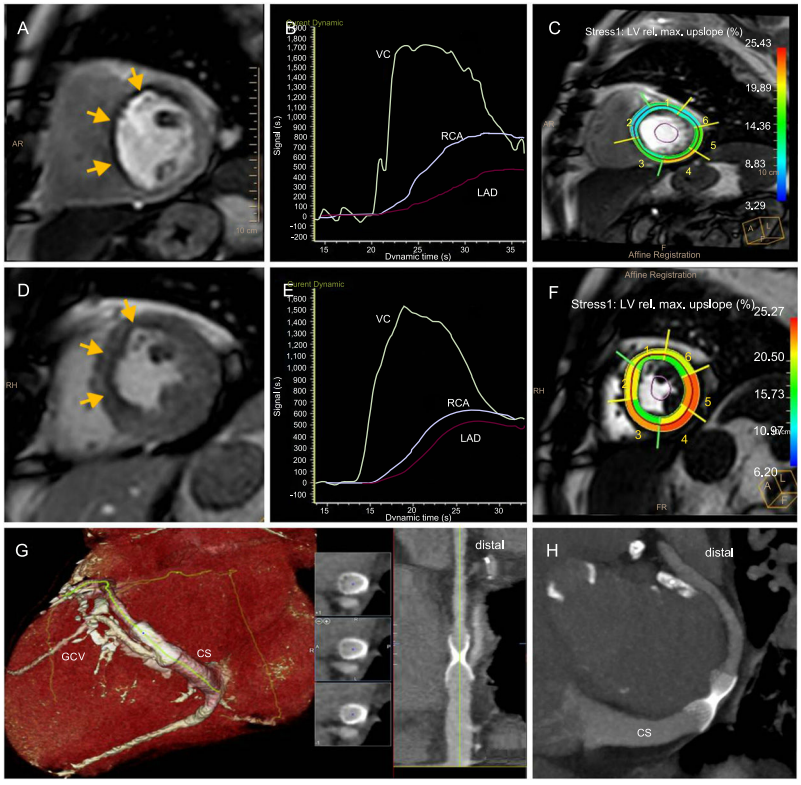

Figure 1.

A 74-year-old man with hypertension, hypercholesterolemia, diabetes mellitus, renal failure, and triple-vessel coronary artery disease, with a patent triple coronary bypass and 3 drug-eluting stents in the left main coronary-circumflex territory experienced limiting angina, despite optimal treatment. Stress cardiac magnetic resonance imaging showed preserved systolic function, a subendocardial anterior infarct and a focal transmural inferior infarct and ischemia in the 3 coronary artery territories, which was severe in the left anterior descending artery (LAD) (Figure 1A: severe transmural hypoperfusion [arrows] on first-pass perfusion sequences; Figure 1B: signal intensity/time curves (VC, ventricular cavity) showing a clear delayed upslope in the LAD territory compared with that of the right coronary artery (RCA), confirmed on the color maps [Figure 1C]). A Neovasc Reducer coronary sinus (CS) reduction device was implanted. Computed tomography coronary angiography showed the device was correctly positioned (Figures 1G and H) in the CS after drainage of the great cardiac vein (GCV). After the procedure, the patient reported a significant improvement in angina, and magnetic resonance at 1 month after implantation showed a reduction in ischemia, particularly in the LAD territory (Figures 1H).

The CS reduction device increases coronary venous pressure and facilitates intramyocardial and epicardial neovascularization. It has been demonstrated to improve symptoms in patients with limiting angina who are not candidates for revascularization. Implantation is straightforward and the complication rate is low.

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