Multimodality imaging guides management of an enlarging saphenous vein graft aneurysm

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A 57-year-old man presented with chest pain and inferior ST-segment depression. Seven years previously, he had undergone coronary artery bypass surgery.

Coronary angiography revealed a patent left internal mammary artery graft, occluded saphenous vein graft (SVG) to his obtuse marginal artery, and a right coronary SVG aneurysm with a maximal diameter of 6.1 cm (Panel A; see Supplementary material online, Movie S1). Transthoracic echocardiography revealed that the SVG aneurysm was compressing the right atrium (Panel B; see Supplementary material online, Movie S2).

Intravascular ultrasound determined the length of the aneurysm neck to be 56 mm (Panel C; see Supplementary material online, Movie S3). This was closed by deploying a series of over-lapping covered stents (JOSTENT GraftMaster Coronary Stent System; Abbott Vascular) (see Supplementary material online, Movie S4). This sealed the aneurysm and improved perfusion into the right coronary artery. Six weeks later, the vein graft remained patent with no contrast demonstrated in the aneurysm on computed tomographic scanning (Panel D, white arrow—aneurysm, black arrow—stents).

Supplementary material is available at European Heart Journal online.