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IMAGES IN CARDIOLOGY

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Unexpected response of saphenous vein graft occlusion to antiplatelet drugs

This case involved a 68 year old male diabetic with nephropathy and coronary artery disease who had undergone coronary artery bypass graft surgery eight years previously. He received saphenous vein graft (SVG) to left anterior descending artery (LAD), obtuse marginal branch (OM) and right coronary artery (RCA) with extensive endarterectomy. The patient was clinically stable until one month ago, when he started having angina on exertion class III. Coronary angiography revealed a patent SVG to LAD with diffuse disease distal to the anastomotic site, an occluded OM graft, and 99% stenosis of the RCA graft with good distal runoff (left panel) and no evidence of thrombus. He was initially treated with aspirin, clopidogrel, β blocker, and low molecular weight heparin, and recommended for percutaneous coronary intervention (PCI) for the vein graft to the RCA, with distal protection device. Three weeks later, he was admitted for intervention and this time angiography revealed dramatic resolution of the lesion with insignificant residual stenosis (right panel).

Predominant mechanisms for SVG disease are thrombosis, intimal hyperplasia, and accelerated atherosclerosis leading to recurrent ischaemia which can be treated by repeat operation or PCI. However, PCI of SVG disease is complicated by a high rate of procedural and long term complications due to distal embolisation causing no reflow, periprocedural infarction, and subsequent restenosis.

In this patient, antiplatelet agents alone seem to have resolved the lesion to a large extent, obviating the need for intervention. This case illustrates the importance of adequate pre-treatment with antiplatelet therapy for vein graft intervention, even if the diagnostic angiogram does not show any obvious thrombus.

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