

An unusual case of in-stent restenosis

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G.G. is a 72-year-old man who underwent coronary artery bypass surgery on September 1997 for triple vessel coronary artery disease. He received a left internal mammary artery graft on the left anterior descending coronary artery and a saphenous vein jump graft on the first obtuse marginal branch and on the posterior descending coronary artery. The patient was asymptomatic until March 2000 when he complained of angina and had a positive stress test.

Coronary angiography showed triple vessel disease, a patent left internal mammary

artery graft on the mid left anterior descending coronary artery and a critical stenosis in the proximal part of the saphenous vein graft (Fig. 1A). This lesion was treated with the implantation of two overlapping NIR Royal stents (3.0 mm in diameter and 15 mm in length) (Fig. 1B) that were over-expanded with a 3.5 mm non compliant balloon. At the end of the procedure, angiography showed a good result (14% diameter stenosis measured with quantitative coronary angiography) without any evidence of early stent dislodgment (Fig. 1C).

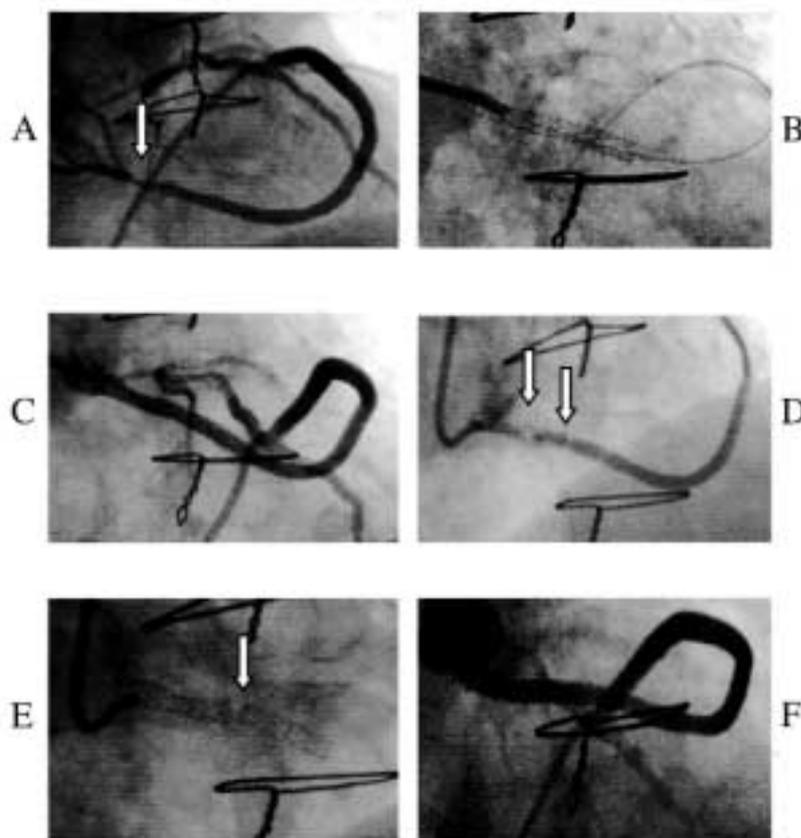


Figure 1. Angiographic sequence of the two coronary angioplasty procedures.

Seven months after the procedure the patient was readmitted to our hospital for crescendo angina. The angiographic study revealed restenosis at the site of stent implantation (Fig. 1D). The pattern of this restenosis was unusual¹; the stents that overlapped at the time of implantation appeared to be separated with a gap of about 2 mm in between (Fig. 1E). At this level an evident stenosis was present, while a second restenosis was present in the body of the more proximal stent. These lesions were successfully treated (Fig. 1F) with repeat dilation followed by the implantation of a 9 mm NIR Royal stent (3.5 mm in diameter) in between the two separated stents.

Probably, this restenotic process had two major causes^{2,3}: remodeling of the saphenous vein graft that

possibly underwent significant lengthening, thus causing subsequent stent separation, and in-stent tissue growth.

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