Intermittent spastic coronary occlusion at site of non-significant atherosclerotic lesion requiring stent implantation

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A 65-year-old woman was admitted with severe but mainly atypical chest pain at rest for some weeks. Two years ago, primary percutaneous coronary intervention with stenting of the mid left anterior descending artery (LAD) had been performed in the setting of an anterior myocardial infarction. Physical examination, electrocardiogram, serum levels of troponin I, and echocardiography were normal. During maximal treadmill test, a significant depression of the ST segment was found in leads V₄ to V₆ while the patient remained asymptomatic. Coronary angiography demonstrated normal right (figure 1A) and circumflex (figure 1B) coronary arteries while the LAD was totally occluded just proximal to the previously implanted stent (figure 1B). However, a few minutes later, ventriculography showed – besides normal left ventricular function – antegrade filling of the LAD (figure 1C, arrows). Repeated contrast injection into the left coronary system showed a non-significant lesion at the site of the former occlusion (figure 1D). After a few seconds, the occlusion reappeared (figure 1E). The site of coronary spasm was then treated by coronary stenting with excellent angiographic result (figure 1F) and freedom of complaints for more than one year.

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Figure 1. Intermittent occlusion of left anterior descending artery due to spasm at non-significant lesion site treated by stenting. In a patient with atypical chest pain, coronary angiography demonstrated normal right and circumflex coronary arteries (A, B) and an intermittent total occlusion of the LAD with normal function of the left ventricle (B, C, D, E). The lesion site (D) was treated with coronary stenting which led to an excellent angiographic result (F).

Coronary vasospasms can occur at sites of angiographically non-significant atherosclerotic lesions.¹ While it is not beneficial to generally stent non-significant coronary stenoses, there is little knowledge on the treatment of coronary spasm which occurs at sites of non-obstructive plaques and is refractory to medical therapy.^{2,3}

In this section a remarkable 'image' is presented and a short comment is given.

We invite you to send in images (in triplicate) with a short comment (one page at the most) to Bohn Stafleu van Loghum, PO Box 246, 3990 GA Houten, e-mail: l.jagers@bsl.nl.

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The present case underlines that in non-significant coronary atherosclerotic lesions that trigger severe vasospasm refractory to medical therapy stenting may be a valuable therapeutic option. ■

References

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