The late stent malapposition develops also after paclitaxel balloon predilatation before bare-metal stent implantation: case description

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The patient is a 57-year-old non-diabetic woman admitted for stable angina caused by tight stenosis of a diagonal branch. This lesion was predilated with a paclitaxel-eluting balloon (2.5 × 20 mm, Sequent, B Braun Mesungen AG, Germany) at 8 atm for 3 min after which a 2.25 × 28 mm bare-metal stent (Trimaxx; Abbott Vascular Redwood City, CA, USA) was implanted for a small dissection distal to the dilated segment. She was re-admitted again after 4 months for stable angina caused by right coronary artery in-stent (implanted in past for myocardial infarction) restenosis. Huge aneurysm in the previously stented diagonal branch, with no sign of residual dissection, was found. Intravascular ultrasound showed late coronary aneurysm with severe stent malapposition through the whole segment that had been treated with the paclitaxel-eluting balloon. The distal part of the stent that covered the small dissection was without any evidence of malapposition. It seems that even short contact with paclitaxel can induce the development of aneurysm. The late stent malapposition after paclitaxel balloon has never been described yet. The decision was made to (i) continue with long-term dual antiplatelet therapy together with ATLAS study medication (rivaroxaban, an oral direct inhibitor of factor Xa, vs. placebo) and (ii) control angiography after 6 months to check for progression of the aneurysm.

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Figure Angiography and intravascular ultrasound pictures of late aneurysm in diagonal branch. (I) Angiographic result after stent implantation. (II) Angiographic finding of late aneurysm after 4 months. (A) Well apposed and expanded stent. (B) Well apposed, but not adequate expanded stent with bulky residual plaque. (C) Severe (almost 360°) stent malapposition. (D) Atherosclerotic plaque behind stent struts in an aneurysmatic-enlarged vessel. (E) 270° stent malapposition. (F) Residual plaque in front of stent.