Progression of Late Stent Malapposition Beyond 2 Years After Sirolimus-Eluting Stent Implantation

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Recent reports suggest that late stent malapposition (LSM) might be associated with stent thrombosis. We show a series of angiograms, intravascular ultrasound, and multidetector computed tomogra-

Figure 1. Coronary Angiograms and IVUS Images Showing Gradual Progression of LSM

(A1 to A3) Just after sirolimus-eluting stents implantation. Cross-sectional and longitudinal intravascular ultrasound (IVUS) images show well-apposed stents. (B1 to B3) At 10-month follow-up. Late stent malapposition (LSM) is confirmed at the proximal part of the stents (arrowheads). (C1 to C3) After 30 months presenting with an acute coronary syndrome. Coronary angiogram shows further outward expansion of stented segment. Cross-sectional and longitudinal IVUS images show progressive large LSM due to positive vessel remodeling at the proximal part of the stents (arrowheads).

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Manuscript received July 6, 2009, accepted July 25, 2009.
phy images of LSM that continued to progress beyond 2 years and caused acute thrombotic events.

Two sirolimus-eluting stents were implanted in the proximal left descending artery (LAD) with good apposition in September 2005 (Figs. 1A1, 1A2, and 1A3). The LSM was evident at 10-month follow-up (Figs. 1B1, 1B2, and 1B3). Then LSM showed continuous progression and resulted in acute coronary syndrome 30 months later (Figs. 1C1, 1C2, 1C3, and 2). The patient was treated medically, including dual antiplatelet therapy. In March 2009 (42 months later), the patient was admitted for severe gastrointestinal bleeding. Unfortunately, he developed late stent thrombosis 2 weeks after the dual antiplatelet therapy was stopped. Emergency coronary angiography revealed a thrombotic occlusion of left main trunk and proximal LAD. Although percutaneous coronary intervention was successful, the patient died from multiorgan failure.

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