

Drug eluting balloons in complex coronary lesions — case report

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Introduction: Drug eluting balloons (DEB) are mostly used for treatment of BMS restenosis, but the indications are broadening (DES restenosis, de novo lesions, small vessel disease and bifurcations). They are usually combined with BMS. The usage of DEB without stent implantation is a promising new tool in PCI.

Case report: In 2010 a 72-year-old woman was transferred to our department, after successful fibrinolysis of an acute inferior STEMI. Coronary angiography revealed ostial D1 stenosis, occlusion of mid LAD and multiple stenoses of RCA. After RCA stenting with 2 BMS “no reflow” occurred. TIMI 3 flow was restored with eptifibatid and implantation of 2 additional BMS. Evaluation was suggested regarding elective PCI LAD but the patient didn't return. She was readmitted in February 2012 because of unstable angina. Coronary angiography revealed a patent RCA, TIMI 1 flow in D1 and occlusion of mid LAD. PCI of LAD-D1 bifurcation lesion was attempted. After successful wire crossing, PTCA of LAD and D1 was performed. DEB were used in both vessels with an optimal result and TIMI 3 flow. The patient was discharged with DAPT recommendation for 12 months. Angiographic follow up in February 2013 showed a patent LAD and D1 without significant recoil.

Discussion: Bifurcations and small vessel are still a challenge. Even with the usage of DES there is still a high per-

centage of restenosis and periprocedural complications. DEB only in small vessel disease showed good results in randomized trials and registries. In bifurcation trials DEB were used with BMS in the main branch and alone in the side branch, but trials with DEB only are started. Our patient had a complex bifurcation lesion and DEB only proved a good treatment option.

Conclusion: We can assume that DEB only is an optional method in some patients with complex coronary lesions. They can be used for small vessels and bifurcation lesions with optimal results. Further research must be done to confirm this hypothesis.

KEYWORDS: drug eluting balloons, bifurcations, small vessels.

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Literature

1. Granada JF, Gray WA. Drug-coated balloons for coronary artery disease. *Cardiac Interventions Today*. June 2010.
2. Unverdorben M, Kleber FX, Heuer H, et al. Treatment of small coronary arteries with paclitaxel-coated balloon catheter. *Clin Res Cardiol*. 2010;99:165-74.
3. Unverdorben M, Vallbracht C, Cremers B, et al. Paclitaxel-Coated Balloon Catheter Versus Paclitaxel-Coated Stent for the Treatment of Coronary In-Stent Restenosis. *Circulation*. 2009;119:2986-94.
4. Stella PR, Belkacemi A, Dubois C, et al. A multicenter randomized comparison of drug-eluting balloon plus bare-metal stent versus bare-metal stent versus drug-eluting stent in bifurcation lesions treated with a single-stenting technique: six-month angiographic and 12-month clinical results of the drug-eluting balloon in bifurcations trial. *Catheter Cardiovasc Interv*. 2012;80(7):1138-46.