Abstract: P967

Combined modified balloons and Saito's modified JBT for calcified coronary bifurcation lesions

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Topic(s):
Coronary Intervention: Technique

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Background: Bifurcation lesions are account for relatively high incidence of adverse events, especially in serious calcification and distort lesions during bifurcation stenting.

Purpose: Based on Saito’s modified jailed balloon technique (M- JBT, "Shigeru Saito, Modified jailed balloon technique for bifurcation lesions, Catheter Cardiovasc Interv. 2018;92:E218–E226"), fully dilatation with modified balloons was performed on calcification lesion in main branch, to observe if this combination method will facilitate bifurcation lesions stenting procedure.

Methods: For M-JBT, we followed Saito’s technique. Basically, a jailed balloon (JB) is introduced into the side branch (SB), while a stent is placed in the main branch (MB) as crossing SB. The size of the JB is half of the MB stent size. While the proximal end of JB attaching to MB stent, both stent and JB are simultaneously inflated with same pressure. Kissing balloon dilatation (KBD) and/or T and protrusion (TAP) stenting are applied as needed.

Modified balloons are performed as severe calcification presented in MB.

Results: more than 50 patients and 60 bifurcations (both for selective and primary cases) underwent percutaneous coronary intervention (PCI) using this combined technique since November 2018. Procedure success was achieved in all cases. KBD was performed for a few lesions and TAP stenting was employed for 1 lesion. Occlusion of SV was not observed in any of the patients.

Conclusions:
Saito’s modified jailed balloon technique is safe and effective method in bifurcation stenting. Combined with modified balloons is an effective method when severe calcification presented in bifurcation lesions, especially in distort lesion (main branch or side branch) and poor position visualization situations when rewire is difficult in traditional JBT procedure.
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Timeline angiography of LAD bifurcation lesion with serious obstruction, tortuous angiography and poor posture visualization in Case 2.

Fully predilatation with modified balloons (cutting balloons or scoring balloons) in main branch (LAD)

Start and balloon positioning:
A jailed balloon is carefully placed at just return of side branch stump(s).

Both jailed and balloon are simultaneously inflated at same pressure (<12 atm).

Post dilatation in main branch (LAD) and the final result.