TCTAP C-066

BVS for Long, Heavily Calcified True Bifurcation Stenosis (Medina 1,1,1)

Teguh Santoso
Medistra Hospital, Indonesia

[Clinical Information]
Patient initials or identifier number: BS

Relevant clinical history and physical exam:
A 69 years old male with stable angina.
Risk Factor: Dyslipidemia
Physical Examination: Unrevealing

Relevant test results prior to catheterization:
ECG normal. Ca score on MSCT 2055 (in LAD 657). Suspected severe stenosis in mid-LAD, D2, mid-LCX, and mid-RCA. D2 was a big and long vessel.

Relevant catheterization findings:
Angiography: Distal LM: 30%, heavily calcified mid-LAD/D2 bifurcation stenosis (Medina 1,1,1), mid-LAD was diffusely diseased, mid-LCXp: 70% stenosis, mid-RCA: 50% stenosis.

[Interventional Management]
Procedural step:
Transradial approach, with 7F guiding catheter. OCT showed long concentric calcific plaques in the proximal segment and its ostium. The lesions in the LAD and D2 yielded to high pressure dilatation using appropriately sized balloon with disappearance if waist and residual narrowing of < 40%. As 7F guiding catheter cannot take 2 BVS, initially one 3x18 mm BVS was placed in mid-LAD and one balloon in D2. After deployment of BVS in the LAD, both balloons (balloon in D2 and stent-balloon in LAD) were dilated (kissing balloon dilatation). Subsequently the reverse was done with one 3x18 mm BVS in D2 and one balloon in mid-LAD. After deployment of BVS in D2, kissing balloon dilatation was performed. The result was therefore kissing BVSs. Then final kissing balloon dilatation using high pressure was performed not exceeding the maximal allowable expansion of the BVS. However, bad dissection was noted just distal to the BVS in the LAD and this was easily fixed with a long 3x28 mm BVS, placed with minimal overlap to the previously implanted BVS. Final OCT in the LAD and D2 showed excellent result with well apposed BVS. A short new carina was detected in the proximal LAD. None of the struts were broken.

Case Summary:
1. BVS can be used in selected case with long, heavily calcified true bifurcation stenosis
2. Lesion preparation is very important for heavily calcified lesion
3. Kissing BVS technique can be applied if parent vessel is bigger than branches
4. Use OCT (or IVUS) is crucial
5. Even long BVS can be easily introduced across another BVS
6. Minimal overlapping is advisable

TCTAP C-067

Two Cases of Combined Coronary (Left Main) and Peripheral Intervention (Common Iliac Artery) Case No. 1

Sandeep Shakya
Asahi General Hospital, Japan

[Clinical Information]
Patient initials or identifier number: A.S.

Relevant clinical history and physical exam:
The patient with the history of renal cell carcinoma (right kidney resection 20 yrs ago), chronic kidney disease, hypertension, dyslipidemia and aortic stenosis complained of frequent epigastric distress on effort. A nuclear study was performed which showed perfusion defect in the anterior and posterior region and was admitted for further study.

Physical Exam:
systolic murmur @ 2LSB
no leg edema

Relevant test results prior to catheterization:
Labs:
Hb10.4g/dl UN17mg/dl, Cre1.28mg/dl, eGFR 41.7, BNP 166.1 pg/ml
Chest X-ray: CTR 62%
EKG: HR56 regular, sinus 1/C14 AV block
Cardiac Ultrasound: posterior wall hypokinesis persistent with prior ultrasound recording
ABI: 0.64/0.65
SPECT: perfusion defect in the anterior and posterior region

Relevant catheterization findings:
1st Catheterization:
RCA seg1 25% stenosis, seg2 90% stenosis, seg3 25%
LMT seg5 90% stenosis

2nd Catheterization:
Aortic valve area: 1.0cm², mean Pressure Gradiant: 31.7mmHg
Since the patient insisted on treating the LMT with the catheter PCI was performed in the LMT along with the EVT.

[Interventional Management]
Procedural step:
EVT
1) 7F guiding catheter. OCT showed long concentric calcific plaques in the proximal segment and its ostium. The lesions in the LAD and D2 yielded to high pressure dilatation using appropriately sized balloon with disappearance if waist and residual narrowing of < 40%. As 7F guiding catheter cannot take 2 BVS, initially one 3x18 mm BVS was placed in mid-LAD and one balloon in D2. After deployment of BVS in the LAD, both balloons (balloon in D2 and stent-balloon in LAD) were dilated (kissing balloon dilatation). Subsequently the reverse was done with one 3x18 mm BVS in D2 and one balloon in mid-LAD. After deployment of BVS in D2, kissing balloon dilatation was performed. The result was therefore kissing BVSs. Then final kissing balloon dilatation using high pressure was performed not exceeding the maximal allowable expansion of the BVS. However, bad dissection was noted just distal to the BVS in the LAD and this was easily fixed with a long 3x28 mm BVS, placed with minimal overlap to the previously implanted BVS. Final OCT in the LAD and D2 showed excellent result with well apposed BVS. A short new carina was detected in the proximal LAD. None of the struts were broken.

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