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 calcification plaque 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 of 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
PCI was performed in the RCA (Promus element 2.25/12)

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 GC cannot take 2 BVSs
2) pressure were recorded in the left brachial artery and right femoral artery
3) 0.35" wire was guided through the common iliac artery into the aorta using JR4
4) right Common Iliac Artery was ballooned using Mustang 6/20mm
5) right Common Iliac Artery was stented with Smart stent 10/60mm
**Case Summary:**
A high risk elderly patient with CKD (single kidney) was diagnosed with Severe Left main trunk (LMT) lesion and moderate Aortic stenosis. The patient was referred for second opinion. Finally he decided to have percutaneous treatment of the coronary lesion only. However his previous CT scan showed focal calcified lesion of the right common iliac artery (CIA) with ABI of 0.64/0.65 indicating peripheral artery disease.

In order to treat the LMT safely, we had to have access for cardiopulmonary support through left femoral artery while performing PCI from the right.

**TCTAP C-068**

A Case of Successful PCI to Left Main Bifurcation Lesion with Heavy Calcification

Kazuya Shinji
Okamura Memorial Hospital, Japan

**[Clinical Information]**

Patient initials or identifier number: S.Y.

**Relevant clinical history and physical exam:**
An 82-year-old woman was admitted with effort chest pain which had lasted for several months. She was referred for cardiac catheterization. And cardiac catheterization revealed severe stenosis of ostium of left circumflex artery and moderate stenosis of proximal left anterior descending artery.

Her coronary risk factors included diabetes and hypertension. The echocardiography showed normal. Her physical examination was unremarkable.

**Relevant test results prior to catheterization:**
No tests were performed.

**Relevant catheterization findings:**
A coronary angiography was performed on November 13th 2013 and it showed severe stenosis of ostium of left circumflex artery and moderate stenosis of proximal left anterior descending artery.

**[Interventional Management]**

Procedural step:
A 7Fr CLS3.0 with side hole guiding catheter (Mach1) was engaged in the left artery through the right femoral approach. Initially, we inserted an ASAHI SION blue into the LAD. We couldn’t cross a Runthrough NS into the LCX and changed ASAHI XT-R wire with finecross GT could cross the lesion. A IVUS catheter couldn’t pass the LCX lesion. After a sapphire2 balloon was inflated at the lesion, the IVUS catheter could pass. The IVUS image showed severe calcification of ostium of LCX and proximal LAD. Therefore, we decided to use rotational atherectomy at proximal LAD and proximal LCX and two stent strategy (mini crush technique). We exchanged into a 0.014 inch 325cm Rota wire and performed rotational atherectomy with a 1.5-mm burr at LCX and 1.75-mm burr at LAD. A score flex balloon (2.5mm x 15mm) was inflated at the proximal LCX, middle LAD and proximal LAD.

A NOBORI stent (2.5mm x 24mm) was inplaced at the middle LAD and a promus Element stent (2.5mm x 12mm) was implanted from LMT to proximal LCX. This stent was minimally protruded to the LM preparing for stent crush. Then the deployed NOBORI stent at LCX was crushed by the NOBORI stent balloon (2.5mm x 24mm). After that, a NOBORI stent (3.0mm x 14mm) was implanted from LMT to proximal LAD. Post-stenting adjunctive balloon dilatation was performed using a score flex balloon (2.5mm x 15mm) at pLCX and a NOBORI stent balloon (3.0mm x 14mm) at LM to pLAD. Additional kissing ballooning was performed using a NOBORI stent balloon (3.0mm x 14mm) at LM to pLAD and a score flex balloon (2.5mm x 15mm) at proximal LCX. Final angiogram and IVUS showed that the procedure was successful.