

Relevant test results prior to catheterization:

ECG showed the atrioventricular junctional rhythm and ST elevation in I, aVL and V2-5 leads.

UCG showed the severe impaired of left ventricular wall motion and the ejection fraction was approximately 10%.

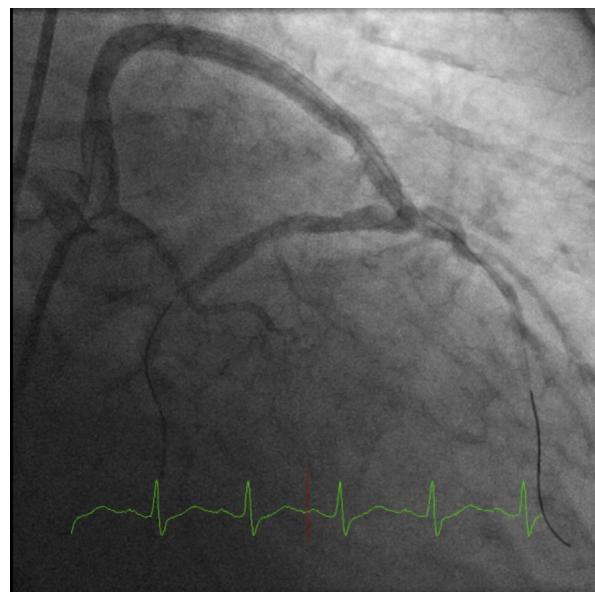
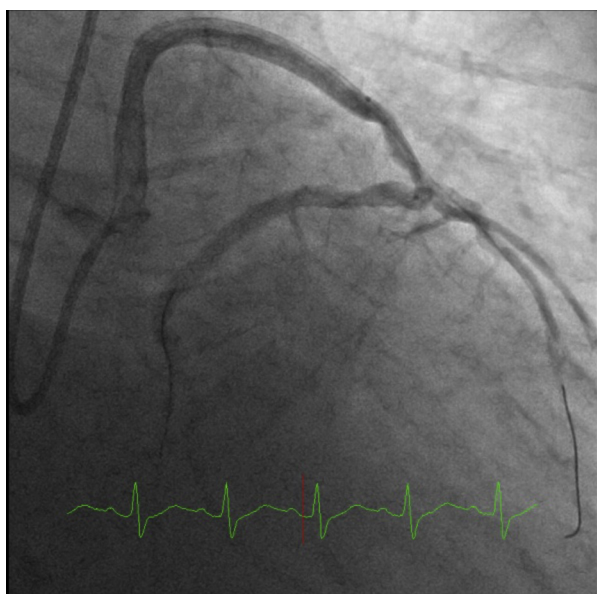
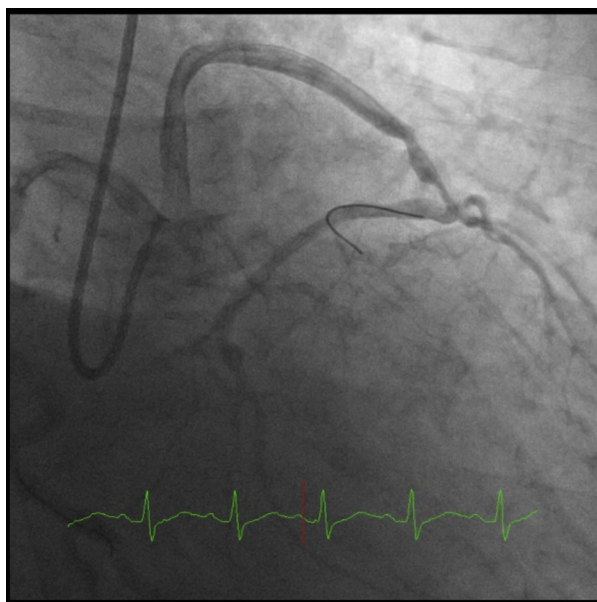
Relevant catheterization findings:

We initiated immediately the support by extracorporeal life support system (ELCA) via right femoral artery. After the initiation of ELCA, we performed CAG via left femoral artery. CAG showed no significant stenosis in RCA, but we could not detect LCA. Because of the undefined LCA, we initiated the intra-aortic balloon pumping support via left femoral artery.

Following the resuscitation with mechanical support via bi-lateral femoral artery, CAG via right radial artery showed the LCA originated from right coronary cusp with LMT lesion.

[Interventional Management]**Procedural step:**

Guiding catheter AL-1 6Fr was engaged to LCA via right radial artery. Floppy wires were crossed to LAD and LCx, and we performed the thrombectomy with Thrombuster III 6Fr. We pre-dilated the culprit lesion by 2.0mm balloon. IVUS showed much plaque in the large vessel from LCx to LMT. We deployed BMS 4.0x24mm in LMT to LCX. After stent implantation, we performed the post-dilatation by kissing balloon technique. Final angiography showed good dilatation and reperfusion. Support with ECLS and IABP was successfully weaned on next day.

**TCTAP C-053****Left Main Stent Compression - An "Uh Oh" Situation**

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Tan Tock Seng Hospital, Singapore

[Clinical Information]**Patient initials or identifier number:**

S0181972J

Relevant clinical history and physical exam:

This is a 63 year old man, inferior STEMI 4 days earlier underwent PCI and stenting to the distal RCA with Xience Xpedition 2.75 x 33 mm DES with a good result. He was enrolled in the Compare Acute Trial (FFR guided vs. "usual" care of non-culprit vessel). During the index procedure, a long moderate LAD lesion (non-culprit vessel) was examined by pressure wire and then randomized to "usual" care arm. The FFR results were, hence, kept blinded.

The patient developed recurrence of typical chest pain on the Ward 4 days after RCA intervention. The treating physician decided to proceed with PCI

Relevant test results prior to catheterization:

See above

Relevant catheterization findings:

Angiography demonstrated a patent stent in the distal RCA and a long moderate lesion in the LAD with critical lesions in both diagonals. Angiographically there was suspicion that plaque extended into the left main. Also, as an incidental finding, we found an LAD-PA fistula.

[Interventional Management]**Procedural step:**

The left main was engaged with initially a 6F guider then, after IVUS, upgraded to a sheathless 7.5F PB 3.0 guide. The LAD and diagonals were wired and the diagonals and LAD were pre-dilated with appropriate sized balloons (Angiosculpt used for LAD). Next, the mid-distal LAD was stented with a Xience Xpedition 2.5 x 28 mm DES. Next, "mini-crush" stenting of the D1 was performed by deploying a Xience Xpedition 2.25 x 23 mm DES in the diagonal and crushing it with the previously used 2.5 x 28 mm stent balloon. The D1 was rewired and opened up in a "modified" DK crush fashion by dilating it with 1.5 mm then 2.5 mm balloons (but without the first crush of DK crush). Next, a Xience Xpedition 3.5 x 48 mm DES was placed from the mid left main to the already deployed stent (jailing the crushed stent in the diagonal). The LM and LAD stent was then post dilated with 3.0 mm and 3.5 mm NC balloons which traversed the long stent length with absolutely no problem. Then the jailed crushed stent was rewired and dilated with 1.5 mm then 2.5 mm balloons. While introducing the 2.5 mm balloon some mild 'resistance' was felt as it crossed the left main but not much and the diagonal stent was dilated at high pressure.

At this point, the previously used NC 3.5 balloon was reintroduced in order to do FKB in the LAD and diagonal but the used 3.5 mm NC balloon would not cross the left main stent. A new 3.5 nc would not cross. Closer look at images revealed evidence of longitudinal stent compression. In hindsight the guide was clearly very near the left main stent.

The LAD stent was dilated then with a 1.5 mm balloon to 'tunnel' our way through this left main stent. IVUS confirmed evidence of stent compression and malapposition. The stent was progressively dilated with 3.0 mm then 4.0 mm balloons at the proximal left main stent (site of compression) and despite high pressure dilatations, passage of ANY balloon (used or new) resulted in considerable resistance suggesting mangling of struts at that local spot.

At this point an additional stent was placed from the ostium to the mid left main and instantaneously all balloon passage became completely easy with absolutely no resistance. The stents were post dilated at high pressure with 4.0 mm balloon and FKB was done in the LAD and diagonal. Final IVUS results were good.

Case Summary:

This is a case of an extensively diseased LAD that was far worse on IVUS with plaque extending to the left main. Stenting of the left main, LAD and diagonal was performed with ease. Care was not taken to keep the guide away from the mid left main stent and in the middle of the case when everything seemed to be going fine, balloon passage became impossible from the left main onwards due to longitudinal compression. Eventually the situation was rectified but the lesson to take home was that it is vital to PREVENT the guider from interacting with a stent once deployed, particularly in the left main. Perhaps an anchor wire in the aorta as soon as the left main stent was deployed would have been wise.

TCTAP C-054

Bailout Left Main Stenting for LMCA Dissection During Elective PTCA Stent to LAD

Sudam Jare

Kims Superspeciality Hospital, India

[Clinical Information]

Patient initials or identifier number:

GS

Relevant clinical history and physical exam:

52 Yrs/ Female/GS

Unstable Angina – Duration 15 days

Diabetic – Type 2

HTN

Relevant test results prior to catheterization:

ECG:

Sinus Rhythm,

QS in V1-V5,

T Inversion in V1-V5.

* 2D ECHO - RWMA in LAD territory

Moderate LV Dysfunction

Relevant catheterization findings:

LM: Normal

LAD: Mid & Distal long segment 80% Stenosis.

Diagonals: Normal

LCX: Distally 50% Stenosis.

OM's: Normal

RCA: Normal

[Interventional Management]

Procedural step:

Lesion was accessed through Radial Approach 6Fr JL 3,

Lesion crossed with 0.014" BMW

Direct Stenting done for Distal LAD with 2.5x36mm DES at 8 atm.

Overlap stent done with 2.75x36mm DES at 12 atm.

Overlap and Proximal stent post dilated with 2.75x15mm NC Balloon at 18 atm

Distal Stent Postdilated with 2.5x15mm NC Balloon at 18 atm.

* At the end of LAD stenting, there was Left main dissection with no flow with cardiac arrest.

CPR done and Inotropes started.

IABP inserted through Right Femoral Artery.

* Bailout LMCA to LAD Stenting done with 3.5x24mm DES at 12 atm.

Subsequently after 24 Hrs IABP removed and Inotropes Weaned off.

Patient Discharged after 3 days and 1 month clinical follow-up patient is Asymptomatic and doing her daily activities.

Case Summary:

During PTCA stent guiding cath should be coaxial to the artery.

While injecting contrast, make sure it should be at low pressure & continuous.

TCTAP C-055

Stenting for a Lesion of Chronic Total Occlusion and Trifurcation Stenosis

Seung Mo Kang, Young-Hak Kim, Seung-Whan Lee

Asan Medical Center, Korea (Republic of)

[Clinical Information]

Patient initials or identifier number:

HDI, 46670830

Relevant clinical history and physical exam:

A 52 years old man was referred to your hospital after failed CTO intervention of LAD lesion. He complained of effort related chest pain for 3 months. His coronary risk factors were current smoking of 60 pack-years and hyperlipidemia.

Relevant test results prior to catheterization:

Initial EKG showed normal sinus rhythm. The echocardiography showed normal LV systolic function without regional wall motion abnormality.

Relevant catheterization findings:

The left coronary angiogram showed total occlusion in proximal LAD, and tight stenosis in proximal LAD trifurcation site. The right coronary angiogram showed

total occlusion of distal RCA with bridging collateral flow. Collateral flow to LAD from distal RCA was seen.

[Interventional Management]

Procedural step:

Right coronary artery was cannulated with a 7 Fr AL1 SH guiding catheter and left coronary artery was positioned with a 8 Fr XB 3.5 SH guiding catheter through the bifemoral approach. Initially, we tried antegrade approach at pLAD by using a 0.014 inch Fielder FC wire with Finecross 0.014 inch 1.8 Fr 130cm microcatheter. After negotiation, we succeeded in the engagement of wire into dLAD with Fielder XT 0.014 inch - 190 cm wire, and predilatation was performed with Maverick 1.2 x 20mm balloon at pLAD. And then 0.014 inch BMW and Sion wires were inserted into the 1st and 2nd diagonal branches, respectively. We decided to treat diagonal bifurcation with crush technique first and then LAD bifurcation with culotte stenting. First, balloon angioplasty for LAD, 1st and 2nd diagonal branch was done using a Ryuji balloon 2.0 x 20mm. Xience prime 2.75 x 28mm stent was deployed at the 2nd diagonal branch. Then we performed balloon crush with 3.0 x 20mm Quantum at pLAD to 1st diagonal branch. After rewiring into 2nd diagonal branch balloon inflation was performed at 2nd diagonal branch ostium. Then 3.5 x 33mm Xience Prime stent was deployed from LM to 1st diagonal branch. After rewiring we performed kissing balloon inflation with Qantum 3.5 x 20mm and Maverick 2.5 x 20mm. Then 3.0 x 38mm Xience Prime stent was deployed at pmLAD. After rewiring into 1st diagonal branch, we performed balloon inflation at diagonal ostium with Pantera LEO 3.5 x 20mm. And finally we performed kissing balloon inflation with Pantera LEO 3.5 x 20mm and Qantum 3.5 x 20mm. We checked angiogram but small dissection was seen at distal edge of LAD stent. So we deployed 2.75 x 28 mm Xience Prime stent at mLAD. Final angiogram showed the procedure was successful.

