Entrapment at Stent Edge
A Case Struggled to Salvage the Intravascular Ultrasound (IVUS) Catheter

TCTAP C-164

A Case Struggled to Salvage the Intravascular Ultrasound (IVUS) Catheter
Entrapment at Sient Edge

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

Relevant catheterization findings:
A 69-year-old man presented with recurring effort chest pain.

Relevant test results prior to catheterization:
Stress myocardial perfusion scintigraphy showed ischemia at RCA region.

[Interventional Management]
Procedural step:
From trans-radial approach, a 6Fr AL2 guide-catheter was engaged. Following several pre-dilation using non-compliant balloon at high pressure, two 2.75mm Xience-V™ stents were overlapped. IVUS of Atlantis™ Pro SR2 was advanced; however, its exit port was caught by the distal stent edge. Pushing and pulling could not free the IVUS catheter even after inserting a 014 inch coronary guide-wire after removing the imaging-core. We engaged another 6Fr JR4 guide-catheter from femoral approach, then catheter even after inserting a 014 inch coronary guide-wire after removing the imaging-core. The lesion was treated by cutting balloon in both times.

This time, we took her in for the follow-up CAG. CAG revealed the 99% stenosis in the stent (RCA#2).

The histological examination of the tissue excised by DCA revealed the neointimal view consisting of an extracellular matrix and myofibroblast. Also the tissue thought to be an extracellular matrix by HE staining showed a different staining characteristic, and indicated that it mainly consisted of proteoglycan.

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Saphenous Vein Graft Neoatherosclerosis in OCT

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Madras Medical Mission, India

[Clinical Information]
Patient initials or identifier number: Mr. AK

Relevant catheterization findings:
58 yrs male
Diabetic and Hypertensive
S/P PTCA with stent to native LCX (2008)
S/P PTCA with stent to SVG – RCA (27/03/2013)
Presented with Effort Angina Class II-III
O/E:
PR: 80/min.
BP: 110/80 mmHg.
CVS: S1, S2 (+).
RS: NVBS (+).

Relevant test results prior to catheterization:
ECG: NSR, HR: 71/min, QS in III, T inversion in I, II, aVL.
ECHO: Mild LV dysfunction

Relevant catheterization findings:
Native coronary angiogram
LCA angio shows normal LMCA
LAD is type II vessel and had 90-90% stenosis in the proximal segment followed by total occlusion in the mid segment.
LCX is non-dominant and shows patent stent in the proximal segment. LCX and branches are free of disease.

RCA is dominant and has total occlusion in the proximal segment.

Graft angiogram
Patent LIMA to LAD. LIMA and distal LAD are free of disease

SVG to OM is occluded

SVG to PDA has 90% stenosis in the mid segment followed by another 90% stenosis.

[Interventional Management]
Procedural step:
Procedure done under loval anaesthesia through right femoral approach. SVG-PDA

Saphenous Vein Graft with a 90% stenosis in the mid segment was crossed. Predilatations were done using a 2x10mm sprinter upto 10 atm for 15 sec. Cutting balloon angioplasty was done using 2.75x10mm flxstent upto 6 atm for 15 sec. Stent deployment was done to the distal lesion using 3.5x28mm xience V at 12 atm for 15 sec and the proximal lesion was stented using 3.5x28mm xience V at 16 atm for 15 sec. Post stent dilatations were done with 3.5x12mm NC trek upto 24 atm for 15 sec. Final angiogram showed no residual stenosis with good antegrade flow. The procedure was uneventful. Patient shifted with stable hemodynamics.

Case Summary:
Pre procedure OCT showed Neoatherosclerosis of SVG instent restenosis
Post procedure OCT showed well apposed and overlapped stent.

TCTAP C-166

Preventive Angioplasty in LAD During Primary PCI Where the Culprit Vessel Is the RCA

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[Clinical Information]
Patient initials or identifier number: A 28 years old male

Relevant clinical history and physical exam:
Central chest pain for 3 hours, HR: 110/min, BP: 90/70 mmHg, clear lung bases

Relevant test results prior to catheterization:
ECG: Acute Inf. MI, LVEF: 50%, raised serum markers

Relevant catheterization findings:
LAD: Spiral dissection and loaded with thrombus starting at the ostium to RCA: Totally occluded...

[Interventional Management]
Procedural step:
Trans Femoral approach 7 Fr. vascular access sheath used
Left JL 3.5 catheter for diagnostic angiography for the left side

Culprit vessel (RCA) was engaged with AL 1 guide catheter

Runthrough Floppy wire crossed
Thrombus aspiration done by aspiration catheter

Intra-coronary vasodilators given
A 4.0/24 DES deployed with TIMI III flow

Left side engaged with EBU guide catheter
Runthrough Floppy wire attempted but failed to cross
Hi-torque floppy wire taken
Thrombus aspirated
3.5 mm x 26 mm Resolute Integrity Distal Left main to LAD

IVUS revealed mal-apposed stent and post dilated with higher NC balloon.
Case Summary:
A 28 year old young man presented with acute inferior myocardial infarction of 3 and a half hour duration.
He was rushed to the cathlab from ED and angiography revealed spiral dissection with thrombus load in LAD extending from the ostia to the mid portion.
RCA was the culprit vessel, has had 100% occlusion from the proximal part with full of thrombus.
Collaterals from the conus branch to LAD seen.
RCA was cannulated with AL 1 guide catheter having PP.
Floppy Runthrough wire taken and crossed the lesion.
Thrombectomy was done by aspiration catheter on repeated succession.
After establishing TIMI III flow a 4/24, DES deployed at 14 ATM.
Flow well established but the conus branch were jailed.
Now, felt into a dilemma where to intervene LAD or not at the same setting.
We decided to proceed considering patients age, vessel condition and evidences in favor from the recently published PRAMI study (N Engl J Med. 2013 Sep 19;369(12):1115-23).
We engaged an EBU 3.5 guide catheter, wired with some difficulty and deployed a DES 3.5/26 at 16 ATM.
IVUS showed mal-apposition at the region of LAD ostia and post-dilated by NC balloon.

TCTAP C-167
OCT Follow-up of Absorb BVS Implanted in Saphenous Vein Graft

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[Clinical Information]
Patient initials or identifier number:
H.W. 11253/2013

Relevant clinical history and physical exam:
54 years old male with stable angina, hypertension and dyslipidemia, as well as history of coronary artery bypass grafting (CABG) with implantation of 2 saphenous vein grafts (VG) to LAD (Ao-LAD) and diagonal branch (Ao-D1) 23 years ago.

Relevant test results prior to catheterization:
none

Relevant catheterization findings:
Coronary angiography done because of recurrent angina revealed a chronic total occlusion of right coronary artery, occlusion of Ao-LAD and significant stenosis of Ao-D1. Quantitative coronary angiography (QCA) showed 92% stenosis of Ao-D1 with its reference lumen diameter of 3.7mm, minimal lumen diameter (MLD) of 0.3mm, and lesion length of 11mm.

[Interventional Management]
Procedural step:
After predilatation with semi-compliant balloon 2.5x8mm an everolimus eluting biodegradable vascular scaffold (BVS) ABSORB 3.5x12mm (Abbott, Santa Clara, CA) had been implanted with good angiographic results. Acute angiographic results and QCA post implantation showed MLD of 3.1mm and 15% residual stenosis of SVG. Afterwards, the patient had been scheduled for an intravascular optical coherence (OCT) imaging 3 months after the intervention to monitor Ao-D1 healing. OCT revealed complete apposition, no edge dissection or an excessive neointimal hyperplasia in the BVS. The minimal lumen area was 6.2mm2 and the minimal BVS area was 6.7mm2. Moreover, 136 BVS struts were analyzed and 71 (52%) of them had been already covered by the neointima. No signs of BVS absorption were detected.

Ao-D1 SVG