

Case Summary:

In summary, we experienced the huge coronary artery hematoma by the ruptured balloon inflation in the subintimal space after the Reverse CART technique. The implanted EES was fractured because of the stent implantation into the huge coronary hematoma.

In conclusion, the coronary aneurysm formation after EES implantation is very rare compared with Sirolimus-Eluting Stent, so the stent fracture with aneurysm maybe unlikely with EES, but the stent implantation even EES into the coronary aneurysm is one of the risk of stent fracture.

TCTAP C-087**Strategies of Limiting Contrast Use in Uremic Patient with Killip III Myocardial Infarction Receiving Ad-hoc Intervention to Chronic Total Occlusion**

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[Clinical Information]

Patient initials or identifier number:

C.C.D.

[Interventional Management]**Procedural step:**

A 66 y/o man had Diabetes mellitus, Chronic kidney disease stage V (serum creatinine 7.75mg/dl), Hypertension and had acute non-ST elevation MI with flash pulmonary edema and acute respiratory failure at this admission

Diagnostic angiogram via left radial artery with 6F Terumo Ikari left 4.0 catheter showed LCx diffuse stenosis and RCA CTO.

After engaging LM ostium with a 6F Terumo Ikari left 4.0 catheter, MiniTrek 1.2x12mm and a 2.0x20mm balloons (Abbott) predilated the calcified stenosis. IVUS study defined the reference vessel size and lesion length, and a NC Trek 2.5x20mm balloon predilated the lesions. XiencePrime 3.0x38mm and 2.5x28mm stents (Abbott) were deployed at LCx from the ostium. High-pressure dilatation with NC Trek 3.0x15mm and 2.5x20mm balloons (Abbott) was done with optimal result.

Ad hoc PCI to RCA CTO was intended to increase coronary perfusion in such a MI case with acute pulmonary edema related respiratory failure. Due to poor right radial pulse, right ulnar artery puncture with introducing 5F sheath showed occluded radial artery. 7F EBU 4.0 engaged left main ostium sheathless. Only 2 times of contrast injection before RCA stenting: one is selective septal branch angiogram indicating the collaterals to PDA, and the other is bilateral injection at ostial RCA and mid-RCA (through FineCross microcatheter (Terumo) after retrograde wiring with a 0.014 FielderFc wire). Antegrade wiring with a 0.014 Conquest-12 wire with a FineCross microcatheter to mid-RCA and anchoring a MiniTrek 1.2x12mm balloon at conus branch. Retrograde wiring with a Ultimabros3 wire into antegrade guiding catheter (white arrow). With "Rendezvous in Coronary" Technique, antegrade wire went into the retrograde microcatheter and then advanced to PDA. A MiniTrek 2.0x20mm balloon inflated at prox-to-distal RCA. NC Trek 3.0x15mm balloon predilated at prox-to-mid RCA. A Nobori 2.5x28mm stent deployed at mid-RCA (Terumo), and a XiencePrime 3.0x38mm stent to prox-RCA (Abbott). Post-dilated with the NC Trek 3.0x15mm balloon up to 28atm was done. After IVUS study, a 2.5x28mm stent balloon inflated at distal RCA. Final angiogram showed optimal result.

Only 30ml of contrast was used during RCA intervention!!

Case Summary:

This 66 year-old man had diabetes mellitus, chronic kidney disease stage V (serum creatinine 7.75mg/dl), Hypertension and had acute non-ST elevation MI with flash pulmonary edema and acute respiratory failure at this admission.

Diagnostic angiogram showed LCX diffuse stenosis and co-dominant RCA CTO. After PCI to LCX, RCA CTO was done with limited contrast use under retrograde approach and IVUS guide. This procedure was successful and total contrast use was 170ml. The patient would be beneficial from revascularization of both LCx and RCA without significantly increase of contrast use.

TCTAP C-088**Repetitive Subacute Re-occlusion of RCA CTO Lesion via Retrograde PCI**

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[Clinical Information]

Patient initials or identifier number:

11004594

Relevant clinical history and physical exam:

The 45 years old male is a case of diabetes mellitus, hypertension and dyslipidemia. He visited our outpatient department due to chest tightness off and on for one month.

Relevant test results prior to catheterization:

The thallium-201 uptake derived from single-photon emission computed tomography (SPECT) showed partial reversible defect in inferolateral wall (50-60% decrease to 30% decrease). Cardiac echocardiography showed normal left ventricular systolic function without cardiac chamber dilation.

Relevant catheterization findings:

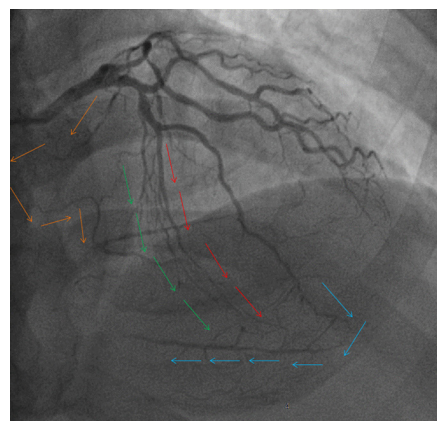
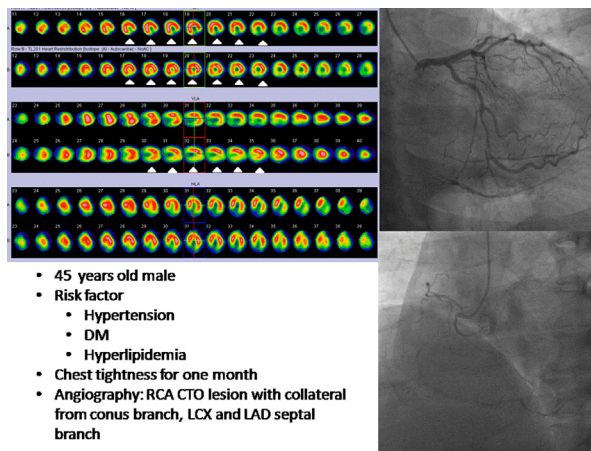
Coronary angiography revealed 50% stenosis over distal segment of left circumflex coronary artery. Furthermore, chronic total occlusion over proximal segment of right coronary artery with collateral from LAD coronary artery was noted.

[Interventional Management]**Procedural step:**

The AL1 short tip guiding was used. Then, Fielder FC wire was tried to cross the CTO lesion via Finecross microcatheter. However, we failed to cross the lesion via antegrade approach, even use of Ultimate 3gm and Conquest Pro wire. Then, different collateral channels were accessed, including septal channel, epicardial channel and AV groove channel. After repetitive test, the Sion wire was used to pass epicardial channel to distal segment of right coronary artery via support of Cosair microcatheter. However, the RCA CTO lesion cannot be passed by Ultimate 3gm wire. Finally, the RCA CTO lesion was crossed with Conquest Pro wire. Unfortunately, the retrograde guiding jumped into left ventricle during the procedure. Then, another antegrade Runthrough wire was used to pass the CTO lesion via the retrograde channel. Due to difficult delivery of DES to distal segment of RCA, the child in mother technique was used via Guideliner and Anchor technique. After stenting from orifice to PLV segment of RCA, TIMI III flow regained.

Three days after discharge, the patient suffered from chest tightness. Mild CK enzyme elevation was noted. The coronary angiography revealed subacute reocclusion of proximal segment of RCA. However, the lesion cannot be passed by Runthrough wire. Ultimate 3gm and Progress 120T were used. Finally, the lesion was crossed by Conquest Pro wire. Another DES was delivered to distal of previous stent via Guideliner and Anchor technique, TIMI III flow regained. Then, Heparin and IIb-IIIa inhibitor were also prescribed for 2 days.

Two days later, follow up coronary angiography was arranged. However, reocclusion of proximal segment of RCA was noted. The lesion was opened with balloon angioplasty.

**Retrograde Plan**

1. Septal Channel 1
2. Septal Channel 2
3. Epicardial Channel
4. AV groove