Relevant clinical history and physical exam:
1st presentation with inferior STEMI
ST elevation of inferior leads

Relevant catheterization findings:
1. Thrombotic occlusion of proximal RCA
2. CTO of proximal LCX. Critical collaterals arising from branch arising from infarct site in RCA

[Interventional Management]
Procedural step:
1st procedure (Primary PCI to RCA)

Wired to distal RCA with RUNTHROUGH guidewire.
Thrombosis of proximal RCA and distal RCA with EXPORT ADVANCE, with aspiration of large amounts of clot.

Decided to "protect" conus branch, which importantly supplies collaterals to LCX CTO. Plan is for DEB-only approach to the lesion, so as not to risk compromise to conus branch.

Wired to conus branch with SION guidewire.
Predilated proximal RCA with 2.5mm compliant balloon.
POBA of proximal RCA with SEQUENCE PLEASE 2.5-20mm DEB, up to 18atm for 60sec.

Minimal recoil and acceptable POBA result to proximal RCA culprit lesion site. TIMI 3 flow preserved into conus branch, with adequate collaterals to LCX.

2nd procedure (Satged PCI to LCX CTO)

Left and right radial approach 6F.
TIGER 5F diagnostic catheter via LRA to engage RCA. EBU3.5 6F guiding catheter via RRA to engage LMCA.
Brought FINECROSS microcatheter to proximal CTO cap on RUNTHROUGH FLOPPY guidewire.

Using FINECROSS microcatheter as support in proximal LCX vessel, unable to cross CTO antegradely with PILOT and G2 guidewires.

With guidance of multiple views (AP CAUDAL and straight LAO views), managed to successfully cross calcified distal cap with CONQUEST PRO guidewire.

CONQUEST PRO guidewire exchanged out for RUNTHROUGH FLOPPY guidewire.
Predilated proximal LCX with 2.0mm compliant balloon.

Stented ostial to mid LCX with SYNERGY 3.0*32mm DES, deployed at 12atm.
Postdilated LCX stent with 3.0mm noncompliant balloon, up to high pressures 16atm.
Final result for LCX excellent with no stent edge dissection and TIMI 3 flow distally. Engaged RCA with JR4 6F guiding catheter.

Wired to mid RCA with pressure wire.
FFR of proximal RCA (previously treated with POBA/DEB) was 0.95, at maximal hyperaemia.

Case Summary:
A case demonstrating the rationale of adopting a POBA (DEB)-only approach to primary PCI, so as to preserve the critical collateral branch supplying a CTO of another vessel. After POBA (DEB) of the culprit lesion in the RCA, a successful staged PCI (3 months later) to the LCX CTO was performed, utilizing the retrograde information from the still intact collateral branch. At the end, it was also demonstrated that the previously treated (POBA) site in the RCA was haemodynamically non-significant, based on FFR measurement.

In summary, a POBA (DEB) only approach in primary PCI can result in a haemodynamically non-significant infarcted site. A POBA (DEB) only approach may be appropriate in certain situations in primary PCI, as in this case.

TCTAP C-112

Heavy Calcified LAD Double CTO Required Multiple Procedural Steps for Interventional Recanalization

Masaki Tanabe
Dai-ni Okamoto General Hospital, Japan

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

Relevant clinical history and physical exam:
76 years old male patient was admitted to our hospital due to ischemic heart failure.
He had been taken coronary artery bypass graft in 2001; right subclavian artery - Saphenous vein - RCA PD branch, left internal thoracic artery (LITA) to first diagonal branch.

Relevant catheterization findings:
CAG showed LITA graft that was anastomosed to first diagonal branch was patent, however his native LAD was opened locally at the trifurcation of first major septal branch and first diagonal branch.

That is, native LAD had double CTO lesion as if the open vessel was sandwiched them; the proximal CTO was from the LAD ostium to the trifurcation and the distal CTO was from just after trifurcation to distal LAD.

Collateral was found from the conus branch to distal LAD via the conus branch.

However, there was no transseptal collateral from RCA distal.

CTO was from just after trifurcation to distal LAD.

That is, native LAD had double CTO lesion as if the open vessel was sandwiched them; the proximal CTO was from the LAD ostium to the trifurcation and the distal CTO was from just after trifurcation to distal LAD.

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RCA had tandem stenosis from proximal site and a CTO at middle site, and Vein graft to PD branch was patent.

[Interventional Management]

Procedural step:
PCI to double LAD-CTO was required staged procedural step to overcome heavy calcification.

(1) PCI to LAD-CTO @ the 1st Attempt
was started by antegrade approach using the Gaia 2nd with the Corsair microcatheter by right transfemoral approach (TFA) with AL2 SH 7Fr. Fortunately, the Gaia 2nd was able to pass through all the CTO lesions. However, passing devices were not able to pass through the entry of the distal LAD-CTO because of heavy calcification.

After that, various bail-out procedural step were attempted; drilling by Tornus microcatheter, buddy wire technique by the Conquest pro., cracking technique by the Miracle12g, child-in-mother technique using the Cokatte guiding catheter after lesion modification of proximal CTO lesion, and anchor balloon technique to diagonal branch.

Moreover, anchor balloon technique using the 1st septal branch caused balloon rupture due to heavy calcification @ the bifurcation of LAD. After EES was implanted to the proximal LAD-CTO, wire exchange to the rota wire floppy was attempted as a final resort. The rota wire was not able to pass through the distal LAD-CTO lesion, but it crossed the proximal LAD severe calcified lesion just before entry of the distal LAD-CTO.

Consequently, rotational atherectomy by 1.5mm burr was performed to ablate the bifurcation of the 1st septal branch and the proximal LAD protruding severe calcified lesion rocacl. After the procedure, antegrade wiring was re-attempted by some 0.014” wires, but those never pass through again. After all, PCI to the LAD-CTO @ first attempt was given up at this moment.

(2) PCI to (the distal) LAD-CTO @ the 2nd Attempt
was performed to overcome heavy calcification by retrograde approach from the beginning by right TFA with the 8Fr CLS. Retrograde wiring was selected via the ipsilateral transseptal collateral. Intentional bilateral wiring was performed using each of the Gaia 2nd with the combination of Corsair microcatheter bilaterally for the purpose of sub-intimal tracking @ the distal CTO entry to avoidance of heavy calcification.

Reverse CART technique and IVUS guided reverse CART was performed. As a result, the retrograde Ultimate bros.3 was able to pass through all the CTO lesion. After wire externalization with the RG3, two EESs were implanted to the distal LAD-CTO.

Finally, LAD double CTOs were successful in complete revascularization.

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**TCTAP C-113**
**Large and Long Dissection After the First Small Balloon Dilatation of Chronically Occluded Right Coronary Artery**

_Tien-Ping Tsao_  
_Cheng Hsin General Hospital, Taiwan_

**[Clinical Information]**

Patient initials or identifier number:  
Mr. GM Chang

Relevant clinical history and physical exam:  
The patient suffered from intermittent chest tightness 2 weeks prior to admission. He underwent PCI with a drug-eluting stent implantation to mid-LCx on June 2013. He has history of hypertension. Physical exam was unremarkable

Relevant test results prior to catheterization:  
Thallium-201 myocardial perfusion scan showed inferolateral myocardial ischemia  
Echoangiography showed normal left ventricular function

Relevant catheterization findings:  
June 6, 2013 CAG:  
LM: normal  
LAD: luminal irregularity, septal perforators provided collaterals to distal RCA  
LCx: 80% stenosis at mid-LCx with collaterals to distal RCA  
RCA: Total occlusion at mid-RCA