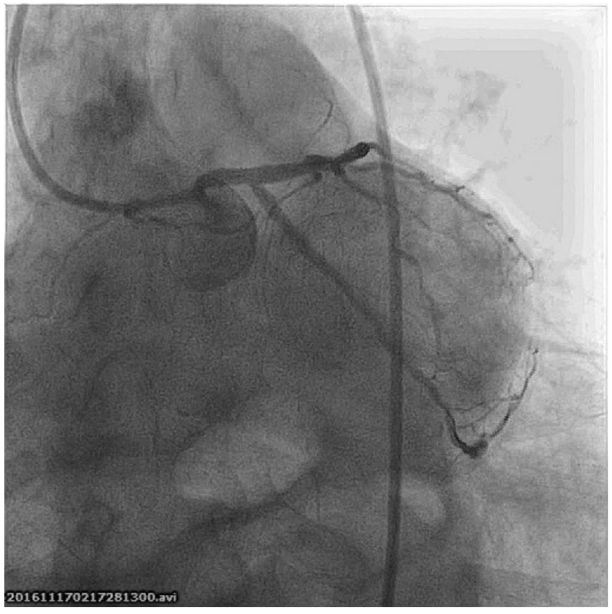

Case Summary. For angulated bifurcation, reverse wire technique was a feasible choice, however, if there's plaque after target bifurcation, we should be very cautious due to loop character of reverse wire, which may damage the plaque and lead to decreased flow causing catastrophic effect. We had better use 7F guide to reverse wire technique due to bigger profile of Crusade double lumen catheter as compared with finecross microcatheter.

TCTAP C-134

The Perfect Storm

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[CLINICAL INFORMATION]

Patient initials or identifier number. LKS

Relevant clinical history and physical exam. We describe a case of a 60 years-old retiree. He is known to have diabetes mellitus type II and hypertension. He presented with typical angina and shortness of breath on exertion over the preceding 3 months. He was in NYHA class II. He was not orthopnoiec and did not have any leg swelling. He did not complain of giddiness and never had syncopal episodes.

Clinically, he was comfortable. BP was 125/89 mmHg and pulse rate 78 bpm. Lungs were clear and there were no peripheral evidence of heart failure

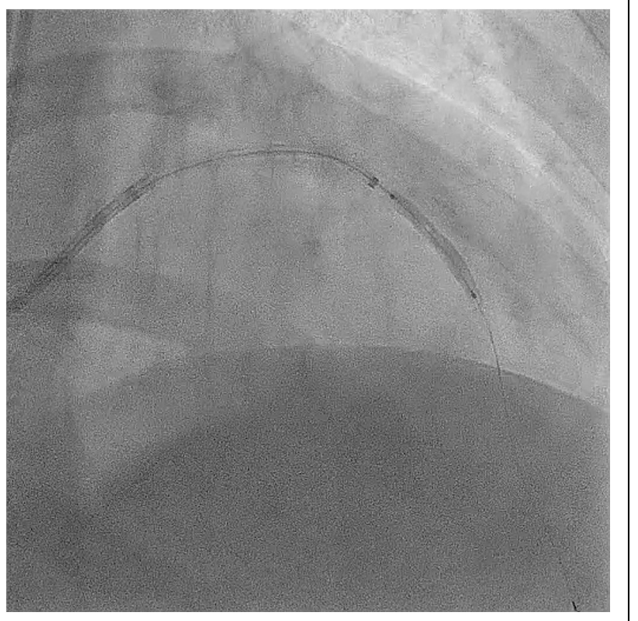
Relevant test results prior to catheterization. Electrocardiogram showed sinus rhythm with T inversion in anterolateral leads. Also poor R wave progression. Echocardiograms showed EF 35% with anterolateral regional wall motion abnormalities. He had normal renal function.

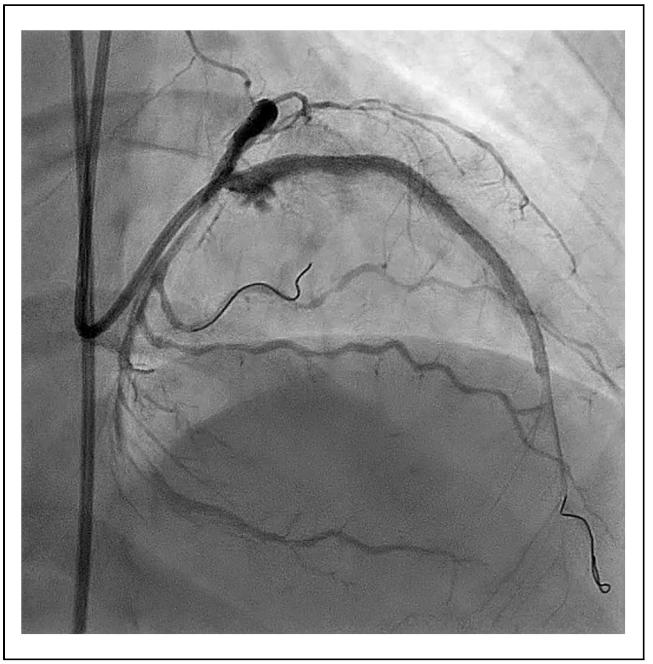
Relevant catheterization findings. Coronary angiogram on 2nd February 2016 revealed short and normal left main, severe diffuse calcified stenosis from ostial to distal LAD, mild proximal LCX stenosis and small diffusely diseased RCA. Patient was not keen for a surgical option.

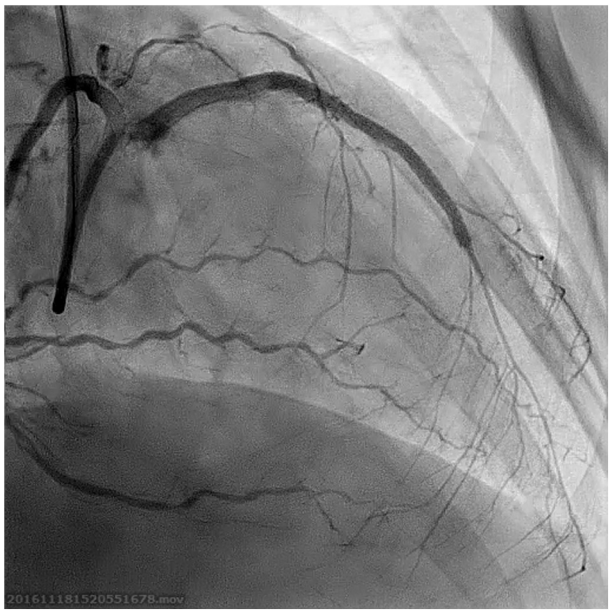
[INTERVENTIONAL MANAGEMENT]

Procedural step. He planned for stage PCI to LAD. Right radial approach initially using AL 1.0/7Fr. However, due to high origin LAD when attempting to cross LAD with wire, the catheter occluded LCX flow and patient became hypotensive and began trashing around. Quick decision was made to change to right femoral approach. Attempted with AL 1.0/7Fr and JL 4.0/ 6Fr. However, both catheters did not give good approach or support to cross LAD. Decided to use AL 1.0/6Fr. RTF passed down LCX for support. We managed to pass Sion Blue down LAD without micro catheter support.

Pre-dilated LAD with a semi compliant balloon 2.0/20 mm and further with NC balloon 2.5/20 mm up to 28 atm. Attempted to pass stent Biomime Morph 3.0-2.5/60 mm, however, failed to pass proximal LAD. Further pre-dilatation done with NC balloon 3.0/20 mm up to 26 atm. However, the long stent refused to pass to distal LAD. Further pre-dilation done with NC balloon 3.5/20 mm up to 28 atm. We were still unable to pass the stent down. We decided to use Guide liner 6Fr for support. However, we had great difficulty in passing the guide liner down the LAD as well. We used NC 3.5 mm balloon as anchor at mid LAD to advance guide liner. NC 3.5 mm was inflated at low pressure and while inflated, guide liner advanced towards balloon. This was done sequentially till guide liner passed to mid LAD. NC balloon was removed. With guide liner secure in mid LAD, the Biomime Morph 3.0-2.5/60 mm was pushed down to distal LAD. Once the stent was passed down, the guide liner was pulled back into LM and Biomime Morph deployed at proximal LAD. The stent was then post-dilated with NC balloon 3.5/20 mm. Despite this, the stent remained under. Decided to use OPN NC balloon 3.5 mm, post dilated stent and pre-dilated ostial LAD up to 35 atm.







At this juncture, the OPN balloon was stuck to the LAD wire and had to be pulled out. We managed to re-wire LAD with a prolapsed Sion Blue. We noted a perforation at ostial LAD. We then stented ostial LAD with Resolute Integrity 3.5/15 mm hoping that will seal the perforation. Unfortunately, the perforation was persistent, despite long balloon inflations. As perforation had not sealed off we used a single-layered covered stent Papyrus 3.5/20 mm to ostial LAD. Covered stent was deployed at 14 atm with a 2.5/15 mm balloon at LM-LCX (at 10 atm). With this, the perforation had sealed. No re-accumulation of contrast seen.

However, we noted haziness at ostial LCX instead. We waited for 5 minutes and repeated shots were similar. IVUS was done to LCX. Noted plaque shift with calculated stenosis at 77% on CSA. Decided to stent ostial LM-LCX with Resolute Onyx 3.0/18 mm. Rewired LAD with a new Sion Blue wire. We then post dilated LM-LCX with NC balloon 4.0/8 mm. LM-LAD initially dilated with 2.0 mm balloon to open up the stent struts. Then final kissing was done with NC balloon 4.0/8 mm in LM-LAD and NC balloon 3.5/20 mm in LM-LCX. IVUS done post stenting to LAD and LCX, showing stent well opposed.

Case Summary. It is important to anticipate complications and have the tools necessary to handle it. In this case we demonstrated high risk coronary angioplasty in a patient with poor EF using multiple complex techniques. We showed how the importance of an appropriate guide comes into play. The procedure had to be hastened to prevent hypotension as patient was solely dependent on left circumflex artery. As this lesion was calcified, it required requires proper lesion preparation. In retrospect the use of rotablation could have been considered. We achieved good final results with TIMI III flow in LAD and LCX arteries.

TCTAP C-135

Electrical Tsunami the Nightmares of Coronary Re-perfusion During 1RY PCI

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[CLINICAL INFORMATION]

Patient initials or identifier number. BF

Relevant clinical history and physical exam. This is a 45 years old male, patient with known h/o DM, dyslipidemia, cigarette smoker and morbidly obese; he presented to ER with severe typical chest pain and with nausea,vomiting, where he was diagnosed as acute inferior wall MI.

Vital signs: BP 127/73, HR 85 bpm, RR 19, Po2 99%.

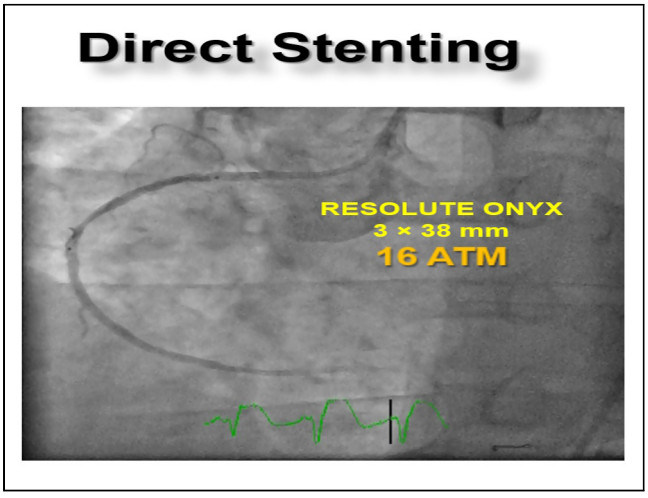
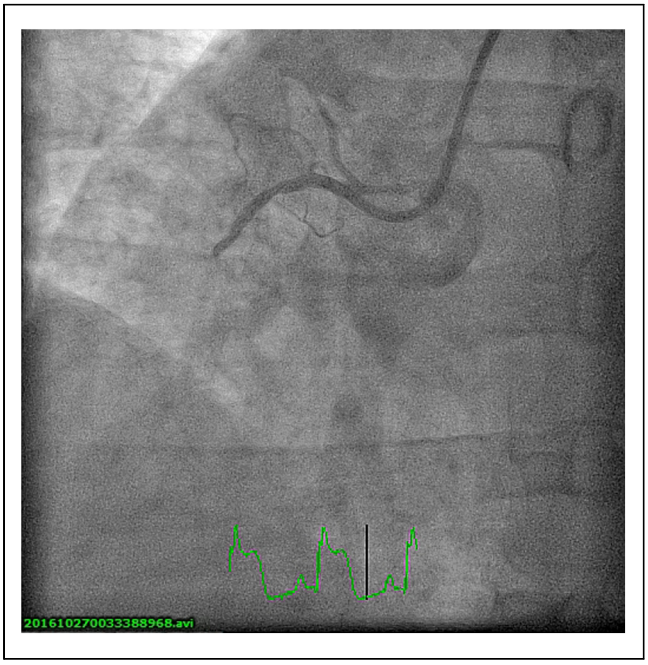
Clinically: Chest clear, normal heart sounds, on additional sounds.

Relevant test results prior to catheterization. ECG: S-T elevation in II,III, avF.

Cardiac enzymes: Troponin 68, CK-MB 101, CK 2191.

Relevant catheterization findings. CA showed: no significant stenosis in left coronary system but RCA was totally occluded. JR4 guide catheter used but it was not aligned so, it was replaced by AR guide catheter BMW wire crossed successfully and recanalize the occluded RCA, but the patient stated to had frequent PVCs and then suddenly develop VF where 200 J DC shock de fibrillated to sinus bradycardia that respond to 0.5 mg atropine with improvement of HR &BP.

[INTERVENTIONAL MANAGEMENT]

Procedural step. Then direct stenting Resolute onyx 3 × 38 mm 16 ATM but the patient became distressed, agitated with nausea, vomiting, severe chest pain,and develop VT with stable BP where amiodarone 300 mg/10 min then he developed junctional rhythm then became hypotensive 80/50 (Dopamine 10 mic/kg/min started) and again frequent PVCs then VT and arrested by VF and Torsa De Pointes where CPR Started (4 MIN) with Intubation & MV and 2 gm magnesium iv then polymorphic VT was seen which respond to DC shock 200J converted to sinus rhythm but few minutes he developed ACCELERATED junctional rhythm, so another antiarrhythmic drug xylocaine was given but again with the final injection, he developed VF that respond to DC shock 200 j.

The patient transferred to ICU on MV and Iv dopamine 15 mic/kg/min, iv tirofiban 0.25 mic/kg/min loading then 0.15 mic/kg/min for 24 hour.