supply of PDA from LAD, a large part of the heart was dependent on the LAD. The operative risk of PCI with retrograde approach by using the LAD as donor artery was considered high. We got the inotropes, intra-aortic balloon pump (IABP), and extracorporeal membranous oxygenator ready in the catheterization laboratory, in order to provide prompt hemodynamic support when necessary.

A septal perforator with a good collateral channel was identified by selective contrast injection through the Corsair microcatheter. Miracle 6 guidewire was brought to the distal CTO cap via the retrograde route. An intravascular ultrasound over the antegrade guidewire confirmed the subintimal position of the retrograde guidewire and the native vessel size. Reverse controlled antegrade and retrograde subintimal tracking (CART) technique with a Sprinter Legend 3.0x15mm balloon was performed at the proximal CTO cap. The retrograde guidewire was able to get across the CTO through the subintimal track and then reached the guiding catheter. However it was difficult to manipulate the Corsair microcatheter through the LCxs into the guiding catheter. The Miracle 6 guidewire in the retrograde route was exchanged to a 300cm Fielder FC guidewire. It was manipulated back into the guiding catheter for externalization. Instead of working on the guidewire loop for subsequent steps of intervention, we preferred to minimize the device load in the donor artery. Therefore the Corsair in the retrograde route was withdrawn to the septal branch, and a Finecross microcatheter was brought antegradely through the guidewire across the CTO. Through the Finecross, antegrade guidewire into the distal LCx was established, and the devices in the retrograde system were withdrawn. The activated clotting time was monitored regularly to ensure a therapeutic range.

A thrombus was then noticed over the ostium of LCx (Fig 2, asterisk). Thrombus aspiration by a 7F Export catheter yielded large amount of red thrombus. Intra-coronary epifibatide was given, followed by intravenous infusion. However the thrombus load rapidly increased and propagated into the left main artery and caused LCx acute closure. There was also clot embolization into the distal LAD. At that juncture, the patient developed chest pain and hypotension (blood pressure 60/35mmHg). Bolus intravenous adrenaline and dopamine infusion were promptly given and IABP was inserted quickly, in order to prevent further spiral downhill of clinical condition. The residual thrombi in LCx and LAD were squashed by balloon angioplasty with a Sprinter Legend 2.5x20mm balloon. A Xience V 2.25/18mm stent was positioned across the CTO. The LCx and obtuse marginal branch bifurcation just proximal to the CTO, bifurcation stenting with 2 DES (Xience V 2.5x20mm in LCx, and Xience V 2.25x18mm in obtuse marginal branch) was performed. The final angiogram showed that the antegrade flow across the CTO was established (Fig 3). The patient was able to wean off inotropic and IABP support in the coronary care unit and was discharged 5 days later.

**Case Summary:**

In summary, the patient had a left dominant coronary system and he received distal LCx CTO PCI by left-to-left retrograde approach. LAD, the major feeding artery of the heart, was used as the route for retrograde intervention. Acute thrombosis first developed at the ostial LCx, which later propagated to involve the left main artery and LAD. The blood flow to the whole myocardium was jeopardized and hemodynamic instability was the result. As CTO intervention is complex and is associated with certain operative risk, a comprehensive risk-benefit assessment, in the context of clinical and coronary anatomical profiles, should be exercised before the decision to intervene. Under this high-risk profile, interventionalists should be able to identify and treat any complication promptly, in order to avoid a spiral downhill course.

TCTAP C-098

Transradial Coronary Intervention of Vein Graft Chronic Total Occlusion by the Beginner

Kyunghoon Lee
Gil Medical Center, Gachon University, Korea (Republic of)

[Clinical Information]

Patient initials or identifier number:
K-S. Lee

Relevant clinical history and physical exam:
She had hypertension for 20 years and no other cardiovascular risk factors. She underwent coronary artery bypass graft (CABG, SV to mLAD & SV to OM) at 1994. In
Achieve a Middle LAD Chronic Total Occlusion with Ipsilateral Double Guide Catheter

Hsin Ru Li, Sung Shih-Hsien
Taipei Veteran General Hospital, Taiwan

[Preclinical Information]

Patient initials or identifier number:
MT Chen

Relevant medical history and physical examination:
85 y/o male with history of CAD, HTN, exertional syncope one month ago

Relevant test results prior to catheterization:
Cardiac enzyme computer tomography showed middle LAD chronic total occlusion

Relevant catheterization findings:
Coronary artery computer tomography showed middle LAD chronic total occlusion

Relevant catheterization findings:
CAD with TVD and LAD-P total occlusion with severe calcification, LCX: patent, RCA: -P to -D: instant patent

[Interventional Management]

Procedural step:
We engaged LMCA with EBU 4/7 GC. One sion GW was adv anced to LCX-D under the support of Finecross MC. Distal injection showed poor distal collateral. Therefore, we decided to used FR 4/7 GC to engaged RCA. One sion GW was advanced to RCA-PDA under the support of Finecross MC. However, we failed to advance the Finecross MC through the stent strut. Then, we tried the RV branch and failed again. Therefore, we tried the antegrade approach again. We used sion GW under the support of Finecross MC and we managed to advanced the sion GW into LAD-D. Then, we shift to Corsair MC and man age to cross the collaterals. Then, we used One Pilot 200 GW was advanced to distal cap and we try to cross the distal cap but failed. Then, we used Miracle 6 GW and manage to cross the lesion. However, false lumen was impressed. Therefore, we used Conquest pro 12 and placed one runthrough floppy GW for marker wire in LAD-P. However, we still failed to advanced to retrograde wire. Then, we used one Conquest 8-20GW and cross the lesion successfully into LM. During exchange wire, we dislodge the wire and we recross the lesion again but failed. Then, we used one Fielder FC, Provia 12 GW into LAD-D1 antegrade. Then, we used another FL 4.5/7 GC to engaged LMCA. One Runthrough floppy GW under the support of Finecross MC and exchange into the retrograde Corsair MC in FL 4.5/7 GC with Rendervous technique. And we change the runthrough floppy GW into LAD-D1 antegrade. Then, we used one 2.0*20mmBC to inflate LM to LAD-M with pressure up to 4 atm. Then, we used one Wizard GW to advanced to LAD-D successfully under the support of Crusade MC. But we cannot pass the 2.0BC into LAD-D. Therefore, we used another Runthrough GW and advanced the wire into LAD-D under the support of Crusade MC. One took 1.25x5mm BC was inflated in LAD-M with pressure up to 14 atm. Then, one Sprinter legend 2.5*15mm BC was inflated in LAD-P to D with pressure up to 14 atm. The IVUS showed patent LCX-Os and D1-Os. Due to post POBA dissection type B, one Promus element 2.5*28mm DES was deployed in LAD-P to D with pressure up to 12 atm under the support of Guideliner. Another Promus element 2.75*28mm DES was deployed in LM to LAD-P with pressure up to 12 atm. One NC sprinter 3.0*15mm BC was inflated instant with pressure up to 14 atm. The final result of LAD was fair with TIMI 3 flow.

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2008, she underwent percutaneous coronary intervention (PCI) due to saphenous vein failure to mLAD and was implanted with endeavor stent (3.0/30mm, medtronic).

Relevant test results prior to catheterization:
ECG showed normal sinus rhythm without ST changes. Cardiac enzymes were negative. (CK-MB/Tnl 1.16/0.028 (CK-MB < 5.00, Tnl < 0.78)) Echo showed no RWMA (EF=76%). Cardiac CT showed patent SV (aortic root) to LAD graft and severe stenosis in another SV (aortic root to OM) graft proximal segment and total occlusion of distal segment.

Relevant catheterization findings:
Current coronary angiogram showed total occlusion of LAD os and minima stenosis of Lt. main and minimal stenosis of LCx and total occlusion of OM and minimal stenosis of RCA and patent SV (aortic root) to LAD graft and total occlusion of SV (aortic root) to OM graft.

[Interventional Management]

Procedural step:
I used a 6Fr AL #1 guiding catheter via Lt. radial artery and fielder XT & runthrough guidewire. The two coronary drug-eluting stent were inserted from SV graft os to distal lesion. (Resolute integrity 3.0/38mm and 3.0/22mm, Medtronic)

Case Summary:
She had hypertension for 20 years and no other cardiovascular risk factors. She underwent coronary artery bypass graft (CABG, SV to mLAD & SV to OM) at 1994. In 2008, she underwent percutaneous coronary intervention (PCI) due to saphenous vein failure to mLAD and was implanted with endeavor stent (3.0/30mm, medtronic). ECG showed normal sinus rhythm without ST changes. Cardiac enzymes were negative. (CK-MB/Tnl 1.16/0.028 (CK-MB < 5.00, Tnl < 0.78)) Echo showed no RWMA (EF=76%). Cardiac CT showed patent SV (aortic root) to LAD graft and severe stenosis in another SV (aortic root to OM) graft proximal segment and total occlusion of distal segment. Current coronary angiogram showed total occlusion of LAD os and minima stenosis of Lt. main and minimal stenosis of LCx and total occlusion of OM and minimal stenosis of RCA and patent SV (aortic root) to LAD graft and total occlusion of SV (aortic root) to OM graft. I used a 6Fr AL #1 guiding catheter via Lt. radial artery and fielder XT & runthrough guidewire. The two coronary drug-eluting stent were inserted from SV graft os to distal lesion. (Resolute integrity 3.0/38mm and 3.0/22mm, Medtronic) I used a 6Fr AL #1 guiding catheter via Lt. radial artery and fielder XT & runthrough guidewire. The two coronary drug-eluting stent were inserted from SV graft os to distal lesion. (Resolute integrity 3.0/38mm and 3.0/22mm, Medtronic)