Ultrasonic examination: negative pericardial effusion, drainage tube in the pericardial cavity
CT: left lower opacity, bilateral pleural effusion
Anti infection treatment for 1 weeks
Discharged smoothly

TCTAP C-119
Successful Tough and Rare Chronic Total Occlusion Case Treated with Multiple Refined Techniques
Kensuke Yokoi, Satoru Sumitsuji
Osaka University Graduate School of Medicine, Japan

[Clinical Information]
Patient initials or identifier number:
398406

Relevant clinical history and physical exam:
We report a tough case of retrograde recanalization of chronically occluded right coronary artery (RCA) with a rare collateral channel. The patient was 46-year-old man with a history of hyperlipidemia and known three-vessel coronary artery disease. The patient underwent PCI for stable angina three month before admission for the second PCI.

Relevant test results prior to catheterization:
Echocardiography showed hypokinesis of the inferior wall and ejection fraction 54%.

Relevant catheterization findings:
Coronary angiography revealed patency of the left ascending coronary artery (LAD) and left circumflex coronary artery (LCX) without instant restenosis of previously deployed drug eluting stents. The RCA was occluded at the proximal part. The distal RCA area was supplied through several collateral channels from left coronary artery. The distal LAD seemed to be directly connected to the post descending artery (PDA).

[Interventional Management]
Procedural step:
The RCA was engaged with a 7F AL 1.0 guiding catheter. An attempt to antegrade cross the lesion using several guidewires (Runthrough NS, PILOT 50, and Conquest Pro) with Finecross MG failed. A left femoral retrograde approach was then attempted using a 7F BL 3.5 guiding catheter. At first, we chose the LAD apical channel which was thought to be directly connected to the PDA. But after the SUOH wire got stuck in the channel, a careful study of the initial angiography revealed it was not connected to the distal RCA. Secondly, we advanced a wire into septal channel, but it was connected to the distal LAD. Finally we succeeded in crossing the epicardial AV groove channel with a SUOH wire and Finecross MG. We succeeded in crossing the occluded lesion with a Conquest Pro wire retrogradely.

To bring the retrograde wire into the antegrade GC, we used “Pick-up technique” using a child catheter (Cokatte). But we couldn’t cross the lesion with any micro-catheters or a small balloon retrogradely. We succeeded in “Rendezvous technique in the antegrade GC” for advancing the antegrade balloon, but couldn’t cross the lesion with the antegrade balloon. Fortunately we retrogradely recrossed the lesion with a RG3 wire and succeeded in retrograde wire externalization. Even with more back-up force with the retrograde wire externalization, we couldn’t cross the lesion with any balloons or micro-catheters including Tornus. Finally we succeeded in antegrade recrossing the lesion with a Rota wire using “Rendezvous technique in the occluded lesion”. After rotablation with a 1.5mm burr, we deployed four drug eluting stents. We completed the revascularization of the RCA CTO lesion without any complications.

Case Summary:
We experienced a case with a rare anatomy of collateral channels. There seemed to be the LAD apical channel connected to RCA PDA, but actually not connected to the distal RCA. An invisible but wire-crossable septal channel was connected not to the RCA PDA but to the anomalous LAD. Finally we succeeded in crossing the epicardial AV groove channel with a SUOH wire and Finecross MG. We succeeded in crossing the occluded lesion with a Conquest Pro wire retrogradely.

TCTAP C-120
Complete Resolution of Iatrogenic Bidirectional Dissection
Hyuck Jun Yoon
Keimyung University Dongsan Medical Center, Korea (Republic of)

[Clinical Information]
Patient initials or identifier number:
LRN
Relevant clinical history and physical exam:
58 years old female visited our hospital due to exertional chest pain (CCS III).
She had history of hypertension for 10 years.

Relevant test results prior to catheterization:
Baseline ECG showed ST depression in II III aVF, V2~6.
Echocardiography showed normal left ventricular systolic function without regional wall motion abnormality.

Relevant catheterization findings:
Coronary angiogram revealed significant stenosis on mid LAD and Rentrop Class III collateral to distal RCA via septal perforators. Right coronary artery was nearly chronic total occlusion status. (Fig.1)
We decided to treat RCA first because of concerning about disastrous septal branch jail during LAD stenting.

[Interventional Management]
Procedural step:
A 6 Fr sheath was inserted through right radial artery and the right coronary artery was engaged with a 6 Fr Ikari guiding catheter. A 0.014 inch guidewire (Fielder XT, Asahi) with 1.25mm OTW balloon (Maverick, Boston Scientific) was inserted into the RCA.
Sequential balloon dilations using 1.2mm (Sapphire, OrbusNeich) and 2.5mm (Trek, Abbott) were performed. Then a 3.0x33mm Everolimus eluting stent (Xience Prime, Abbott) was placed at mid RCA.
We tried contrast injection to confirm the position of distal stent tip repeatedly. The stent was deployed at mid RCA lesion. At that time, bidirectional dissection was developed at proximal RCA lesion. However we did not recognize the events.
For the proximal stent positioning, additional contrast injection was performed, and the dye staining at ascending aorta was evidently seen. (Fig 2.)
After proximal stenting (Xience Prime, 3.5x33mm) labile moving dissection flap at RCAos was seen. Intravascular ultrasound (IVUS, iLab, Boston Scientific) showed collapsed RCAos by huge false lumen and intimal tearing. (Fig 3.)
To cover intimal tearing site and to maintain true lumen, additional stenting (Xience Prime 4.0x15mm) was done.

Case Summary:
Post PCI TTE and CT showed ascending aortic dissection and minimal pericardial effusion. Emergency surgery was considered at first. However, the patients denied immediate surgery and entry point of dissection was sealed. Therefore we decided to take close observation with surgical back up.
The patient was asymptomatic during PCI and observation.
We repeatedly checked bedside TTE for hourly to detect change of pericardial effusion and dissection size.
During the close observation, BP was maintained below 90 mmHg (systolic pressure) using nitroprusside and IV labetalol.
Follow up CT scan after 2 days, revealed decreased size of hematoma and amount of pericardial effusion.
Patient could discharge at 18 days after PCI without any sequelae. Effort chest pain was relieved.
Three months follow up CT revealed nearly complete resolution of hematoma.

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TCTAP Abstracts/CASE/Chronic Total Occlusions

What to Do When the Balloon Can’t Pass the CTO Lesion
Jingang Zheng
China Jampan Friendship Hospital, China

[Interventional Management]
Procedural step:
GW: AL 0.75, GW: RUNTHROUGH, MIRACLE, MC: finescross
With the bi-lateral injection, the guidewire went to the subintimal space. With the use of parallel technique, the antegrade wire eventually went into distal true lumen. However, the balloon can not pass through the lesion. What can we do?
I tried to use two small balloon dilation for more than 10 times, the use of another stiff wire to try destroy the lesion, the tornous, and buddy wire technique, the balloon still can not pass the lesion.
With the use of Finescress and Sion, the retrograde guidewire eventually pass through the lesion retrogradely. A 1.25x15 balloon went through the lesion, predilation was made. However, the antegrade balloon still can not pass through the lesion.
I have to send the retrograde wire to the RCA guiding catheter, externalize the guidewire, through that guidewire, the antegrade balloon was passed through the lesion, stents were delivered successfully.