

using LAD calcified lesion was successfully expanded. Even though we could not do the IVUS guided wiring, we could manipulate the GW by diagonal branch using crusade. However, this procedure was also failed in success and also proceeded into pseudo lumen. At this point, we advanced corsair into pseudo lumen and attempted the penetration strategy from pseudo lumen to true lumen using Conquest 8-20 with bilateral injection. This procedure, finally succeeded in getting true lumen. Then we decided to perform culotte stenting for the bifurcation lesion. Before the first stenting toward to diagonal branch, we performed POBA to pseudo lumen in LAD enough to reinsert GW into distal LAD true lumen through the near LAD pseudo lumen. As a result, reinsertion of GW was successfully done, we accomplished the culotte stenting. After that, we performed POBA throughout the LAD lesion using scoring balloon. Then we performed single stenting from LMT to LAD with KBT for LCX.



Case Summary. Intravascular ultrasound plays an essential role in the treatment of chronic total occlusion after the failure of both antegrade and retrograde approach. Parallel wiring technique assisted by intravascular ultrasound/Crusade MC is helpful in antegrade approach.

TCTAP C-122
Angina Pectoris with Heart Failure Remaining LAD and RCA CTO in Spite of Post CABG



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[CLINICAL INFORMATION]

Patient initials or identifier number. K.Y

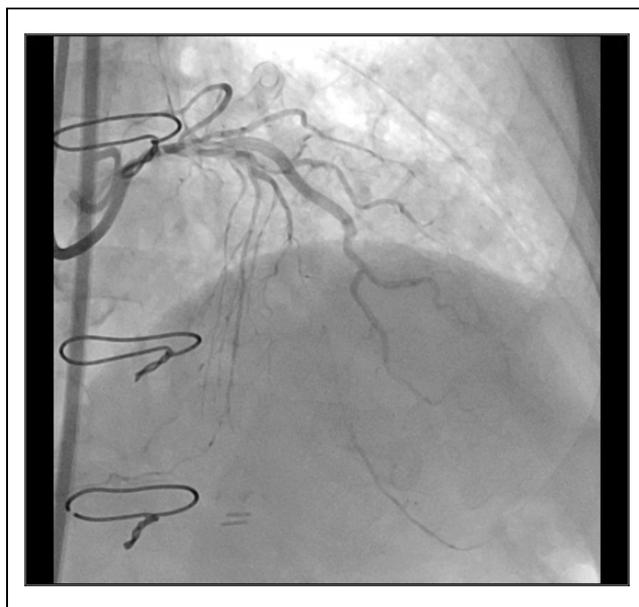
Relevant clinical history and physical exam. He admitted to our hospital due to dyspnea on exertion. ECG on admission revealed paroxysmal atrial fibrillation without remarkable ST change. His roentgenogram of chest showed cardiomegaly and moderate lung congestion. He had a history of post CABG causing myocardial infarction in other hospital. He was diagnosed as acute heart failure involving ischemic heart disease with arrhythmia.

Relevant test results prior to catheterization. Echocardiography demonstrated severe hypokinesis in posterior and lateral and hypokinesis inferior wall. We started intensive care including infusion of diuretic, catecholamin, and PDE III inhibitor in HCU. After these treatment, his cardiac function got to stabilized. Then we performed CAG.

Relevant catheterization findings. The CAG revealed CTO in proximal RCA, mid LAD and mid LCX. Severe calcification detected in all native coronary resulting in severe negative remodeling. LITA to diagonal anastomosed and SVG to LCX PL anastomosed and those grafts was patent. However, SVG to RCA occluded. Distal RCA detected by collaterals from septal branch which was bifurcated before LAD CTO and from LCX PL. Distal LAD was detected by ipsilateral collateral from diagonal branch.

[INTERVENTIONAL MANAGEMENT]

Procedural step. We started PCI for RCA-CTO. Even though, we succeeded in performing reverse CART and externalization, finally failed in success. Due to caravel ruptured in severe calcified CTO body. At later, we performed PCI for LAD-CTO. We could not do the IVUS guided wiring due to severe calcification at all. So, we started single wiring for CTO under Corsair with bilateral injection through LITA. GW proceeded into pseudo lumen unfortunately. However, after repeatedly insertion into pseudo lumen, non compliant balloon for





Case Summary. Final CAG showed successful antegrade flow both of LAD and diagonal branch and well expanded stent without any complication. We succeeded in performing PCI for a case of angina pectoris with heart failure remaining LAD and RCA CTO in spite of post CABG.

TCTAP C-123

Roller-coaster PCI of Chronic Total Occlusion in Mid Left Anterior Descending Artery



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[CLINICAL INFORMATION]

Patient initials or identifier number. RS

Relevant clinical history and physical exam. A 75 year-old male smoker admitted with history of effort angina since two years. His symptoms aggravated for last two months despite Guideline directed medical therapy. Hence, he was taken up for coronary angiography with an intent for revascularization.

Relevant test results prior to catheterization. At presentation his blood pressure and heart rate were stable. His electrocardiogram revealed ST coving and biphasic T waves in anterior precordial leads (V2-V6). Echocardiography did not reveal any wall motion abnormality (RWMA) with LVEF = 52%. His haematological and biochemical profile normal and serum creatinine was 0.98 mg/dl. His CRUSADE bleeding score was 20 indicating a low bleeding risk.

Relevant catheterization findings. Coronary angiography via right femoral access revealed a right dominant circulation. LAD totally occluded in Mid segment while RCA having a 90% type B lesion in proximal segment. LCX diseased in distal part including OM1. Ramus intermedius was also severely stenosed in mid segment. In view of Multi-vessel disease, CABG discussed but patient and family opted for multi-vessel PCI. In view of ECG changes corresponding to LAD territory, it decided to revascularize it first.

[INTERVENTIONAL MANAGEMENT]

Procedural step. Extra Back Up guide catheter (Medtronic Vascular, USA) was used to engage left system

LAD wired with Fielder-FC (Asahi Intec, Japan) with multiple attempts and maneuver

However, lesion could not be crossed by low profile 1.0 x 8 mm balloon even after realignment of guide catheter

Subsequently, 1.20 mm & 1.0 mm balloons failed to cross the lesion too.

LAD predilated proximal to Lesion to help balloon advancement but still balloon unable to advance

Buddy wire support taken in diagonal but didn't help either

Anchor balloon support technique unsuccessful

Finally, LAD rewired with an extra support wire -ALL STAR (Abbott Vascular, USA)

This time the 1.0 x 8 mm balloon was able to negotiate the lesion.

Disease segment sequentially predilated with progressively larger (1.25, 1.5 and 2.0 mm) compliant balloons.

Two overlapping DES of 2.5 x 32 mm and 2.75 x 37 mm deployed in LAD

Following stent deployment there was No-reflow and guidewire was also out accidentally

Intracoronary Diltiazem and Adenosine were administered but flow did not improve

Subsequently, LAD rewired and drugs were delivered to distal bed via manually perforated 2.0 x 12 mm balloon catheter.

Final TIMI 3 flow was achieved.

