Case Summary. In contemporary reverse CART, key point is antegrade preparation. First benefit is easy to control retrograde wire. The reason is that antegrade preparation (antegrade ballooning) had done before making big subintimal space by retrogradewire. Second benefit is that this method can avoid severe vessel injury like big subintima or hematoma. In this LCX CTO case, contemporary reverse CART was performed and good result was provided.

TCTAP C-096
Successful PCI for LCx CTO with Severe Calcification Using the Reverse-CART Technique with Retrograde Wire Externalization to Ipsilateral 2 Guiding System via LAD-Septal-PL Channel
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[CLINICAL INFORMATION]
Patient initials or identifier number. M.Y
Relevant clinical history and physical exam. A 63 years old female with effort chest pain was admitted to our hospital for percutaneous coronary intervention (PCI) to left circumflex coronary artery (LCx) with severe calcification. Several PCIs were performed for left main-left ascending descending coronary artery (LAD) and right coronary artery (RCA) before.
Relevant test results prior to catheterization. The trans thoracic echocardiography showed inferior-posterior wall motion abnormality with normal LV contractility. No other non-invasive studies were performed.

Relevant catheterization findings. The target was a mid LCx chronic total occlusion (CTO) lesion with severe calcification. The distal LCx was filled through the rich collaterals of the LAD via the septal perforators.
**INTERVENTIONAL MANAGEMENT**

Procedural step. A 7Fr EBU-3.5SH guiding catheter was engaged in the LCA. First, the antegrade approach was tried with the Gaia 2nd guidewire with a Corsair microcatheter. The guidewire was changed to Conquest pro 9g, 12g, Miracle 12g and Gaia 3rd using parallel wire technique, but they couldn’t pass the CTO lesion. Next, the retrograde approach was attempted. A 7Fr EBU-3.5SH 90cm guiding catheter was engaged in the LCA, ipsilateral 2 guiding system was created. By using the combination of a SION guidewire and a Corsair microcatheter, the arterial lumen distal to the CTO lesion was successfully reached through the septal branch via the LAD. By exchanging the system for a combination of the Fielder FC guidewire and the Finecross GT microcatheter, penetration of the occlusion was attempted. The occluded segment was so hard, however, that a retrograde wire at the distal entry point of the CTO lesion proved satisfactory. Successful crossing by a stiff guidewire into the sub-intimal space parallel to the true lumen that proximal to the CTO lesion was achieved. At this point, the reverse-CART technique was performed and a Sprinter Legend 1.5x10mm balloon was introduced in an antegrade manner. The balloon was inflated in the proximal part of the CTO lesion to create a false lumen, which was connected to the true lumen proximal to the CTO lesion. Following the balloon inflation, the retrograde wire was easily passed into the sub-intimal space to the reach the proximal true lumen.
Case Summary. The retrograde wire and the Finercross GT microcatheter were inserted into the antegrade guiding catheter. The 300cm RG3 guidewire was inserted from one guiding catheter to the other and it formed a wire loop (retrograde wire externalization). Predilation with the 1.0, 1.5 and 2.0mm balloon managed to be performed. I created 4 in 7 Fr systems to get sufficient backup and overcome the tight curve around main bifurcation and severe calcification at the CTO lesion. After that, three DESs were successfully deployed. The final angiogram showed successful revascularization at the LCx CTO lesion.

TCTAP C-097
Successful Revascularization of Chronic Total Occlusion in a Left Anterior Descending Coronary Artery by Rendez-vous Technique
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[CLINICAL INFORMATION]
Patient initials or identifier number. K.F.

Relevant clinical history and physical exam. A 65-year-old male, he previously received coronary angiography and was detected multi-vessel coronary artery disease. However, he had never received intervention. He was hospitalized with pneumonia, and he presented worsening dyspnea on exertion. His coronary risk factors were diabetes mellitus and dyslipidemia. His blood pressure was 83/56, the plus was 75, respiration was 20, temperature was normal, plus oximetry was 96% (nasal cannula 3L/min). Chest is clear, no murmur and no edema. Relevant test results prior to catheterization. The electrocardiogram showed normal sinus rhythm at 75 and QS pattern in precordial leads. And, cardiac echocardiogram showed cardiac dilatation, reduced ejection fraction, about 26%, with left ventricular asynergy at anteroseptal and inferior wall, and mild mitral regurgitation. Chest X-ray showed cardiomegaly (cardiothoracic ration was 70%) and mild pulmonary congestion. His renal function was stage 3B chronic kidney disease (creatinine clearance 42.3ml/min).