Case summary: A 67-year-old man was referred for CTO-PCI. His risk were hypertension and alcohol intake, with past history of prior-PCI 15-years ago.

Baseline coronary angiogram: The target lesion was a CTO ISR lesion in the proximal RCA. The distal RCA well filled through the rich collateral channels of the LAD. The LAD and LCX were normal.

Procedure: A 7 Fr sheath was inserted into the right femoral artery, and the right coronary ostium was engaged with a 7 Fr AR II 4.0 guiding catheter. A 7 Fr sheath was inserted into the left femoral artery, and the left coronary ostium was engaged with a 7 Fr JL 4.0 guiding catheter and performed dual injection. Firstly, 0.014 inch Runthrough NS guidewire was inserted into conus branch, then the 2.5\*15mm Tazuna balloon was deployed by anchoring technique. A Runthrough NS guidewire with a Corsair 150mm microcatheter was inserted into pRCA, and then the guidewire was changed to Ultimate 3, afterwards the guidewire was changed to Conquest 9g, in the next the guidewire was changed to Sion black, but all failed. A 7 Fr EBU catheter was engaged at left coronary ostium through left femoral. A Sion guidewire with a Corsair 150mm microcatheter was inserted into Septal branch, then the guidewire was changed to Suoh 3, after the guidewire was changed to Sion black, at the same time, the balloon dilatation was performed at mRCA by antegrade, and the Sion black was successfully through the CTO lession by rCART. The guidewire Sion black was changed to RG3 330mm and catheter was changed to 7 Fr JR 4.0. The Tazuna bolloon was used to dilate the calcified segment, and the Angiosculpt passed failure. Afterwards we used NC Raiden3 to dilate several times, but Ultimaster 2.5\*28mm stent could pass. A 7 Fr sheath was inserted into the other puncture site of right femoral artery for Rotablation. A Rotalink 1.5mm was inserted into from pRCA to mRCA. But rota system was stuck during the removal. Mutiple attempt was done to remove the system and finally succeeded. Then we performed IVUS-guided PCI, deployed Onyx 2.5\*22 stent at the mRCA, after stenting showed dRCA had dissection, so deployed Ultimaster 3.0\*33 stent at the dRCA. Finally, we deployed two DEB at the RCA ostium and pRCA. Post-stenting CAG showed wellexpanded stents with good distal flow, but mRCA and dRCA had local fixation hemorrhage, the ECHO showed there was no pericardial effusion. The procedure was finished, and then the patient was transferred to the CCU.