

Taito Nagai¹Msayuki Kagota¹, Yasutake Toyoda¹, Yoshiyuki Yazaki¹¹ The Department of Cardiology, Misato Central General Hospital, Japan

The case is 50's male, and coronary risk factor is dyslipidemia, past smoker. PCI was performed for LAD and HL with drug eluting stent about 3 to 6 months ago. Renal function was normal, but ejection fraction was 36% with diffuse hypokinesis. In this case, target lesion is RCA long CTO diagnosed with silent myocardial ischemia and lesion length is about 90mm with mild-moderate calcification. Because the entry and exit of CTO was unclear and there is no interventional collateral judged by preliminary information, we started the procedure from searching the interventional retrograde channel. CAG with balloon occlusion of LCX which is main collateral source revealed good collateral flow from HL to RCA#4PL. We started the primary retrograde approach with using the collateral channel from HL. SION and SOH03 successfully passed through the channel, and microcatheter also passed. We tried to puncture the exit of CTO using Miracle Neo3 and Gaia Next2, but it's failed. Miracle 12 could puncture and advanced to the CTO body, however it got stuck because of calcification based on near the CTO exit. We changed the wire to Gladius EX, and the wire could advance to near the entry of CTO. After that, procedure was switched to antegrade approach. Miracle Neo3 advanced to mid of the RCA from antegrade and we could check the IVUS findings. IVUS showed that the wire from antegrade exist subintimal space and the wire from retrograde exist out of vessel. We could not re-route the retrograde wire to inside of the vessel, and also could not advance the antegrade wire to distal site with keeping subintimal space. After that, bidirectional knuckle wire technique was performed, but it's failed. Finally, tip detection-intraplaque tracking at the proximal site of the CTO was performed, and Miracle Neo3 could advance to the distal site of CTO. We got externalization system by using reverse CART technique, and put the drug eluting stent. Angiography after stent deployment showed extravasation from the distal site of the CTO, bailout was successfully achieved using a covered stent. We report a case of successful recanalization of RCA long CTO using several techniques.