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A case successfully externalized easily using the aortic arch-assisted Tip-in technique.

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The case is an 82-year-old man who visited a medical facility with complaints of chest pain on exertion. Coronary CT suggested a heavily calcified lesion in the RCA, leading to his referral to our hospital. Upon performing CAG, the RCA was found to be completely occluded at its ostium, with good collateral circulation observed from the LAD. The LAD also showed significant stenosis, and CABG was considered as a treatment option; however, the patient strongly preferred PCI.

Since it was considered that a guiding catheter could not be inserted into the RCA, treatment was initiated using a retrograde approach. Successfully captured the channel with SUOH 03 and advanced the micro catheter to near the entrance of the RCA. Performing a tip injection, finding of to-and-fro movement were observed, we approached with Gladius , and the wire advanced. However, the friction was quite high, and we could not confident that it had successfully passed into the aorta. Nonetheless, as we advanced the wire further, we observed it being pushed by the blood flow. Furthermore, as we advanced the wire, it reached the ascending aorta. Although advancing the guiding catheter in the antegrade approach and capturing it with a snare was also considered, it was thought that maintaining the guiding catheter in the proper position would be difficult. Therefore, using the bias of the aortic arch, the retrograde wire was inserted into the antegrade guiding catheter. By trapping the wire using a balloon, the micro catheter was also able to be advanced into the aorta. We advanced the antegrade guiding catheter to the entrance of the RCA over the wire. But, as expected, we were unable to maintain it at the entrance, and the wire was pulled out from the antegrade guiding catheter. However, the micro catheter had exited into the aorta, we performed a similar procedure using RG3 and successfully achieved externalization. After balloon dilatation, IVUS showed a calcified nodule, leading to the decision that long term patency with stent placement is unlikely. Debulking was considered, but the calcification at the entry was protruding into the aorta, and removal of the externalization was deemed too risky. So, it was decided to consider debulking in next session, and treatment was concluded with a DCB.

Externalization using snare is highly reliable, but it can be costly and often time consuming. We experienced a case where externalization was successfully in a short time by using the aortic arch-assisted Tip-in technique.