The effectiveness of IVUS guide wiring and dual lumen catheter for CTO.

A 49-year-old man with a history of PCI to inferior MI 16 years ago presented to our hospital. After performing coronary CT examination, obstruction of RCA # 1 and # 2 was suspected, so we performed a CAG.

The CAG showed RCA # 1 99% stenosis and # 2 CTO, and according to the RI examination, there were partial reversible ischemic findings in the inferior wall, so PCI was performed for RCA.

We used 8FrAL1.0SH for RCA and JL 4.0 for LCA as contralateral contrast.

RCA # 1 was passed to the direction of RV branch using XT-R, SUOH 03 with MC corsair, and after expanding # 1 with 2.5 mm balloon, we confirmed the IVUS.

Using the IVUS from the RV branch, we could check the ostium of RCA CTO, and we succeeded to advance Neo3 to CTO entrance with IVUS guidance.

After capturing the CTO entrance, we proceeded the GW to the distal end of CTO, but we could not cross the GW (Neo3, XT-R) to the distal true lumen.

At this point, we thought that it was difficult to complete the CTO-PCI with only the Antegrade approach, so we decided to use the Retrograde approach system.

We used 7FrVL 3.5 SH to LCA, and we selected a septal channel with Sionblue using MC corsair.

However, it was difficult to track this septal channel because the septal channel had many branches, so we used the dual lumen catheter(DLC) to shorten the procedure time to select other septal channels.

We inserted the DLC via the first GW, and we succeeded in selecting another good septal channel by SUOH 03 from the side hole.

After that, we did the Reverse CART technique with 2.5 mm balloon at # 3 ISR section and succeeded in wire crossing.

We also crossed the GW to # 4 AV using the DLC and deployed CoCr-EES 2.5/38mm to #3-#4PD with jailed corsair technique, and post-dilation was performed with a 3.0mm balloon.

We also deployed CoCr-EES 3.0/38 mm and 3.5/28 mm to #2-#1 with proper dilatation with a 3.0mm and 4.0mm balloon, and the procedure was completed.

In this case, it was very effective to insert the IVUS into the RV branch during the Antegrade approach in order to cross the entry of the RCA CTO with IVUS guidance.

Also, it was easy to select the collate channel by using the DLC in the Retrograde approach.

I believe that the usage of IVUS and DLC should be shared and reported.