Successful PCI with IVUS-guided parallel wire technique using dual lumen catheter Crusade for the occluded bifurcation

Yokohama Sakae Kyosai Hospital, Japan

Taku Iwaki

74 year-old male complained of chest discomfort at effort.CAG showed severe stenosis of proximal LCX and total occlusion from mid to distal LCX (from segment 11 to 13 and 14). We performed PCI with antegrade approach. We crossed the guide wire (GW) with microcatheter (MC) to just before total occlusion. Tip injection showed no visible channel. We advanced GW to occluded segment 13(13). We changed MC to Crusade and advanced another GW to segment 14(14). IVUS revealed GW existed in the subintimal lumen. We tried to cross another GW into the true lumen with parallel wire technique, but the GW also went into subintimal lumen. We observed the bifurcation of #13 and #14 with IVUS. The true lumen of #14 was upper side of GW in the subintimal lumen. We aimed at the upper side of GW, and advanced another GW to 14 with parallel wire technique using Crusade. IVUS revealed the guide wire existed in the true lumen. We removed Crusade, and crossed GW with MC to distal 14. We put 3 stents from proximal to distal LCX. Final CAG showed optimal result. We could direct GW to the occluded bifurcation with Crusade. GW advanced to the subintimal lumen at first, but we detected the location of the true lumen of the bifurcation by IVUS and we aimed at the true lumen and advanced GW with parallel wire technique. GW successfully advanced into the true lumen. The parallel wire technique using both IVUS and Crusade is very useful for occluded bifurcation.