1046 **A Case of Mid-RCA CTO Successfully Treated with the Aid of Calculation of Optimal Angiographic View using IVUS (COA View)**

Masashi Morita1, Toshiharu Oka1, Hironori Ueda1, Yukihiro Fukuda1, Naoya Mitsuba1, Yoji Urabe1, Syunsuke Tomomori1, Kiho Itakura1, Naoya Hironobe1, Ryotaro Yamamoto1, Kazuki Takeichi1, Taiki Yokoyama1, Ryosuke Tanaka1

[1]Department of Cardiology, Hiroshima Prefectural Hospital, Japan

An 85-year-old male presented to a previous physician with exertional dyspnea and was referred to our department for further evaluation and treatment following a diagnosis of heart failure. TTE revealed reduced LVEF of approximately 30%. Coronary CT angiography demonstrated a CTO in the mid-segment of the right coronary artery (RCA). Invasive coronary angiography revealed a tortuous CTO lesion with partial calcification. Collateral circulation from the LCX was observed through epicardial channels, with contrast opacification extending to the distal mid-RCA (#3 segment). After optimizing medical therapy for heart failure, percutaneous coronary intervention (PCI) was performed for the RCA CTO. Given the patient's compromised cardiac function, an antegrade approach was selected for the procedure. An 8Fr AL1.5SH guiding catheter was used, with a 5Fr BL3.5 catheter employed for contralateral injection. A Corsair Pro microcatheter and Gaia Next 2 guidewire were utilized to navigate the tortuous lesion, using deflection control with calcification as a landmark. The wire was then stepped down to an Ultimate Bros 3 (UB3), which initially entered an extravascular route but was successfully redirected into the subintimal space. The tip detection (TD) method was adopted. Following pre-dilation of the proximal lesion with a 2.0 mm balloon, an AnteOwl IVUS was advanced, and a Conquest-ST wire was employed as the second wire to attempt TD intraplaque tracking. However, the IVUS shaft interfered with the procedure, compromising the wire's ability to reach the distal true lumen. Thus, repositioning of the Conquest-ST wire tip was necessary. To determine the optimal repositioning angle, the Calculation of Optimal Angiographic View using IVUS (COA View) method was utilized. By rotating the angiographic detector from RAO 40° to LAO 20, the target was brought to the inner curvature side. Under fluoroscopic guidance, the antegrade puncture was performed on the small curvature side, and the AnteOwl IVUS was reinserted. The wire tip was successfully relocated adjacent to the target, and clockwise rotation facilitated successful lateral puncture of the target. Due to the severe tortuosity, advancing the Corsair under IVUS guidance was not feasible. Therefore, the distal true lumen was fluoroscopically marked, the AnteOwl was removed, and the Corsair was advanced to the marked location. Using an XTR wire, successful passage into the distal true lumen was achieved. Following balloon dilation, three Ultimaster Nagomi stents (4.0×28 mm, 3.5×28 mm, and 3.5×50 mm) were deployed. The procedure was completed with TIMI grade 3 flow.