Thrombus protrusion to left main trunk by non-slip element balloon during percutaneous coronary intervention for left anterior descending artery

Takao Konishi
Hokkaido Cardiovascular Hospital, Japan

A 78-year-old man presented to our hospital complaining of shortness of breath on exertion, 1 week after the onset of chest pain. Coronary angiography determined a severely stenosed, long diffuse lesion of the proximal-mid (segment 6-7) left anterior descending (LAD) coronary artery. Using a left radial approach, a 6Fr 6Fr TAIGA EBU 3.5 guiding catheter (Medtronic Inc.) was used to engage the left coronary artery (LCA). An XT-R guidewire with a support of Corsair, to which was exchanged from SION blue guidewire (Asahi Intecc) could cross through the LAD artery. Intravascular ultrasound (IVUS) imaging determined fully circumferential fibrocalcified plaque or thrombus from the segment 6 to 7. A 3.0 x 13 mm Lacrosse NSE ALPHA balloon was selected for predilatation of segment 6, but was not easily able to cross the highly calcified and stenosed lesion. Using so-called leopard-crawl technique, NSE balloon could successfully reach the lesion site, and subsequent dilatation of the lesion was performed at 12 atm from distal to proximal segment 6. The tip pressure of guiding catheter suddenly showed 0 mmHg in the monitor. Angiography revealed a large thrombus in the left main trunk and left circumflex artery. After aspiration thrombectomy, using Export AdvanceTM Aspiration Catheter (Medtronic Inc.), several red thrombi were aspirated, resulting in disappearance of thrombus in angiography. The ACT was 293 sec. After stent implantation of Resolute Integrity 3.0/26mm for segment 6, the patient was free from symptoms with TIMI grade 3 flow. Histopathological examination showed that the thrombus was slightly organized, which suggested that the thrombus was probably formed not during the procedure, but several days before the admission. This case highlights that non-slip element balloon provides a useful scoring effect, but infrequently causes thrombus shift when extracting the balloon catheter because of its unique design.

Biography

Takao Konishi is a Medicine Doctor (MD-Medicine), is a Clinical Fellow of Department of Cardiology, Hokkaido Cardiovascular Hospital, the Japanese Circulation Society certified Specialist, the Japanese Society of Internal Medicine certified Specialist, the Japanese Association of Cardiovascular Intervention and Therapeutics certified Physician, the Fellow of the Japanese Society of Ultrasonics in Medicine, AHA ACLS Instructor and AHA BLS Instructor. He also belongs to Department of Cancer Pathology, Hokkaido University School of Medicine. He is involved in a clinical research in the graduate school of medicine.

takaokonishi0915@gmail.com

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