1090 **Successful stentless staged strategy for ST-elevated myocardial infarction of left main trunk true bifurcation using multiple devices: a case report.**

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A 73-year-old male was admitted to our hospital due to acute chest pain and was diagnosed with antero-septal ST-elevated myocardial infarction (STEMI). Emergent coronary angiography revealed occlusion of the ostial left anterior descending artery (LAD) and severe stenosis of the ostial left circumflex artery (LCx). Primary percutaneous coronary intervention (PCI) was performed for the LAD via the right radial approach. A guide wire advanced into the LAD and the angiography showed TIMI 1 flow. A Ryusei 3.0×20 mm balloon was inflated with 6 atm for 3 minutes while injecting nicorandil into the left coronary artery. Residual stenosis in the LAD was approximately 50 % with TIMI 3 flow. However, after 15-minuites waiting, the stenosis worsened. Intravascular ultrasound (IVUS) image revealed increased thrombus burden, and then, an intra-aortic balloon pump (IABP) was inserted to increase coronary flow. The Ryusei was re-inflated with 14 atm for 3 minutes with nicorandil intracoronary injection, resulting in improved stenosis to 25% which remained stable after another 15-minuites. A SeQuent Please NEO 3.0×15mm was inflated in the LAD. Peak creatine kinase was 8789U/L. Rosuvastatin and ezetimibe were initiated and low-density lipoprotein cholesterol decreased to 46 mg/dL.

Two months latrer, the patient underwent staged PCI for the LCx. An 8-French guiding catheter CL 4.0SH was engaged in the left coronary artery via the right femoral artery. IVUS demonstrated a high-intensity surface plaque resembling a calcified nodule, continuous with calcification from the LCx to the left main trunk (LMT). Directional coronary atherectomy (DCA) was performed using an Atherocut L 9 mm 4 times at 0atm. IVUS showed effective plaque removal and residual calcification. Rotational atherectomy (RA) was done with 2.15 mm burr at 180000 rpm. A Wolverine 3.0×15 mm cutting balloon and a SeQuent Please NEO 3.0×15mm were dilated in the LCx. Final IVUS and angiography confirmed sufficient lesion expansion.

This case illustrates a successful stentless, staged PCI strategy for STEMI involving a true LMT bifurcation. The approach utilized long inflation balloon angioplasty at high pressure using a perfusion balloon for the LAD under IABP support, and combined DCA and RA for the LCx. This strategy was effective and may be considered as an alternative to immediate complex 2-stent technique.