1127 **Successful Revascularization of Heavily Calcified Left Main Stenosis and Left Circumflex CTO Using Rotational Atherectomy**

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A 76-year-old man with a history of hypertension and persistent atrial fibrillation presented with effort angina.Coronary angiography revealed a heavily calcified severe stenosis of the distal left main trunk (LMT), with a total occlusion of the ostial left circumflex artery (LCx).Computed tomography confirmed that the ostial LCx was completely occupied by dense calcification.

Initially, a guidewire was advanced into the LAD, and intravascular ultrasound (IVUS) was performed.IVUS revealed protruding calcified nodules distributed along the LMT, while the LCx ostium was completely sealed by a calcified cap and was not visualized.Since the wire bias toward the lesion was favorable, rotational atherectomy was initiated in the LMT with a 1.75-mm burr.Then, the burr size was increased to 2.15 mm to achieve adequate calcium modification, followed by dilation with a 3.0-mm cutting balloon. Adequate lumen gain was achieved in the LMT?LAD; however, the LCx ostium remained ambiguous on the IVUS despite lesion modification.Therefore, a retrograde approach was chosen to cross the LCx CTO.

Epicardial collateral from the diagonal branch to the posterolateral branch was successfully crossed with SUOH 03.After microcatheter advancement, the wire was exchanged for Gladius EX.Thereafter Gladius EX was successfully advanced to the proximal true lumen and then into the guiding catheter.The tip-in technique was performed.IVUS from the LCx confirmed severe calcification at its ostium.

Therefore, rotational atherectomy with 2.15-mm burr was performed in the LCx.After achieving adequate lumen gain, a kissing balloon technique (KBT) was performed for the LAD and LCx.Finally, a 3.0-mm drug-coated balloon (DCB) was applied to the LMT and a 2.75-mm DCB to the LCx, completing the procedure.The total procedure time was 120 minutes.

This case highlights that rotational atherectomy can be effectively applied not only to left main bifurcation lesions but also to a heavily calcified CTO, enabling optimal lesion preparation and successful revascularization in complex scenarios.