Experience of directional coronary atherectomy followed by drug-coated balloon dilation for the ostial left circumflex coronary artery lesion

[Purpose] Percutaneous coronary intervention (PCI) for a lesion in the ostial left circumflex coronary artery (LCx) is challenging and the target lesion revascularization was high both in ostial LCx stenting and left main trunk to the LCx crossover stenting. We report here some ostial LCx lesions in which we first debulked plaque by directional coronary atherectomy (DCA), then dilated the lesion with a drug-coated balloon (DCB).[Methods] From 2016 to May 2019, 127 cases were treated with DCA and 12 cases were treated ostial LCx lesion with DCA followed by DCB in our institution. Of which, > 3-month follow-up data available 7 cases were retrospectively analyzed.[Results] In quantitative coronary angiography (QCA) analysis, reference vessel diameter (RVD) was 3.52 mm, minimal lumen diameter (MLD) was 0.86 mm, and diameter stenosis (DS) was 75.1%. On intravascular ultrasound analysis before PCI, plaque area was reduced from 80.7% at baseline to 56.4% after DCA. In QCA analysis after PCI, RD was 3.53 mm, MLD was 2.46 mm, and DS was 28.7%. There were no in-hospital major complications including coronary perforation. One case received target lesion revascularization at 280 days after index treatment. No other cases experienced major cardiac adverse events.[Conclusions] PCI for a ostial LCx lesion with DCA followed by DCB might be an effective strategy. But to demonstrate the efficacy and safety of this strategy, larger studies are required.