C-30

Impact of Procedural Dissection on Clinical Outcomes in Directional Coronary Atherectomy for Left Main Bifurcation Lesions

Shinji Imura[1], Heng Shee Kim[2], Motosu Andou[1], Miwako Tsukiji[1], Fumitaka Hosaka[1]

[1]Okamura Memorial Hospital, [2]Hospital Sultanah Aminah, Malaysia

[Background]Previous studies have demonstrated the efficacy of directional coronary atherectomy DCA for treating left main LM bifurcation lesions. However, medial dissection can sometimes occur during the DCA procedure. This study aimed to evaluate the characteristics and clinical outcomes of cases in which dissection occurred during DCA.[Methods]We retrospectively analyzed consecutive patients who underwent DCA for left main trunk LMT to left anterior descending artery LAD lesions at Okamura Memorial Hospital between 2020 and 2024. Target lesion failure TLF, including cardiac death, target vessel myocardial infarction TV-MI, and clinically driven target lesion revascularization TLR at one year, was compared between the dissection and non-dissection groups.[Results]A total of 95 cases were analyzed, 80 in the non-dissection group and 15 in the dissection group. Baseline clinical characteristics and procedural characteristics were comparable between groups. Notably, the dissection group had a higher prevalence of calcified plaques on IVUS. There were no significant differences in one-year TLF 3.1% vs 0%, p=0.44, cardiac death 1.2% vs 0%, p=0.66, TV-MI 0% vs 0%, TLR 2.5% vs 0%, p=0.53 between the groups.[Conclusion]Clinical outcomes were comparable between the dissection and non-dissection groups for LM bifurcation lesions treated with DCA. The presence of calcified plaques on IVUS warrants careful attention due to the increased risk of dissection.