Duration of Dual Antiplatelet Therapy and Long-term Clinical Outcomes after Implantation of Drug-Eluting Stents for Left Main Lesions: Results from the COBIS (Coronary Bifurcation Stenting) Registry II

Background: Whether prolonged dual antiplatelet therapy (DAPT) improves clinical outcomes is not known after percutaneous coronary intervention (PCI) for left main lesions.

Objectives: This study sought to investigate the effects of duration of DAPT on long-term clinical outcomes in patients receiving drug-eluting stents (DES) for left main lesions.

Methods: From a registry of patients receiving DES for coronary bifurcation lesions, we selected patients undergoing PCI for left main lesions. Patients who were event-free (no death, myocardial infarction [MI], stroke, stent thrombosis, or revascularization) at 12 months after the index procedure were divided into 2 groups based on duration of DAPT use: ≥12-month DAPT group (n=572); and <12-month DAPT group (n=113). The primary outcome was a composite of death or MI.

Results: During a median follow-up duration of 35 months, there was no significant difference in death or MI between the ≥12-month DAPT group and the <12-month DAPT group (3.7% versus 4.4%, adjusted hazard ratio [HR]: 0.73; 95% confidence interval [CI]: 0.27 to 1.95; p=0.53). After propensity-score matching, the risk of death or MI (3.4% versus 3.6%, HR: 0.84; 95% CI: 0.25 to 2.75; p=0.77) did not differ significantly between the 2 groups. Treatment effects of prolonged DAPT were consistent across various subgroups.

Conclusions: In patients undergoing PCI using DES for left main bifurcation lesions, prolonged use of DAPT ≥12-month was not associated with reduced risk of death or MI.