

Optimal Timing of Percutaneous Coronary Intervention for Non-culprit Vessel in Patients With ST-Segment Elevation Myocardial Infarction and Multivessel Disease

The purpose of this study is to investigate a current status of the staged PCI procedure in STEMI patients for non-culprit vessels and the impact of different time frames of the staged PCI on the incidence of MACE. Methods: This was a retrospective analysis of 753 STEMI patients and MVD who were treated by multivessel PCI in the COREA-AMI registry (Convergent Registry of Catholic and Chonnam University for Acute MI). Patients were divided into 3 groups according to the time from initial PCI to staged PCI: group 1 (n = 316, multivessel PCI performed during the index procedure), group 2 (n = 360, staged PCI within 1 week after primary PCI), and group 3 (n = 77, staged PCI performed more than 1 week after primary PCI). The endpoint was MACEs during 3.4 years of follow-up. Results: Baseline and angiographic findings were similar among 3 groups. The incidence of MACEs was higher in group 3 compare to group 1 (OR: 1.83, 95% CI: 1.06 to 3.18, p = 0.031). The risk of MACEs between groups 1 and 2 was comparable (OR: 1.01, 95% CI: 0.70 to 1.46, p = 0.950). Conclusions: Simultaneous culprit and non-culprit PCI during primary PCI in STEMI patients with MVD is quite often in real clinical practice. Staged PCI that is delayed more than 1 week after the primary PCI was associated with worse clinical outcome compared to multivessel PCI performed during the primary PCI and staged PCI performed within 1 week after the primary PCI.