CLINICAL BENEFITS OF GLYCOPROTEIN IIB/IIA INHIBITORS IN PATIENTS WITH ACUTE ST-ELEVATION MYOCARDIAL INFARCTION PRETREATED WITH CLOPIDOGREL BEFORE PRIMARY PERCUTANEOUS CORONARY INTERVENTION

Background: It remains controversial whether glycoprotein IIb/IIa inhibitors (GPI) would provide additional benefits in patients with acute ST-elevation myocardial infarction (STEMI) undergoing primary percutaneous coronary intervention (PCI) after receiving a loading dose of clopidogrel. In the present study we evaluated clinical outcomes of patients with acute STEMI given GPI at the time of primary PCI after pretreatment with clopidogrel.

Methods: A cohort of 356 patients with STEMI, enrolled in the nationwide prospective Korea Acute Myocardial infarction Registry between January 2007 and January 2008, who received GPI during primary PCI was compared with 356 propensity-matched patients with STEMI who did not receive GPI at the time of primary PCI. All patients were treated with 300 mg of aspirin and 300-600 mg of clopidogrel before undergoing PCI. The primary end point was a composite of death, MI, or urgent target vessel revascularization occurring within 30 days. Secondary end points were rates of in-hospital major and minor bleeding.

Results: The mean door-to-balloon time was 2.4 and 2.7 hours in the GPI and non-GPI groups, respectively (p=0.649). In-hospital mortality was 5.6% for patients who received GPI and 4.5% for those who did not receive GPI (p=0.494). The incidence of major and minor bleeding complications was similar between the two groups. The primary end point occurred in 26 patients (8.1%) who received GPI and in 18 patients (6.1%) who did not receive GPI (p=0.276). On subgroup analysis, GPI use was not associated with a significant reduction in 30-day ischemic events, irrespective of the loading dose of clopidogrel used (600 mg vs. 300 mg).

Conclusion: In patients with acute STEMI undergoing primary PCI after pretreatment with clopidogrel, GPI use was not associated with improved short-term clinical outcomes.