

Assessment of Platelet Reactivity in ACS Patients Treated with Double-Dose Clopidogrel

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Introduction: The optimal dose of clopidogrel in patients with acute coronary syndromes (ACS) undergoing percutaneous coronary interventions (PCI) is unclear. Conflicting conclusions from the CURRENT-OASIS 7 trial regarding the effectiveness of double dose versus standard dose clopidogrel were published separately. However, no assessment of platelet reactivity was performed in this trial. The purpose of our study was to report on platelet reactivity in patients with ACS who received different dosing regimens.

Methods: Assessment of platelet function using light transmission aggregometry was performed in 100 patients treated with double loading and standard maintenance dose (600/75 mg), 100 patients treated with double loading and maintenance dose (600/150 mg) and 200 patients treated with standard dose (300/75 mg) clopidogrel.

Results: Mean age was 61±12 and 76% were male. Diabetes was present in 25% and ST segment elevation myocardial infarction (STEMI) was diagnosed in 75%. No major differences were found in baseline characteristics and clinical presentation between groups. Platelet aggregation was reduced significantly in the 600/150 mg group (41± 17) versus the 600/75 mg group (58±18) and this in turn was reduced significantly versus the 300/75 mg group (all p<0.01)(Figure). The findings remained similar in the diabetic subgroup and in patients with STEMI.

Conclusion: In patients undergoing PCI for ACS, a 7-day double-dose clopidogrel regimen was associated with a significant reduction in platelet reactivity, supporting the recommendation that double dose clopidogrel should be considered for all patients with ACS treated with an early invasive strategy.

