ACCELERATED INHIBITION OF PLATELET AGGREGATION, INFLAMMATION AND MYONECROSIS BY ADJUNCTIVE CILOSTAZOL LOADING IN PATIENTS WITH ACUTE CORONARY SYNDROME: THE RESULTS OF THE ACCEL-LOADING-ACS MULTICENTER RANDOMIZED TRIAL

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Background: Cilostazol pretreatment reduces platelet activation, inflammation and ischemia-reperfusion injury; these benefits have not been tested in a randomized study.

Methods: NSTE-ACS East Asian patients were randomized to aspirin and clopidogrel (prePCI 600mg loading + 75mg/d) (DOUBLE=111) or adjunctive cilostazol (prePCI 200mg loading +100mg bid) to standard therapy (TRIPLE=107). Primary endpoint was 30d incidence of CV death, MI, or TVR. CK-MB and troponin I were measured before and 8 and 24h after PCI. Platelet reactivity was assessed immediately before PCI by VerifyNow.

Results: TRIPLE had greater % platelet inhibition (% PIVerifyNow) (24±24% vs. 12±18%; p=0.003) and lower PRU (234±90 vs. 271±79; p<0.001) compared with DOUBLE. Although TRIPLE showed higher CRP on admission (7±22 vs. 2±6mg/l; p=0.04), adjunctive cilostazol achieved numerically lower change in CRP between on admission and 24h post-PCI (4±10 mg/l vs. 6±12mg/l; p=0.31). There was no difference in primary endpoint rate (TRIPLE, 28% vs. DOUBLE, 29%; p=0.79). In multivariable analysis, bifurcation lesion, diabetes, and stent length were independent predictors of outcome (Figure). Combination of % PIVerifyNow ≤12% and CRP>0.7mg/l showed 20-fold increased risk of primary endpoint.

Conclusions: In NSTE-ACS patients undergoing PCI, adjunctive cilostazol failed to reduce 30d adverse CV event. Combined estimation of platelet reactivity and inflammation may improve the risk stratification in these patients. (NCT01354808)