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ABSTRACT WITHDRAWN

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Unmet Needs of Clopidogrel in Acute Myocardial Infarction Compared with Unstable Angina After 1 Month Administration

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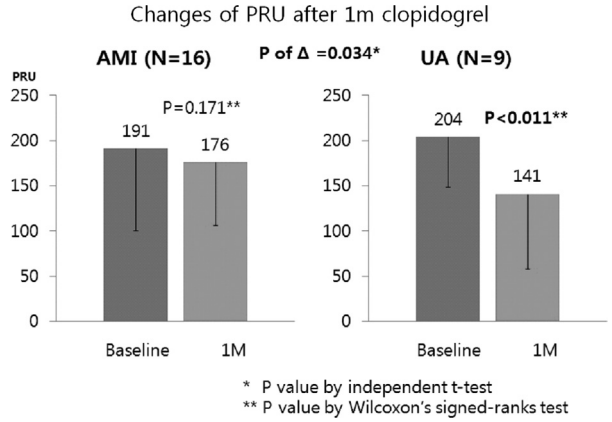
Background: Clopidogrel resistance is more important in acute myocardial infarction (AMI). We investigated high on-treatment platelet reactivity (HTPR) in acute coronary syndrome (ACS).
Methods: Forty-six ACS patients undergoing percutaneous coronary intervention (PCI) were screened with CYP 2C19 *2, *3 loss-of-function (LOF) polymorphism and VerifyNow P2y12 assay at least 24 hours after clopidogrel 600mg loading, defining high on-treatment platelet reactivity (HTPR) as platelet reaction unit (PRU)>230. According to genotyping and VerifyNow, we decided on anti-platelet agents. Those with homozygous LOF allele and HTPR, we switched clopidogrel over to prasugrel (10mg/day) (Group 1). And, those with normal genotyping (*1*1) and normal platelet function (PRU<230), we maintained clopidogrel (75mg/day) (Group 4). Those with heterozygous LOF allele and HTPR, homozygous LOF allele and normal platelet function, and normal genotyping and HTPR were randomized to prasugrel (10mg/day) (Group 2) or clopidogrel (75mg/day) (Group 3). We checked VerifyNow again 1 month later. Among clopidogrel group (Group 3 and 4), we compared PRU between AMI (N=16) and unstable angina (UA) (N=9).
Results: After 1 month, among clopidogrel group, PRU value decreased less in AMI than UA. (PRU 191±90 to 176±70 vs. 204±55 to 141±83; p (of Δ) = 0.034). And, there were decreases of HTPR patients in both groups (5/16 to 4/16 vs. 3/9 to 1/9).
Conclusions: Our study showed that there was unmet needs of clopidogrel in AMI compared with UA about HTPR. And, there was additional decrease of PRU after 1 month clopidogrel administration compared with baseline loading status in ACS.



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Effective Platelet Inhibition with Triple Antiplatelet Regimen in High Risk PCI in Patients with LV Dysfunction

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Background: Effective platelet inhibition is of paramount importance in patient undergoing high risk PCI like LV dysfunction for prevention of early and late stent related complications. We want to study the effect of triple antiplatelet (TAP) regimen (Aspirin, Clopidogrel and Cilostazol) on platelet aggregation (PA) and long term outcome in this subset of patients.
Methods: We retrospectively analyzed the details of patients with severe LV dysfunction who underwent PCI in Jan 2010 to Dec 2010 in our unit, who were on TAP regimen during first month post PCI (after one month they were kept on DAP agents for one year and thereafter on Aspirin only). We recorded their PA on 15th day post PCI and their MACE (all cause death, MI, TLR, TVR, worsening of symptoms of angina or HF, hospitalization due to HF) at 2 yrs and non-cardiac events (NCE) (CVA, puncture site complications and renal dysfunction).
Results: Out of 215 eligible pts 177 (82.3%) were males (average age-54.98±11.351 yrs). 139 (64.7%) were hypertensive, 96 (44.7%) were diabetic and 64 (29.8%) were smokers. A total of 304 lesions were treated by PCI of which 55 (25.6%) were multivessel. Transrdial PCI in 104 (48.4%) pts and DES in 149 (49.01%) lesions. 133 lesions in LAD, 68 in LCX-OM, 91 in RCA-PDA, 2 in LIMA to LAD, 6 in SVG grafts and 4 ISR. Average stent size was 2.89±0.3mm and stent length was 19.4±5.7mm. On day 15, average PA was 40.31±23.04%. Five patients were lost to follow up and remaining 210 patients were followed up for 2 yrs. 166 (77.2%) patients remained asymptomatic and 44 (22.8%) patients had one or more MACE or non cardiac events. 40 patients had MACE, 8 patients had NCE which included 4 patients who also had MACE. 8 patients underwent TVR (1 stent thrombosis, 7 ISR) and 12 patients underwent non TVR (8 PCI, 4 CABG). Out of 11 patients were hospitalized for heart failure, 9 had patent stent. 3 patients died, 2 with LVF and 1 after CABG.
Conclusions: Effective platelet inhibition with TAP regimen in high risk patients with LV dysfunction and CAD resulted in clinical benefit in the form of low MACE and NCE during long term follow up despite only nearly 50% of DES usage.

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Patients Characteristics and Clinical Implications of Switching Antiplatelet Therapy from Clopidogrel to Prasugrel or Ticagrelor

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Background: While 2nd generation anti-platelet therapy (Gen 2 APT), such as Prasugrel and Ticagrelor, may have superior inhibition of platelet reactivity compared with Clopidogrel, cost and compliance remains an issue for many patients. We sought to assess whether Gen 2 APT use had an increased risk of stent thrombosis after being switched from Clopidogrel from non-compliance.
Methods: We included patients from July 2009 until present who underwent PCI with stent placement and followed clinical events following hospitalization. We then obtained clinical follow-up on patients based on the anti-platelet medication on admission and discharge to assess for a switch in the APT prescribed.
Results: We included 6,888 patients in our study (patient characteristics in Table 1). Patients switched from clopidogrel to a Gen 2 APT were more likely to be admitted for an acute myocardial infarction (64% vs 33% in the other groups, p<0.001). At 30 days and 6 months, there were no significant differences in stent thrombosis between the groups (all groups <1%). However, patients that were switched from clopidogrel to a Gen 2 APT had a greater incidence of target vessel revascularization at 6 months compared with patients that stayed on clopidogrel or that were switched from a Gen 2 APT to clopidogrel (12.6% vs 3.9% vs 5.4% respectively, p<0.001), suggesting that patients switched to Gen 2 APT may represent a higher risk patient subset.