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Acute Coronary Syndromes

REAPPRAISAL OF PHARMACODYNAMIC EFFECT OF ADJUNCTIVE CILOSTAZOL AND HIGH-DOSE CLOPIDOGREL IN EAST ASIAN ACS PATIENTS

Poster Contributions
Hall C
Monday, March 31, 2014, 9:45 a.m.-10:30 a.m.

Session Title: Contemporary Perspectives on Anti Platelet Pharmacodynamics and Pharmacokinetics
Abstract Category: 3. Acute Coronary Syndromes: Therapy
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Background: Compared with Westerners, East Asians have shown different therapeutic level of platelet reactivity (PR) regarding post-PCI ischemic and bleeding events. We also reported different therapeutic level for East Asians (35% < 20 μM ADP-PR < 70%). We reappraised the pharmacodynamic effect of adjunctive cilostazol and high-dose clopidogrel in East Asians based on this criteria.

Methods: PCI-treated ACS patients were assigned to either clopidogrel 150 mg/d (DOUBLE; n=139) or cilostazol 100 mg bid + clopidogrel 75 mg/d (TRIPLE; n=136) on top of aspirin. PR was measured at least 30-day follow-up with light transmittance aggregometry. Primary endpoint was the prevalence of HPR at follow-up.

Results: DOUBLE and TRIPLE together showed low prevalences of HPR (9.4% and 2.2%, respectively). Although the level of PR in TRIPLE increased according to the number of CYP2C19 loss-of-function (LoF) allele (p=0.015), HPR risk was almost overcome irrespective of CYP2C19 phenotype (p=0.633). The level of PR and HPR risk in DOUBLE increased proportionally depending on CYP2C19 phenotype (p<0.001 and p=0.006, respectively). In multivariate analysis, carriage of 2 CYP2C19 LoF alleles only increased HPR risk by 8.5-fold in DOUBLE.

Conclusions: Our results support clinical usefulness of TRIPLE in East Asians based on pharmacodynamic data. Clinical efficacy and safety of more potent P2Y12 inhibitor, prasugrel and ticagrelor, must be reevaluated separately in this unique race.