Clopidogrel Hyporesponsiveness and Clinical Outcomes in Patients Undergoing Percutaneous Coronary Intervention

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Background: Clopidogrel hyporesponsiveness is highly prevalent among the northeastern population of Thailand.

Objective: We aimed to study clinical impact in patients who underwent percutaneous coronary intervention (PCI).

Methods: A retrospective study was conducted in patients who underwent PCI and VerifyNow©P2Y12 testing at Srinagarind Hospital and Queen Sirikit Heart Center of the Northeast between January 2014 and December 2015. Clopidogrel hyporesponsiveness was defined as platelet reactivity unit (PRU) of ≥240 and all patients were followed for at least 2 years after PCI.

Results: Twenty-seven of overall 65 patients had clopidogrel hyporesponsiveness (41.5%). Mean age was 62 years and 72.3% were male. Diabetes mellitus (DM) was the single significant predictor for clopidogrel hyporesponsiveness, with odds ratio (OR) 3.01, 95% confidence interval (CI) 1.06 to 8.5 (p = 0.038), and OR 4.0, 95% CI 1.14 to 13.98 (p=0.029), from univariable and multivariable analysis, respectively. Five cardiovascular (CV) events occurred during overall follow-up. The number of events between the groups with and without clopidogrel hyporesponsiveness was 1 in-stent restenosis (ISR) with 1 myocardial infarction (MI) and 1 CV death, and 1 ISR with 1 CV death, respectively.

Conclusion: Clopidogrel hyporesponsiveness is common among patients undergoing PCI in the northeastern of Thailand. Nevertheless, the clinical impact is seemingly deniable.

Keywords: Clopidogrel hyporesponsiveness, Cardiovascular event, Percutaneous coronary intervention