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Aspirin Resistance in Thai Patients with Chronic Stable Angina

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Abstract

Objective: To determine the prevalence, clinical profile and risk factors of aspirin resistance in Thai patients with chronic stable angina.
Material and Method: The patients were prospectively recruited from the consecutive patients diagnosed chronic stable angina at Siriraj Hospital during March 2011 to February 2012. Ten milliliter of blood samples were cautiously drawn from the antecubital vein of the patients to determine the hemoglobin, platelet count and platelet aggregation test performed by light transmittance aggregometry using platelet-rich plasma. Platelets were stimulated with 0.5 mg/ml of arachidonic acid and 10 mM adenosine diphosphate. Platelet aggregation was expressed as the maximal percent change in light transmittance from baseline. Aspirin resistance was defined as the mean platelet aggregation of > 70% with 10 mM ADP and the mean platelet aggregation of > 20% with 0.5 mg/ml of arachidonic acid.
Results: One-hundred and fifty seven patients diagnosed chronic stable angina were enrolled in the present study. There were 34 patients (21.6%) demonstrating aspirin resistance. The clinical characteristic of these patients included male 58.8% with mean age of 66 years, body mass index 27.5 kg/m2, diabetes mellitus 52.9%, smoking 8.8%, hypercholesterolemia 70.6% and proton pump inhibitor use 23.5%. Multivariate analysis demonstrated none of the risk factors including age, female, body mass index, diabetes mellitus, hypercholesterolemia, smoking and proton pump inhibitor (PPI) use had a statistically significant association with aspirin resistance.
Conclusion: Our study demonstrated that the prevalence of aspirin resistance in Thai patients with chronic stable angina was 21.6%. No significant association was demonstrated between age, female, body mass index, diabetes mellitus, hypercholesterolemia, smoking, proton pump inhibitor (PPI) use and aspirin resistance.

Keywords: High on-treatment platelet reactivity, Aspirin resistance, Aspirin non-responsiveness, Aspirin, Platelet aggregation

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