Aspirin Non-Responder in Thai Ischemic Stroke Patients

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Abstract

Background: An important cause of recurrent ischemic stroke is failure to prevent secondary stroke due to poor control of important stroke risk factors. One of the proposed important risk factor is aspirin resistance. The prevalence of aspirin resistance varied widely. It depended on heterogeneity in studied populations and methods of platelet functional assessment.

Objective: To describe the prevalence of aspirin resistance based on optical platelet aggregometry in stroke patients who attended the Neurological Institute and investigate the clinical risk factors associated with aspirin resistance.

Material and Method: Three hundred stable ischemic stroke patients, whose aspirin dosage varied between 60 to 325 mg/day for at least 14 days before enrollment were recruited in the present study. Demographic data, modifiable risk factors, and treatment were collected by interview and from medical records. Aspirin resistance was determined by optical platelet aggregation technique, using arachidonicacid (AA) and adenosine diphosphate (ADP) as agonists.

Results: The patients were classified into two groups based on their platelet aggregatometry tests (PAT). The cases group (n = 40, 13.3%) included both patients with aspirin resistance (n = 2, 0.6%) and aspirin semi-responsiveness (n = 38, 12.7%). The control group was aspirin non-resistance (n = 260, 86.7%). The cases were older (64.8 year vs. 61.26 year, p = 0.049), higher proportion of females (60% vs. 41.5%, p = 0.029), and shorter in height (159.9 CM vs. 164.1 CM, p = 0.007) than the control group. Dosage and duration of the aspirin therapy were the same in both groups. The multivariate analysis showed old age was associated with aspirin resistance.

Conclusion: The prevalence of aspirin resistance in the present study is 0.6% (95% CI, 0.18%-1.38%). The risk factor for aspirin resistance in post stroke patients is aging. No association between duration and aspirin dosage with aspirin resistance was found. The proportion of aspirin resistance was similar to a previous study done in post myocardial infarction patients.

Keywords: Aspirin resistance, Ischemic stroke

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