Novel Oral Anticoagulants for Prevention of Stroke and Bleeding Complications in Thai Elderly Patients with Non-valvular Atrial Fibrillation: A Single Center Experience

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Background: Atrial fibrillation (AF) is one of the major causes of stroke and systemic embolism. Novel oral anticoagulants (NOACs) have been increasingly used for stroke and systemic embolism prevention in AF. It is well recognized that elderly patients seem to have high risk of bleeding and other complications after their uses. However, there is little information available concerning the benefit versus adverse effects of these drugs in elderly patients, especially Asian populations.

Objective: In the current study, we aimed to evaluate usage, dose, outcomes, and bleeding complications in Thai patients aged > 75 years with non-valvular AF who visited and were prescribed with NOACs at Siriraj Hospital.

Methods: We evaluated the retrospective electronic medical records of patients aged > 75 years with non-valvular AF according to ICD-10 who were prescribed with NOACs at Siriraj Hospital from January 2013 to December 2017. The NOACs doses were recorded and classified as appropriate or inappropriate doses according to ESC recommendation. The evaluated parameters in this study included baseline characteristics, creatinine clearance, CHADS2, CHA2DS2VASC, HASBLED score, and current medications. Longitudinal outcomes consisting of ischemic stroke, myocardial infarction, pulmonary embolism, death, and bleeding complications in correlation to drug usage were evaluated.

Results: The mean age of 244 patients was 82.12 years and 59.4% were female. The prescription of Dabigatran, Apixaban, and Rivaroxaban was 37.3%, 31.6% and 31.1%, respectively. The mean duration of follow-up was 445 days. 72 patients (29.5%) were prescribed with inappropriate dose, while 46 (18.9%) with under dose and 26 (10.7%) with overdose. The stroke event of all treated patients was 2%. Moreover, the bleeding events were observed in 38 patients (15.5%), with 2 (0.8%) fatal bleeding. The overdose group was found to have significant higher events of gastrointestinal bleeding than the appropriate group (p-value = 0.005). The relative risk of the overdose group was 5.292, (95% CI 1.519-18.442) compared to the appropriate group.

Conclusion: Thai elderly patients taking NOACs have the same incidence rate of stroke and bleeding as compared to the previous study. The number of patients receiving inappropriate dose is high, up to 29.6%. There is a significant association between the overdose group and prevalence of GI bleeding.

Keywords: Novel oral anticoagulants, Atrial fibrillation, Elderly