00294 Evaluation of the Safety and Efficacy of Direct Anticoagulants Versus Warfarin in Patients With Non-valvular Atrial Fibrillation - A Single Centre Retrospective Cohort Study in Singapore

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Aims: Multiple randomized clinical trials and meta-analyses consistently showed that direct oral anticoagulants (DOACs) are generally better compared to warfarin in terms of safety and efficacy outcomes. However, there is limited data on Southeast Asian patients in the major clinical trials. Therefore, this study aims to evaluate the safety and efficacy of DOACs versus warfarin in patients with non-valvular atrial fibrillation (NVAF) in Singapore.

Methodology: This single-centre retrospective cohort study included patients aged $\geqslant$ 21 years old newly prescribed with oral anticoagulants for NVAF between 01 January 2015 and 31 December 2015. Data on patient demographics and comorbidities were collected then CHA2DS2-VASc and HAS-BLED scores were computed. All patients were followed for 2 years from the initiation date of anticoagulation. Primary safety and efficacy endpoints include major bleeding and stroke respectively. Secondary safety and efficacy endpoints include overall bleeding and thromboembolic events respectively. All endpoints were evaluated via Kaplan-Meier survival analysis.

Result: A total of 439 patients were identified through electronic medical records from Changi General Hospital whereby 157 received warfarin (35.8%), 154 received rivaroxaban (35.1%), 98 received apixaban (22.3%) and 30 received dabigatran (6.8%). The patients selected were predominantly male (56.5%) and Chinese (73.8%) with overall mean age of 70.8 (±10.8) years old. Overall median CHA2DS2-VASc and HAS-BLED scores were 3.0 (2.0-4.0) and 1.0 (1.0-2.0) respectively. Mean follow up duration was 684 (±157) days. There was no significant difference in time to major bleeding and stroke between DOACs versus warfarin (adjusted $p > 0.05$). Patients who received apixaban had significantly shorter time to overall bleeding (adjusted HR: 2.21, 95% CI: 1.03-4.72, $p = 0.041$) and thromboembolic events (adjusted HR: 7.00, 95% CI: 1.96-24.91, $p = 0.003$) when compared to warfarin.

Conclusion: The safety and efficacy of DOACs are similar to warfarin and may be considered as alternative anticoagulants for NVAF.