

The performance of SAME-TT2R2 score in predicting the quality of anticoagulation control in a Malaysian population

Lim Chong Teck¹, Mohd Saffian Shamin², Md Redzuan Adyani², Tan Swee Looi³, Wong Wu Ching¹

¹Pharmacy Department, Hospital Tengku Ampuan Rahimah, Klang, Selangor, ²Faculty of Pharmacy, Universiti Kebangsaan Malaysia, Kuala Lumpur, ³Medical Department, Hospital Tengku Ampuan Rahimah, Klang, Selangor

ABSTRACT

Introduction: Warfarin is the mainstay oral anticoagulant for stroke prevention in atrial fibrillation (AF). Poor quality of anticoagulation control, with a time in therapeutic range (TTR) <70%, is associated with an increased risk of stroke and bleeding. The Sex, Age, Medical history, Tobacco use, and Race (SAME-TT₂R₂) score was proposed as a simple clinical tool to identify AF patients expected to respond poorly to warfarin. The study aimed to investigate the performance of the score in predicting the quality of anticoagulation control in a multiethnic Malaysian population. **Methods:** Data from patients attending the Anticoagulation Clinic in Hospital Tengku Ampuan Rahimah (HTAR) Klang, Malaysia between January to December 2019 was collected retrospectively. The TTR was calculated using the Rosendaal method, and the SAME-TT₂R₂ score was determined for each patient. **Results:** The 388 patients had a mean TTR (\pm SD) was 51.2% (\pm 26.3%), with only 103 (26.5%) patients achieving good quality of anticoagulation control (TTR \geq 70%). The median (IQR) SAME-TT₂R₂ score measured was 3 (2–4), and 287 (74.0%) patients had a SAME-TT₂R₂ score > 2. The area under the receiver operating characteristic (ROC) curve showed that SAME-TT₂R₂ score > 2 was not able to discriminate poor anticoagulation control (TTR < 70%) [c-statistic 0.49 (95% CI 0.43–0.56)]. **Conclusion:** The SAME-TT₂R₂ score did not satisfactorily predict the quality of anticoagulation control of AF patients on warfarin in the clinic. Modifying the score based on culture-specific or socioeconomic factors in Asians may be necessary for the SAME-TT₂R₂ score to be clinically useful in this region.