

ABSTRACT

Background: Warfarin is an oral anticoagulant prescribed worldwide with a narrow therapeutic index and wide interindividual variability in dose requirement. Due to its difficulty in predicting an accurate dose for an individual, it predisposes patients to risks of thromboembolism or even hemorrhagic events associated with underdoing or overdosing respectively. Thus, Time in Therapeutic Range (TTR) is recommended to monitor warfarin anticoagulation control with TTR >60% considered as well controlled. This study assessed the performance of warfarin and associated patients' and institutional factors on anticoagulation control among adults at UHI, Mulago Hospital from July to October 2021.

Methodology: In this study, 157 patients were enrolled, aged 18 to 80 years on warfarin as an anticoagulant control for not less than six months and had a minimum of three INR results. Consecutive and convenient sampling of all patients was done. Patients' previous three INR results were retrieved from their respective files plus the INR test done on the review date and these were used to calculate the TTR using the Rosendaal's method of linear interpolation. Quantitative data was entered into MS excel and later exported to the STATA SE13 for analysis while qualitative data was coded manually to generate themes. A TTR >60% was considered good control.

Results: The average TTR among the study participants was 45.97% (95% CI=41.51-50.44) and a median of 43% (IQR=24-67). Only 31.21% had a TTR >60. The association between controlled TTR was assessed with; gender, education, comorbidity, comorbidity medication, missed taking warfarin, vitamin K food substance use, use of non-prescribed substances, indication for warfarin, accessing warfarin, paying for warfarin and knowledge regarding warfarin use. Using chi square test and a p value of 0.05, none of the factors was associated with the poor warfarin anticoagulation control. Participants had their views about the services offered at UHI including; appreciation of the cheaper services and quality time with health workers. There were reports on inadequate doctors and long clinic distance.

Conclusion and recommendation: There was inadequate anticoagulation control among adult patients on warfarin therapy attending Uganda Heart Institute, Mulago Hospital with a TTR of 45.97%. The anticoagulation performance of Warfarin was thought to be intrinsic, not affected by the external factors. Therefore, a need to change individuals who are not responding on warfarin to a superior anticoagulant.