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Quality of anticoagulation management with warfarin among outpatients in Tikur Anbessa specialized hospital

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Warfarin is the most widely used anticoagulant in the world. The difficulty of managing warfarin contributes to great potential for patient harm, both from excessive anticoagulation and insufficient anticoagulation. The objectives of this study were to assess the INR control outcome measures for warfarin therapy, to investigate quality of warfarin prescribing and to assess level of patients' knowledge on warfarin therapy among outpatients in Tikur Anbessa Specialized Hospital (TASH). The study was based on cross sectional study design involving retrospective chart review and Oral Anticoagulation Knowledge Assessment (OAKA) questionnaires. 360 patients' charts were included and 130 patients were interviewed in this study. Patients spent 52.2%, 29% and 18.8% of the times in sub-therapeutic, therapeutic and supra-therapeutic ranges, respectively. The daily warfarin dose was increased in (50.9% and 36.9%) and decreased in (52.8% and 60.9%) of the times for occurrences of sub-therapeutic and supra-therapeutic International Normalized Ratio (INRs) to achieve target ranges of 2.0-3.0 and 2.5-3.5 respectively. The majority of patients (76.9%) had moderate knowledge on warfarin therapy. The mean score of patients on correct response was 11.8 ± 2.5 ($59.3\% \pm 12.8\%$). Among interviewed patients only 13.9% of them got passing scores. This study found that quality of anticoagulation management with warfarin among outpatients in TASH was suboptimal. This was reflected by low Time in Therapeutic Range, longer INR monitoring frequency, minimal actions taken to adjust warfarin dose after occurrences of non-therapeutic INRs; and poor patients' knowledge. Establishing pharmacist managed anticoagulation clinic which was supported by computer software programs may be the integral part of anticoagulation management services in TASH.