

Predictors of Anticoagulant Treatment Control in New Warfarin Patients in Jordan

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Abstract

Background: Warfarin, a commonly prescribed oral anticoagulant, relies on maintaining effective therapeutic levels as measured by the time within therapeutic range (TTR) and international normalized ratio (INR). However, the narrow therapeutic index of warfarin, influenced by both genetic and non-genetic factors, poses a significant risk of bleeding or coagulation complications. Identifying predictors of stable INR levels in warfarin-naïve patients is crucial to improve treatment safety and efficacy. Methods: This retrospective study conducted between 2018 and 2021 at Queen Alia Hospital Institute QAHI – RMS aimed to identify the impact of patient demographics, co-morbidities, and drug-drug interactions on stable, sub-therapeutic, and supra-therapeutic INR readings. Additionally, the study sought to determine risk factors for warfarin toxicity and major bleeding events associated with warfarin treatment. Results: Medical records of 163 warfarin-naïve patients (103 males, 60 females) with a baseline INR [?]1.2 were analyzed. Patients were admitted as emergency cases or transferred from internal medicine to the warfarin clinic. The majority of patients were under 65 years of age, overweight, and received warfarin for heart valve replacement or atrial fibrillation. Polypharmacy was common among the patients. Analysis revealed both good responders (24.5%) and poor responders (75.5%) in terms of TTR%. Conclusion: Predictors of warfarin anticoagulation may include age, gender, smoking status, and concomitant medication use. Considering these factors when managing warfarin therapy can improve treatment outcomes and patient safety.

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