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Development of Trigger Tool to Identify Adverse Drug Events From Warfarin Administered to Patient Admitted in Medical Wards of Chumphae Hospital

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Abstract : Objectives: To develop the trigger tool to warn about the risk of bleeding as an adverse event from warfarin drug usage during admission in Medical Wards of Chumphae Hospital. Methods: A retrospective study was performed by reviewing the medical records for the patients admitted between June 1st,2020- May 31st, 2021. ADEs were evaluated by Naranjo's algorithm. The international normalized ratio (INR) and events of bleeding during admissions were collected. Statistical analyses, including Chi-square test and Reciever Operating Characteristic (ROC) curve for optimal INR threshold, were used for the study. Results: Among the 139 admissions, the INR range was found to vary between 0.86-14.91, there was a total of 15 bleeding events, out of which 9 were mild, and 6 were severe. The occurrence of bleeding started whenever the INR was greater than 2.5 and reached the statistical significance ($p < 0.05$), which was in concordance with the ROC curve and yielded 100 % sensitivity and 60% specificity in the detection of a bleeding event. In this regard, the INR greater than 2.5 was considered to be an optimal threshold to alert promptly for bleeding tendency. Conclusions: The INR value of greater than 2.5 (>2.5) would be an appropriate trigger tool to warn of the risk of bleeding for patients taking warfarin in Chumphae Hospital.

Keywords : trigger tool, warfarin, risk of bleeding, medical wards
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