

PP 8

Impact of Brief Educational Intervention and Telephone Reminders on Appropriate Use of Warfarin; a Pilot Study

Gunapala P.C.S.K.^{1#}, Dissanayake D.M.K.A.¹, De Silva D.N.S.¹, Fahim A.C.M.²
Karunanayaka K.D.S.V.³

¹Department of Pharmacy, Faculty of Health Sciences, The Open University of Sri Lanka

²Department of Pharmacy, Faculty of Allied Health Sciences, University of Peradeniya

³Department of Pharmacy, Faculty of Allied Health Sciences, University of Ruhuna

[#]Corresponding author: chinthi_skg@yahoo.com

Background: Warfarin is a commonly used oral anticoagulant in clinical practice. Optimal treatment with warfarin is challenging since it has a narrow therapeutic index. It is associated with high frequency of food and drug interactions. Appropriate patient education regarding warfarin therapy may increase adherence to drug and reduce complications.

Objectives: To assess patient compliance on use of warfarin and the impact of pharmacist-initiated educational counseling in improving medication adherence in patients receiving warfarin.

Methodology: This prospective study enrolled 100 patients who are on warfarin attending different clinics in a Teaching Hospital. Patients were interviewed using pre-tested interviewer administered questionnaire at baseline. Patients were randomly allocated to two groups as intervention and control. The intervention group received educational intervention on appropriate use of warfarin as per published guidelines using information leaflets and telephone reminders twice a month. At the end of three months, patients' knowledge in both groups was assessed using the same questionnaire used at the baseline.

Results: The control group maintained the constant dose level and International Normalized Ratio (INR) within 2-3 as 14.29% and 26.53%, respectively. In contrast, after education intervention, 17.39% (17.39-intervention vs 14.29-control, $p=0.67$, $X_2=0.18$) and 36.96% (36.96%-intervention vs 26.53-control, $p=0.26$, $X_2=1.24$) patients in the intervention group could maintain the constant dose level and INR within 2-3, respectively suggesting slight but statistically non-significant increase in adherence. All patients preferred information leaflets and majority (93.47%) to telephone reminders as an effective educational tool to increase the compliance. Telephone reminders, offering information leaflets and counseling are effective in enhancing the knowledge regarding dosage regimen, side effects and type of foods to consume, compliance of patients compared to the control group. Education intervention may also help to reduce secondary complications such as bleeding, dark purplish mottled fingers and toes, and allergic reactions from 26.09% to 4.35% in the intervention group ($p=0.0023$, $X_2=9.32$).

Conclusions: Education intervention in the form of information leaflets and telephone reminders help to improve compliance of patients and therapeutic outcome of warfarin. Larger studies are warranted to generalize these findings.

Keywords: Warfarin, Oral anticoagulant therapy, Educational intervention, Telephone reminders, Pharmacist