

ANALYSIS OF POTENTIAL DRUG INTERACTIONS WITH WARFARIN AND PHARMACIST'S INTERVENTIONS FOR THE CLINICAL MANAGEMENT OF PATIENTS IN A UNIVERSITY HOSPITAL

Castro TA.^{1*}; Heineck I.

¹Programa de pós-graduação em Ciências Farmacêuticas, UFRGS

*Mestrando – Início: 2009/1

Introduction: Warfarin is the most widely used oral anticoagulant in clinical practice for the last 50 years¹. It is considered the most effective of its class, but serious bleeding events associated with its use are still a major challenge for Medicine². According to the Food and Drug Administration, warfarin is one of the 10 medicines with the highest number of serious adverse events reported between 1990 and 2000³. Anticoagulated inpatients are at increased risk for serious drug interactions (DDI), because they are exposed to more drugs and are more fragile⁴.

Objective: The aims of this study are to identify potential drug interactions with warfarin, to describe the interventions proposed by pharmacists and to assess the degree of acceptability of these interventions for the management of these interactions in a university hospital.

Materials and Methods: This prospective cohort study consider hospitalized adult patients taking warfarin at two inpatient internal medicine units at the Hospital São Lucas (HSL). Patients are selected by a computer-generated list obtained from the Department of Pharmacy. In order to study, at least 184 patients will be used to sample. Medications are screened for drug interaction with warfarin using the drug interaction screening program Drug-Reax, MICROMEDEX Healthcare Series. At least two prescription orders per patient are selected, the first order of warfarin and next orders after recommendation to verify the degree of interventions acceptance. Furthermore the medical record is monitored and the international normalized ratio (RNI) value is checked. The necessary interventions are proposed by registry in medical records or verbal information to physician. The data will be organized and analyzed using SPSS version 14.0.

Results and Discussion: To date, data were collected from 60 patients, 33 women and 27 men. The mean age was 59 years and the mean hospital stay 18 days. The inpatients were exposed to 210 potential drug interactions with warfarin. Of this total, 97% were considered clinically relevant and motivating the record by pharmacist in the medical record. The most frequent information recorded were the description of the interaction and relationship with the INR value. In most cases (78%), the recommendation were accepted and implemented. An excessive increase of INR was observed in 38.5% of cases in which the pharmacist's suggestion resulted in no change in prescribing. Simvastatin, omeprazole and aspirin, were the drugs most commonly involved in interactions with warfarin, resulting in increased risk of bleeding.

Conclusions: Clinically relevant DDIs are common inpatients on medical wards, and their management can be influenced by providing recommendations to physicians. Considering that in our country this practice is not common, we hope this study will help to alert health teams to the need of minimize the risks of using this medicine.

References

1. Anderson, R. J., Divers, C., Von Hennigs, I. Drug interaction exposure in chronic atrial fibrillation patients maintained on warfarin. *J Thromb Thrombolysis*, v.19, n.2, Apr, p.123-4. 2005.
2. Van Walraven, C., Austin, P. C., Oake, N., *et al.* The effect of hospitalization on oral anticoagulation control: a population-based study. *Thromb Res*, v.119, n.6, p.705-14. 2007.
3. Wysowski, D. K., Nourjah, P., Swartz, L. Bleeding complications with warfarin use: a prevalent adverse effect resulting in regulatory action. *Arch Intern Med*, v.167, n.13, Jul 9, p.1414-9. 2007.
4. Seymour, R. M., Routledge, P. A. Important drug-drug interactions in the elderly. *Drugs Aging*, v.12, n.6, Jun, p.485-94. 1998.