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SUWIMON JATUPOOMDECHA : MONITORING OF DRUG INTERACTIONS AT  
THE MEDICAL WARDS OF PHRAMONGKUTKLAO HOSPITAL. THESIS ADVISORS:  
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Monitoring of drug interactions is a pivotal activity in which a clinical pharmacist can assist to provide more efficient pharmaceutical care to patients. The design of this study was descriptive prospective with interventions which aimed to determine possible and actual drug-drug interactions and phenytoin-enteral feeding interaction at medical wards in a medical center of tertiary level. Specifically, digoxin, theophylline and phenytoin serum levels were monitored to assure pharmacokinetic drug interactions. The current study consisted of 2 phases comparing incidence of drug interactions before and after interventions to medical residents involved directly in patient care at Phramongkutklao Hospital. In each 3-month period of phase I and phase II, we followed 528 and 497 patients respectively. Medical record of each patient was reviewed to monitor drug interactions which were defined by relevant current literature. Thereafter, we performed interventions which included providing an official lecture on drug interaction and providing a handout and a portable chart to all medical residents before phase II study. In addition, verbal communication and suggestion on possible drug interaction were performed during the phase II period. We found that the incidence of total drug interactions was 19.697% (104/528) in phase I and 15.895% (79/497) in phase II. We observed possible drug interactions at the incidence of 17.803% (94/528) in phase I and 15.090% (75/497) in phase II. In addition, 141 and 108 events of possible drug interactions were noted in phase I and phase II, respectively. Common possible drug interactions of both phases were pharmacokinetic drug interactions (110/141 in phase I and 96/108 in phase II). Concerning actual drug interactions, incidence in phase I was 1.894% (10/528) and in phase II was 0.805% (4/497). Ten and 6 events of actual drug interactions occurred in phase I and phase II, respectively. Pharmacokinetic drug interactions were the major type found in both phases (7/10 in phase I and 4/6 in phase II). Phenytoin-enteral feeding interactions, warfarin-amiodarone interactions and digoxin-amiodarone interactions were major actual drug interactions found in this study. In conclusion, the incidence of total drug interactions and actual drug interactions were lower in phase II than in phase I (p 0.0559 and 0.0668, respectively). Thus, monitoring of drug interactions is useful in this setting and should be considered as an active process to prevent possible adverse outcome to patients.