



Study of Potential Drug-Drug Interactions in Prescriptions of University-Based Pharmacies

Sarah Mousavi¹, Molood Norouzi², Asieh Ashouri³, Mohammad Reza Javadi^{4,5}, Kheirollah Gholami⁶, Molouk Hadjibabaie^{6*}

¹ Department of Clinical Pharmacy and Pharmacy Practice, Faculty of Pharmacy and Pharmaceutical Sciences, Isfahan University of Medical Sciences, Isfahan, Iran.

² School of Pharmacy, International Campus, Tehran University of Medical Sciences, Tehran, Iran.

³ Hematology-Oncology and Stem Cell Transplantation Research Center, Shariati Hospital, Tehran University of Medical Sciences, Tehran, Iran.

⁴ Clinical Pharmacy Department, College of Pharmacy, Tehran University of Medical Sciences, Tehran, Iran.

⁵ Pharmaceutical Care Department, Dr. Shariati Hospital, Tehran University of Medical Sciences, Tehran, Iran.

⁶ Research Center for Rational Use of Drugs and Clinical Pharmacy Department, Faculty of Pharmacy, Tehran University of Medical Sciences, Tehran, Iran.

ARTICLE INFO

Article type:

Original article

Keywords:

Drug Interactions
Community Pharmacy Services
Hospital Pharmacy Services
Prescriptions
Iran.

ABSTRACT

Background: Drug-Drug Interactions (DDIs) are adverse reactions caused by a combination of drugs; they are often predictable and therefore avoidable or manageable. The objective of this study was to evaluate the nature, type and prevalence of potential DDIs in prescriptions dispensed in university-based community pharmacies in Tehran, Iran.

Methods: From July 2012 to February 2014, sample of 1260 prescriptions were collected from community and outpatient hospital pharmacies affiliated to Tehran University of Medical Sciences (TUMS), Iran. The prescriptions were assessed using the reference text "drug interaction facts". The identified DDIs were categorized according to their level of significance into three classes (minor, moderate, major).

Results: At least one drug-drug interaction was present in 339 (26.9%) of prescriptions and a total of 751 cases of interactions were found in prescriptions. Major DDIs represented 7.3% of all DDIs detected, whereas moderate DDIs were 75% of all DDIs. The mean number of drugs per prescriptions was 3.2, with a median of 4 (range, 2-10). There was a positive association between number of prescribed drugs and occurrence of DDIs (OR: 2.14, 95% CI: 1.9-2.4). The prescriptions of medical specialist had greater risk of occurrence of moderate severity DDIs than general practitioners (OR: 1.52, 95%CI: 1.08-2.15).

Conclusion: Despite the prescriptions were collected from university-based pharmacies, but the overall prevalence of potential DDIs were high among patients. Physicians should be aware of potentially harmful DDIs. Meanwhile Pharmacists can contribute to the detection and prevention of drug-related injuries. Appropriate education, collaborating drug selection and pharmaceutical care are strongly recommended for physicians and pharmacists.

J Pharm Care 2014; 2 (2): 60-65.

► Please cite this paper as:

Mousavi S, Norouzi M, Ashouri A, Javadi MR, Gholami K, Hadjibabaie M. Study of Potential Drug-Drug Interactions in Prescriptions of University-Based Pharmacies. J Pharm Care 2014; 2(2): 60-65.

* Corresponding Author: Dr Molouk Hadjibabaie

Address: Department of Clinical Pharmacy, Faculty of Pharmacy, Tehran University of Medical Sciences, Enghelab Square, Tehran, Iran. Tel: +982166959090, Fax: +982166461178
E-mail: hajibaba@tums.ac.ir