



PHYSICIANS EXPECTATIONS TO PREVENT THE DRUG INTERACTIONS IN CLINICAL PRACTICE

BHASKAR H.VAIDHUN^{1*}, SATHISH AMIRTHALINGAM²

^{1*} Department of Pharmacology, M.P.Patel College of Pharmacy, Kapadwanj, Gujarat. ² Department of Clinical Pharmacy, A.R.College of Pharmacy, V.V.Nagar, Gujarat, Email:asathish1981@yahoo.co.in

Received: 02 May 2010, Revised and Accepted: 25 May 2010

ABSTRACT

Drug interactions may lead to adverse drug reactions that can be severe enough to necessitate hospitalization. Approximately 37-60% of patients admitted to the hospital may have one or more potentially interacting drug combinations at admission. Drug can be useful tools in the prevention and treatment of Symptoms and Diseases, but if not used properly, they may be Harmful and cause new symptoms (or) produce suboptimal effects. Most drugs have multiple pharmacologic effects in patients, specially the newer, more complex drugs being marketed. Clinically significant drug interactions can occur when two or more drugs are taken in combination. Drugs identified as having a high risk of being involved in a clinically significant drug interaction frequently have a narrow therapeutic index, a very steep dose-response curve or potent pharmacologic effects. More than 30 medications are introduced each year, and physicians receive frequent mailings about discovered drug interactions. As a result, many physicians feel overwhelmed and question the safety of multiple drugs Regimens. Some drug interactions may seriously harm to the patients.

Keywords: Drug interactions, Physicians, Questionnaire.

INTRODUCTION

Drug interaction are said to occur when pharmacologic activity of a drug altered by the concomitant use of another drug or by the presence of another drug or by the presence of food, drinks, or environmental chemicals¹.

A large number of drugs are introduced every year, and new interactions between medications are increasingly reported. Consequently, it is no longer practical for physicians to rely on memory alone to avoid potential drug interactions. The interaction may increase (or) decrease the effectiveness of the drug, it also may result in a new side effects. Recognizing drug interaction is a daily challenge for family physicians, and remembering all potential interaction has become virtually impossible ².

The magnitude of the drug interactions problem increases significantly in certain patient populations and as the number of medications taken each day increases. Drug interactions that may be of minor clinical significance in patients with less severe forms of a disease can cause significant exacerbation of the clinical condition in patients with more severe forms of the disease. Patient populations at high risk include the elderly, critical care patients, and patients undergoing complicated surgical procedures. The elderly populations are at high risk because of the number of medications consumed, complicated drug regimens, and clinical states often presented. About 80% of elderly patients routinely take prescription and nonprescription medications concurrently. Some patients may see multiple physicians for acute and chronic conditions, as well as obtain medication from more than one community pharmacy or mail-order pharmacy ^{3,4}.

Clinical management of drug-drug interactions should include prospective and concurrent patient, disease and drug-monitoring measures that are sensitive enough to alert the pharmacist or healthcare provider to monitor specific patient, disease or drug-therapy parameters and, whenever possible, correlate these findings with clinical laboratory tests. Follow-up monitoring of a patient's therapy and making appropriate adjustments in the drug regimen can circumvent potentially significant drug interactions. Patients at high risk for drug interactions who also take drugs with a narrow therapeutic index should be monitored more closely for drug interactions, especially when a new drug is added or discontinued.

Depending on the drugs in question, likely drug interactions will generally occur within a few days following a change in drug regimen. If two drugs have been identified as having high potential to interact and cause harm, the pharmacist can contact the patient's physician to obtain an order for another medication that will not cause the troublesome interaction ⁵.

MATERIALS AND METHODS

Site of study

The entire studies of Drug-Drug interactions Questionnaires were carried out in doctors from various specialties in hospital and out patient clinical practice from October - 2009 to December - 2009.

Study Design

Design of drug – drug interaction questionnaire

A standard Questionnaire containing 12 Questions regarding Prescription writing, importance, experience, training program attended, training needs, source of information's, software need and software design for Drug-Drug interaction were prepared.

Collection and analysis of Drug Interaction Questionnaire

The prepared Questionnaire circulated to 100 Doctors of various specialties. The filled Questionnaire were collected and analyzed.

RESULTS AND DISCUSSION

Drug-drug interaction questionnaire analysis

A standard Questionnaire containing 12 Questions regarding Prescription writing, importance, experience, training program attended, training needs, source of information's, software need and software design for Drug-Drug interaction were prepared. The prepared Questionnaire circulated to 100 Doctors of various specialties, the filled Questionnaire was collected, analyzed and the following results were obtained.

98% of Doctors consider Drug –Drug interaction is an important aspect while writing prescription.61% of Doctors had serious Drug-Drug interaction experience in their practice.95% of Doctors are not undergone any Drug-Drug interaction/Adverse Drug Reaction Training Program.75% of Doctors expressed their interest for attending Drug-Drug interaction / Adverse Drug Reaction Training. Most of the Doctors Evaluate the Drug-Drug interaction at the time of prescription writing, from memory (42%), book reference (22%) and both (28%).40% of Doctors felt that the ideal method for evaluating Drug-Drug interaction is from book reference. 95% of writing their prescription by Hand written.92% of Doctors need a better solution to identify the Drug-Drug interaction.64% of Doctors said, they want of try the computer-based software.85% of Doctors were interested on computer based software for identify the Drug-Drug interaction.72% Doctors interested the design of the software to be a CD/DVD based.

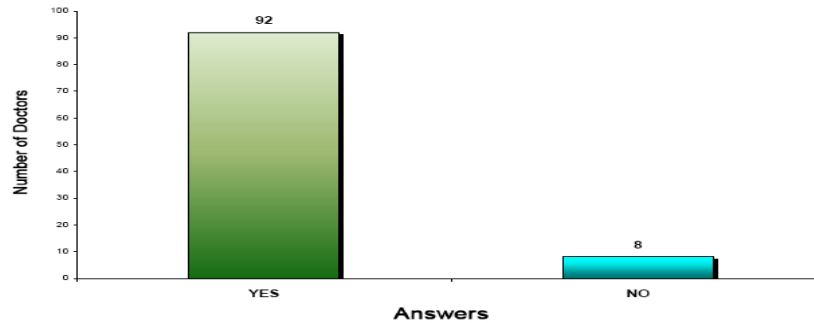


Fig. 1: It shows out of 100 Doctors, 92(92%) Doctors were need speedy, reliable, better solution to solve the Drug-Drug interactions.

Prevention of potentially harmful drug-drug interactions is an important element in helping patients avoids medication related problems and improving medication safety in inpatients and outpatients settings. However, several gaps in the healthcare professionals with DDIs screening process have been identified and can contribute to the occurrence of DDIs. These include failure to properly screening of potential DDIs, inadequate DDIs detection software, inconsistencies in the severity ratings of DDIs.

ACKNOWLEDGEMENT

The authors acknowledge to all the doctors of the hospital and out patients clinical practice to carry out this studies.

REFERENCES

1. Karan Baxter, Mildred Davis, Samuel Driver, editors. Stockly's Drug interaction, Suffolk: Hodder and Stoughton by pharmaceutical press; 2000.
2. Paul WA, John GB, James LL. Clinically Significant drug interaction. American family physician 2000; 61:1745-54.
3. Gosney M, Talus R. Prescription of contraindicated and interacting drugs in elderly patients admitted to hospital. Lancet 1984; 2:564-567.
4. Costa A, et al. Potential drug interactions in an ambulatory geriatric population. J Pharm Prac 1991; 8:234-236.
5. Chales H.Brown. Overview of drug interactions. US pharmacist 2002; 25:7.