

Abstract

Objective: Drug interactions reduce therapeutic efficacy and increase the duration and cost of hospitalization so that patients are sometimes exposed to significant complications and even death. Patients in the intensive care unit are at risk of drug interactions for a variety of reasons, including impaired absorption, decreased metabolism, and renal failure. Therefore, the present study was conducted with the aim of comparative study of drug interactions in hospitalized patients in intensive care units of educational hospitals in Ardabil province. The purpose of this dissertation is to evaluate, diagnose and express drug-drug interactions in the treatment of hospitalized patients in the intensive care unit and to compare them between educational hospitals in Ardabil province. Therefore, a comparative evaluation of drug interactions in patients in the ICU of Imam Khomeini, Fatemi and Alavi hospitals was projected.

Material and Method: In this descriptive-analytical cross-sectional study, drug prescriptions for a specific number of patients admitted to the intensive care unit of Ardabil University of Medical Sciences, including Imam Khomeini, Alavi and Fatemi hospitals in Ardabil, were studied. Patient information including age, sex, diagnosis, number of physicians, number of drugs, length of hospital stay, and status of patients' recovery or death were recorded in the research form. Then, using the online software up to date and the book Drug Intraction Facts, the interactions were checked and evaluated. Finally, the number of drug interactions per person, mechanism, onset of interactions, risk grade, types of intensity and reliability rate was entered the research form. They were then transferred to SPSS software and statistically analyzed.

Results: The number of patients studied was 355, of which 150 were from Fatemi Hospital, 150 from Imam Khomeini Hospital and 55 from Alavi Hospital. The average age of the patients were 51.88 ± 23.22 years. The average number of drugs received in patients were 8.45, the total number of interactions was 1605, and Imam Khomeini Hospital had the most interactions. Class X interaction was 1.4%, class D interaction was 26.2%, and class C interaction was 67.7%. The number of pairs of drug interactions was 499, of which Imam Khomeini Hospital had the most diversity with 350 types of interaction pairs. **Conclusion:** Drug interactions can have side effects on patients, which according to statistical data in general, increasing drug interactions can increase the length of hospital stay of patients and the mortality rate of patients. With the participation of the clinical pharmaceutical team, we can further control and reduce such drug interactions.

Keywords: Drug Interactions, Intensive Care Units, Interaction Mechanism, Side Effects