OPEN ACCESS Freely available online

Journal of Developing Drugs

Prevalence and characteristics of adverse drug reaction among patients in Jubail, Saudi Arabia

Zainab Al Madan

Royal Commission Hospital, Saudi Arabia

Abstract

Introduction: Adverse Drug Reactions (ADRs) often causes prolonged hospitalization and have an increased risk of mortality. ADRs should be differentiated from adverse drug events (ADEs), as ADEs extend beyond ADRs to include harm related to medication errors and drug/food interactions. Adverse drug reaction can greatly affect the quality of life. It may lead to various undesired outcomes such as use of suboptimal alternative drugs, unnecessary investigations, delayed treatment and as a result lead to increased incidence of morbidity and mortality.

Objective: This study aimed to evaluate the prevalence and characteristics of adverse drug reaction as well as, risk factors of allergic drug reactions among hospitalized patients at secondary care center (RCH) in Jubail, Saudi Arabia.

Methods: A cross-sectional study conducted at the Royal Commission Hospital (RCH), Jubail, Saudi Arabia. The study included all patients admitted to RCH during the period from 2017 through 2019. All patients admitted to RCH during the study period were reviewed to identify those with at least one documented drug allergy incident. The data was collected by the study authors from the hospital medical electronic data system by using a structured questionnaire that consists of two sections. The main section is the one adapted from the Adverse Drug Reaction Probability Scale (Naranjo).

Results: A total of 93 patients with reported ADR were recruited in the current study, more than half (55.91%) of them were females, with a mean (±SD) age of 35.79(±21.18). The highest prevalence was for the "probable" ADR at 44.9%, followed by "possible" at 38.8%, but, "definitely" ADR was the lowest at 5.1%. There was a statistically significant (P-value 0.042) difference in the prevalence of ADR by gender, and the "definitely" identified ADR cases were all males. Besides, the correlation was also significant (P<0.05) between the prevalence of ADR and the use of specific antagonists as well as the committee action. The suspected medications for ADR were mainly antibiotics by 54%, particularly the third generation cephalosporins at 13%, followed by the penicillin subtype at 11%. Ceftriaxone was the highest at 13.54%, followed by vancomycin at 9.38%, and cefazolin at 8.33%. This was followed by analgesic class at 14%.

Conclusion: ADRs reported in the current study were mainly probable, and the definite ones were within the reported prevalence globally. The maximum number of ADRs reported was with antibiotics. The majority of patients had recovered from the ADRs.

Keywords: Adverse Drug Reaction Probability Scale (Naranjo), Prevalence, Saudi Arabia, Jubail, Royal commission hospital.