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Assessment of the Prevalence of Drug–Drug Interactions in the Medical Intensive Care Unit of a Tertiary Care Teaching Hospital in India



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ABSTRACT

Background: Drug interaction refers to modification of response to one drug by another when they are administered simultaneously or in quick succession with the increase in the number of patients, multiple diseases, and complex therapeutic regimens, polypharmacy becomes unavoidable in Intensive Care Unit (ICU). Polypharmacy increases the risks of drug Adverse Events (AEs), especially the Drug-Drug Interactions (DDIs), and that leads to elevated healthcare costs, morbidity and mortality. **Methods:** A prospective observational study was conducted for duration of 3 months to assess the prevalence of potential DDIs in medical Intensive Care Unit (MICU) of a tertiary care teaching hospital located in Telangana, India by using Lexi Comp interaction checker. **Results:** A total of 112 patients were included in the study out of which 68 (60.71%) were males and 44 (39.28%) were females. 84 (75%) patients were found to be with drug interactions and 28 (25%) patients were found without any drug interactions. The average length of the stay of the patients in the hospital was 6 days. A total of 248 interactions were found showing an average of 2.95 drug interactions per patient. Furosemide followed by phenytoin, aspirin, atorvastatin and clopidogrel are the most frequently interacting individual drugs. Antiplatelet /anticoagulant agents have a prominent role in the development of interactions in ICU in our study. **Conclusion:** All the health providers must be trained so that they should be able to identify and classify DDIs, and know how to manage/prevent them. In ICUs, clinical pharmacist should take the responsibility of monitoring DDIs and notifying them to prescriber/physician about potential problems. This kind of practice will increase the patient safety.