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POSSIBLE DRUG-DRUG INTERACTIONS IN PRESCRIPTIONS OF DISCHARGED PATIENTS AT A SELECTED TEACHING HOSPITAL IN COLOMBO DISTRICT

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Drug-Drug Interactions (DDIs) can be defined as alteration of the response of one drug by another drug, when two or more drugs are administered simultaneously. Alterations can be synergism, antagonism or idiosyncratic. Early detection of DDIs can prevent the occurrence of undesired effects. In Sri Lanka, limited research has been conducted in relation to DDIs. This study was directed to bridge aforesaid gap and to assess possible DDIs in prescriptions of discharged patients at a selected Teaching Hospital in the Colombo District. A descriptive cross sectional study was carried out in ten randomly selected medical wards at the selected teaching hospital. A total of 132 discharged prescriptions were included through convenience sampling. Data collection sheet was used to extract required data from discharged prescriptions. Preliminary detection of DDIs was done using the software, Drugs.com. Then confirmation and further analysis were performed using National Formularies (British National Formulary, Australian Medicine Handbook). Data were analyzed descriptively and inferentially using SPSS (version 21) software. A majority (81.1%) of the prescriptions were of married female patients over 51 years of age (72.6%) with up to secondary education (75%). Cardiovascular disease was reported in 43.6% of the patients with discharged prescriptions in the past medical history. Out of 132 discharged prescriptions with 705 medicines, 54 (40.9%) discharged prescriptions were detected with possible DDIs. The average presence of DDI per prescription was 0.6 and average number of medicines per prescription was 05. Maximum number of DDIs recorded per prescription was 07 out of 09 drugs on the prescription. There was no relationship between the number of drugs and the presence of DDIs (p = 0.0423). Out of total interaction, 26.9% interactions were major (only in 09 prescriptions) and 70.4% were moderate (in 46 prescriptions) as per the severity level in the above Formularies. The most frequent (n = 24) DDI was between Clopidogrel and Aspirin combination which is with moderate severity level. Considerably, major DDIs were reported with Furosemide and Amiodarone (n = 06s) combinations and Losartan and Amlodipine (n = 6) combinations. There was a significant relationship between the age and the presence of DDIs in discharged prescriptions (p = 0.0341). Prevalence of possible DDIs in discharged prescription of elderly people need to be considered even with significant absence of major DDI as per the study. More emphasis on DDI detection process in discharged prescriptions could improve medication safety and prevent medication associated hospital readmissions.

Keywords: Drug-Drug interactions, Discharged prescriptions