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Evaluation of Drug Related Problems of Diuretics in a Tertiary Care Hospital – A Prospective Observational Study

Running title: Evaluation of Drug Related Problems of Diuretics in a Tertiary Care Hospital.

*KrishnapriyaL^{*1}, LisanaV¹, VilmaVarghese¹, Ahammed Shabeer¹, ViniPavithran², KiranDR³*

1. Pharm D Intern, Department of Pharmacy Practice, Grace College of Pharmacy, Palakkad, Kerala, 678004.
2. Associate Professor, Department of Pharmacy Practice, Grace College of Pharmacy, Palakkad, Kerala, 678004.
3. Medical Superintendent, Karuna Medical College Hospital, Palakkad Kerala, 678004.

***Corresponding Author:** Krishna Priya L, Krishna Priya L, Pharm D Intern, Department of Pharmacy Practice, Grace College of Pharmacy, Palakkad, Kerala, India, 678004

Email Id: serviceheb@gmail.com

ABSTRACT

Introduction: Diuretics are a staple of treatment for a wide range of illnesses, including nephritic syndrome and hypertension. The study was performed to evaluate the drug related problems with diuretics based on medication error, adverse drug reaction and drug interactions.

Objective: The study aims to evaluate the drug related problems associated with use of diuretics.


Method: This study was designed as a hospital based prospective observational study and a total of 100 prescriptions with diuretics were taken for this study. Information was taken from the case file by filling the performance either by interviews or by collection of data from patient's casefiles or both of the above. Medication error was detected using PCNE classification V9.1. ADR were checked by using Naranjo Causality Assessment Scale and drug interactions were checked by lexicomp software.

Result: Distribution of the medication error were performed, prescription error was found to be 82% followed by administration error 18%. Description of medication error according to PCNE classification was done. On ADR distribution, 8 ADRs were reported, with hypokalemia (3) and hyponatremia (3) followed by hypochloremia (2). In the distribution of drug interactions, moderate interactions were mostly found (62.9%) and least found were major interactions (9.2%)

Conclusion: The study shows that prescription error were the mostly found medication error followed by administration error which were analyzed using PCNE classification V9.1. Also ADR monitoring was done

and 8 ADRs reported, with furosemide (50%), hydrochlorothiazide (25%), chlorthalidone (25%) and torsemide (12.5%). In drug interaction distribution moderate interactions were mostly found(62.9%) and least found were major interactions (9.2%). 12% of drugs was prescribed by generic name and 42% of prescriptions with injections.

Keywords: *Drug Utilization Evaluation, diuretics, medication error, PCNE classification, Adverse Drug Reaction, Causality, severity assessment scale.*

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