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ASSESSMENT OF SAFETY & ADR OF IN/OUT PATIENT IN HOSPITAL AT YAVATMAL

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Abstract:

WHO defines ADR as any dangerous and undesirable reaction that occurs in humans at doses that prevent, diagnose or treat disease or alter the body. The incidence and severity of ADRs are affected by patient characteristics (e.g. age, gender, weight, comorbidities, race, genetics or geography) and the effects of drugs analyze, manage, write and report. Hospitals are reviewed daily and monitored for ADR. Evaluate suspicious ADRs using standard algorithms. Name, age, gender, reason for enrollment, brief description of drug reactions, history of drug interactions, onset and severity of ADRs experienced, effects of ADR on treatment and drugs, drug use, etc. includes. All drug information, method and frequency. All putative ADRs were evaluated for violations using the Naranjo algorithm. This is observational study done for period of approximately 3 months from February 27 2023 to April 15 2023 at the various hospitals. Data from a total of 50 patients were analyzed during the study, of which 15 (30%) experienced at least one adverse drug reaction (ADR). Fifteen patients were divided into two groups: Group-1 patients who presented or presented with ADR, and Group-2 patients who experienced or observed ADR during their hospitalization.

Keywords: World Health Organization, ADR, Hospital.

INTRODUCTION:

ADRs are defined as adverse drug reactions. The emergence and use of ADR depends on the demographic characteristics of the patient such as age, sex, weight, current diseases, race, genetics, geography, and the characteristics of the drugs such as drug class, dose and duration of treatment, administration and method of other drugs application [1].

ADR can be classified as one of the following; hematology (e.g. neutropenia, anemia) dermatology (e.g. skin reactions), central nervous system (e.g. depression, epilepsy), metabolism (e.g. Acidosis, diabetes mellitus, hyperkalemia), reproductive diseases (e.g. gynecomastia, sexual dysfunctions), gastrointestinal diseases (e.g. nausea, vomiting, diarrhea), bone diseases (e.g. G. osteopenia, osteoporosis), heart disease (e.g. arrhythmia, coronary angioplasty), hepatic (e.g. hepatitis, pancreatitis) or other conditions. ADRs vary in severity and can lead to hospitalization, serious disability, medically significant or life-threatening complications, and even death. It is usually caused by pharmacokinetic interactions (e.g. drug absorption, drug excretion, enzyme induction, enzyme inhibition) or pharmacodynamics interactions (e.g. drug use drugs). G. Synergy [2].

In addition, allergic reactions and combinations of two or more drugs can also lead to the development of ADRs [3,4]. These are due to a lack of information about the drug and its effects before it is sold. Additionally, interactions between various drugs are often not identified prior to marketing [5]. However, some negative effects are also created, triggered or increased. These include patients who do not comply with medication regulations and prescription and medication errors. While these problems may seem insurmountable, there are many ways to reduce their occurrence and reduce their consequences, such as focusing and researching specific individuals who suffer from drug allergies and drug interactions.

ADRs have had a significant impact on our health systems, resulting in increased patient morbidity, mortality, hospitalization and medical costs. To monitor and help reduce the incidence of ADR in th country, the National Institute of Health commissioned the Medicines and Medicines Group to report on ADR-related issues [6]. The committee's mission is to promote patient safety, recommend the use of safe and effective drugs, recommend changes in policy and clinical practice, and raise awareness of ADRs and the need to report all suspected ADRs [7,8].

Adverse drug reactions:

The World Health Organization (WHO) definition of adverse drug reaction - "any noxious, unintended or undesired effect of a drug occurring at dosages administered in humans for prophylaxis, diagnosis or treatment"[9].

ADRs are classified according to cause and severity:

Type A (therapeutic) reactions: These are pharmacological drugs with different and multiple responses. They depend on the quantity, the spread, the expectation. They can cause toxic side effects. For example: Heparin

Type B (for example) anti-bleeding drug depends on the characteristics of the patient without the use of medication. The answer also has to do with genetics and the environment. The best example is an allergic reaction to penicillin.

Type C (chronic) reactions occur when the drug is used for a long time. These responses are definable and predictable. Some examples are benzodiazepines and drugs that treat nephropathy.

Type D (chronic) reactions are due to carcinogenesis or teratogenicity.

Type E (non-sustained) reactions occur due to an abrupt decision on long-term treatment.

Severity: Adverse reactions are considered serious according to the US FDA if patients are life-threatening, prolonged hospital stays, and are disabled:

SUBJECTS AND METHODS

This observational, prospective study was conducted at pediatric and geriatric in-patients department at Government medical college and hospital, yavatmal for a period of 3 months from February 2023 to March 2023. In-patients within the age group of 1 year to 80 years were incorporated in the study. The objectives of the study were to analysis of the emergence, causation and prevention of ADRs. Clinical data were obtained from 50 in-patients of patient profile form, medication error reporting form and ADR reporting form. The results are formulated by using MS - Excel.

RESULTS AND DISCUSSION:

Enrollments analyzed for a total of 50 patients during the study period, 15 (30%) experienced at least one adverse drug reaction (ADR). Fifteen patients were divided into two groups

Group-1 Patients admitted or hospitalized for ADR and
Group-2 Patients who experienced or observed ADR during their hospitalization

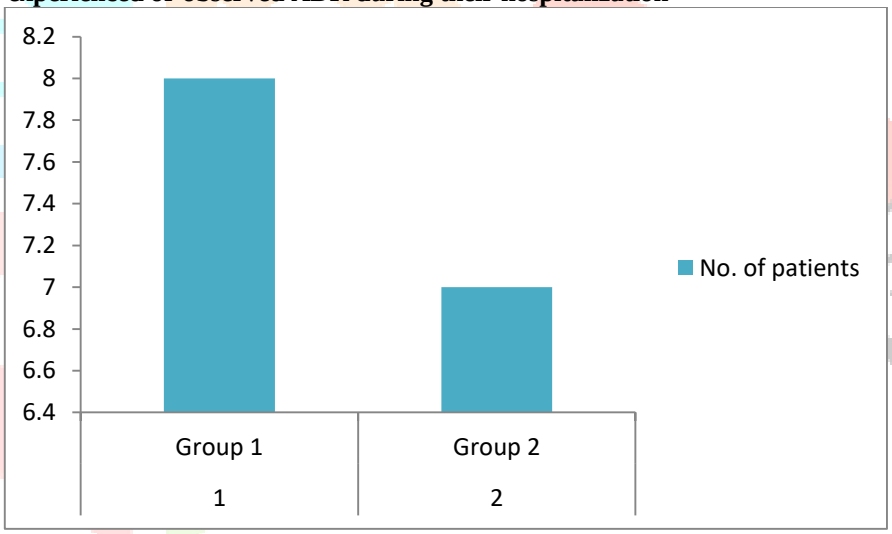

Figure No 1: Schematic Representation of Number of Patients

It was determined that 8 (53.33%) of the 15 patients enrolled had hospitalization or side effects, and 7 (46.66%) had side effects during their hospital stay.

Group-1: Patients admitted or hospitalized for ADR

Amid 8 patients, 8 ADRs were identified, indicating that more than one ADR occurred in one patient. In the table below, 8 patients are divided into 5 classes according to their age.

Table No 1: Age wise distribution

Sr. No.	Age	No. of patients	Percentage (%)
1	1-20	1	12.5%
2	21-40	1	12.5%
3	41-60	2	25 %
4	61-80	4	49.5%
Total		8	100 %

Table No 2: Sex wise distribution

Sr. No.	Sex	No. of Patients	Percentage (%)
1	Male	5	62.5%
2	Female	3	37.5%
Total		8	100%

Table No 3: Area wise Distributions

Sr.No.	Area of Residence	No. of Patients	Percentage%
1	Urban	2	25%
2	Rural	6	75%
Total		8	100%

Table No 4: Distribution According to Past Medical History

Sr.No.	Past Medical History	Frequency	Percentage (%)
1	Skin disease	3	37.5%
2	GI disease	4	50%
3	Immune disease	1	12.5%
Total		8	100%

GROUP-2 Patients who experienced or observed ADR during their hospitalization

Adverse drug reactions were detected in 592 of 383 patients, indicating that multiple adverse drug reactions occurred in one patient.

In the table below, 383 patients are broken down by age in categorical intervals of 10.

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Table No 5: Age wise distribution Group 2

Sr.No	Age	No. of patients	Percentage (%)
1	1-20	1	14.82%
2	21-40	1	14.82%
3	41-60	2	28.57%
4	61-80	2	43.39%
	Total	7	100%

Table No 6: Sex wise distribution-Group 2

Sr.No	Sex	No. of patients	Percentage (%)
1	Male	4	57.14%
2	Female	3	42.85%
Total		7	99.99%

Table 7: Area wise distributions-Group 2

Sr.No.	Area of residence	No. of patients	Percentage (%)
1	Urban	2	28.57%
2	Rural	5	71.42%
Total		7	100%

Table No 8: Distribution According To Current Medical Diagnosis

Sr.No.	Current Medical Diagnosis	Frequency	Percentage (%)
1	Skin disease	2	28.57%
2	GI disease	3	42.85%
3	Respiratory disease	1	14.28%
4	Immune disease	1	14.28%
Total		7	100%

Table 9: Risk Factors Involved In Adverse Drug Reactions

Sr.No	Risk factors	Frequency	Percentage (%)
1	Multiple drug administration without indication	3	42.85%
2	Lack of information or knowledge	2	28.57%
3	Hypersensitivity & Pharmacology of drugs	2	28.57%
Total		7	100%

CONCLUSION:

During the study period total 50 patients case sheets were reviewed among then 30% patients have experienced at least one adverse drug reaction (ADR). Among the 8 cases documented 53.33% patients were admitted or visited to Hospital due to ADRs and 46.66% ADRs were observed during the Hospital stay. Among the 50 cases, 15 ADRS were identified, which shows the probability of multiple ADRs in a single patient.

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