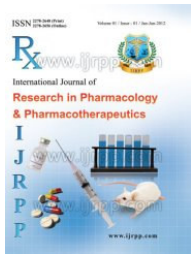
International Journal of Research in Pharmacology & Pharmacotherapeutics



ISSN Print: 2278-2648 IJRPP |Vol.10 | Issue 4 | Oct - Dec - 2021
ISSN Online: 2278-2656 Journal Home Page: www.ijrpp.com

Research Study Open Access

Management of the ADRs experienced during the Hospital stay

Shete Shivkumar Kashinath* and Dr. K. Sattanathan

Research Scholar Mewar University Rajasthan, India

Corresponding author: Shete Shivkumar Kashinath

ABSTRACT

This is a prospective observational study done for a period of three years from March 2015 to March 2015 at the inpatient block of multispecialty hospitals, Patients Visited or admitted in Hospital due to ADRs Hyderabad, Patients who visited the Hospital were reviewed on daily basis and monitored for ADRs. Patient's demographic details are collected and documented. Suspected ADRs were assessed by using standard algorithms. It includes all the information such as name, age, sex, reason for admission, brief description of reaction, relevant past history of medication, the onset and severity of the ADR experienced the impact of ADR on the treatment and drug involved, dose of the drug, route and frequency time. All the suspected ADRs were evaluated for their causality using WHO Probability Scale, Naranjo's Algorithm, and the Karch and Lasagna scale Severity assessment was done using the Hartwig *et al.* Scale. Preventability of an ADR is determined by using Shumock *et al.* criteria. Predictability of an ADR is also determined by using criteria's. Results and Discussion: Among the 383 cases, 592 adverse drug reactions were identified, which shows the probability of multiple adverse drug reactions in a single patient. Among age groups adults 52.74% were predominant over geriatric 36.55% and children 10.70% in terms of prevalence, while males have higher risk to develop adverse drug reactions among adults and geriatrics, and in Children both the genders have high risk in developing adverse drug reactions and showing 1.69 times higher risk for males to develop adverse drug reactions. Among the 383 cases documented predominance of adverse drug reactions was observed in patients belonging to urban area 59.26%.

Keywords: Adverse drug reaction, Dermatology, gastrointestinal, suspected drug.

INTRODUCTION

The WHO defines an ADR as "any response to a drug which is noxious and unintended and which occurs at doses used in man for the prophylaxis, diagnosis or therapy of disease, or for the modification of physiological function. ADRs refer to the unwanted or dangerous effects that a drug may possess. The incidence and severity of ADRs are influenced by patient characteristics such as age, gender, body weight, coexisting diseases, ethnicity, genetic or geographic factors and by drug factors such as the type of drug, dosage, treatment duration, co-ingestion of other drugs, and route of administration and aim of this study is identify, assessment, management, documentation and report of adverse drug reaction.

METHODOLOGY

Study Site

This study was conducted in different wards of multispecialty hospitals. The hospital is 220 beds Multi-Specialty teaching private hospitals located in Hyderabad, The hospitals operates of various departments like general medicine, surgery, pediatrics, psychiatry, pulmonologist, neurology, nephrology, ophthalmology, gastroenterology, orthopedics, urology, obstetrics and gynecology (OBG), ear, nose, & throat (ENT), skin and sexually transmitted diseases (STD), oncology & radiology. Patients are admitted to the ward directly from the outpatient department, emergency and casualty department or transferred from the wards of other clinical specialties.

Department - General Medicine & all Clinical Departments
Study period for data collection - Three years (March 2015 To March 2018)
Study Type - Prospective, Observational and non-interventional

RESULTS

Group -2 Among the 383 cases, 592 adverse drug reactions were identified, which shows the probability of multiple adverse drug reactions in a single patient. In the following table, 383 patients were distributed according to the age considering 10 as class interval.

Table 1: Fate of the suspected drug

Sr. No	Fate of the suspected drug	No. of ADRs	Percentage
1	Drug withdrawn	321	54.22
2	Dose altered	155	26.18
3	No change	116	19.59
	Total	592	99.99

In 592 ADRs suspected drug was withdrawn in 321 (54.22%) patients followed by 155 (26.18%) patients dose were altered and no change in prescription in 116 (19.59) patients.

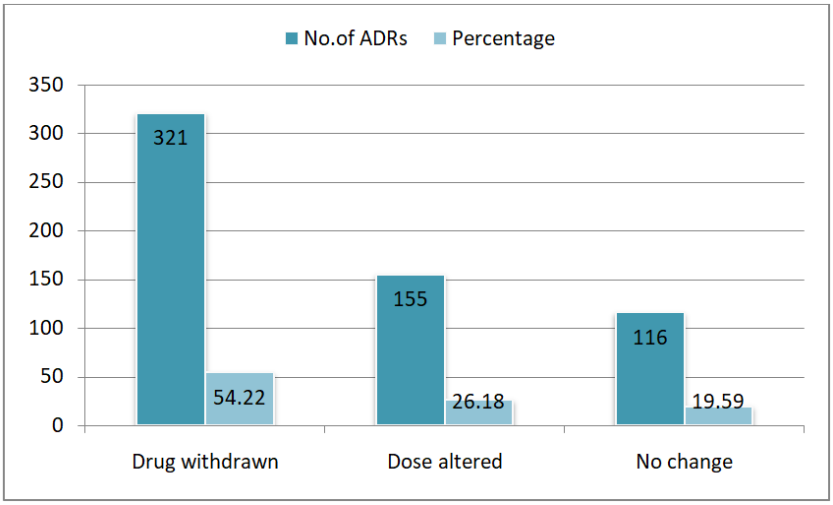


Table 2: Treatment for ADRs

Sr. No	Treatment given	No.of ADRs	Percentage
1	Specific + Symptomatic	271	45.77
2	Symptomatic	142	23.98
3	Specific	82	13.85
4	Nil	97	16.38
	Total	592	99.99

Among 592 patients Specific and Symptomatic treatment was given in 271 (45.77%) patients followed by only symptomatic treatment was given in 142 (23.98%) patients, specific treatment were given for 82 (13.85%) patients and no treatment for ADRs in 97 (16.38%) patients.

.

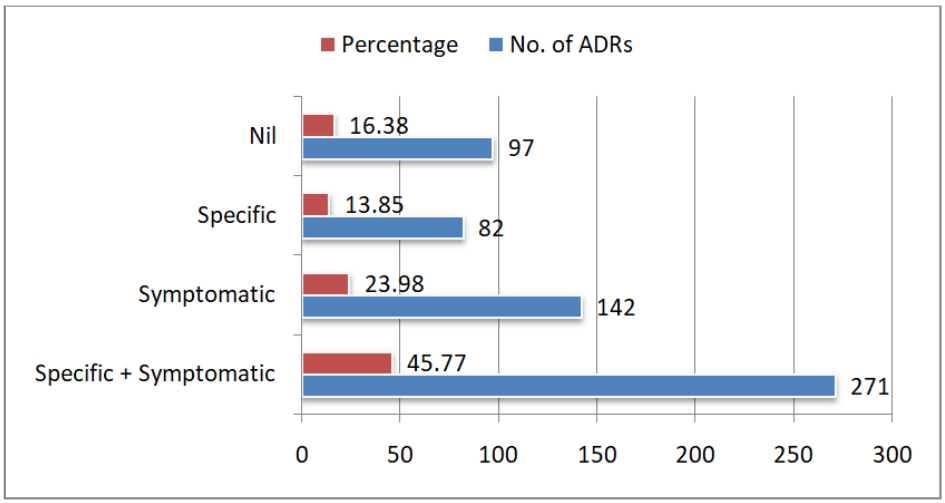


Fig. 2: Treatment for ADRs

Adverse drug reaction patients De-challenge and Re-challenge information were given in table 3.

Table 3: De-challenge and Re-challenge information

Sr. No.	Age group	adverse drug reactions	Frequency	Percentage (%)
1	**Dechallenge**	Yes	Yes	421
		No	No	171
2	**Rechallenge**	Yes	Yes	136
		No	No	285

Dechallenge was done in 421 (71.11%) patients and the suspected drug was continued in 171 (28.88%) patients. In 421 dechallenge patients 136 (32.30%) reinitiated the drug and 285 (67.69%) patients not reinitiated the outcome rechallenge and dechallenge information was given below tables.

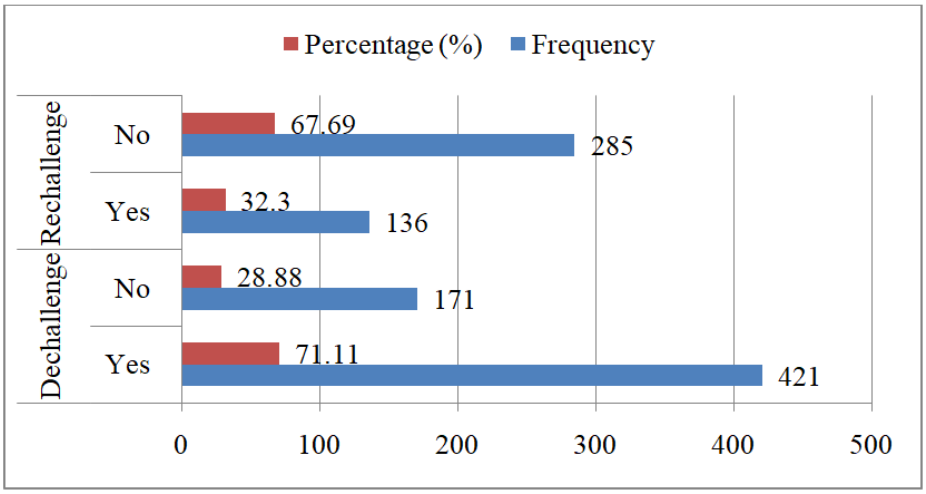


Fig. 3: De-challenge and Re-challenge information

CONCLUSION

The present study identified the pattern of ADRs experienced by the patients on ATT. Males had a higher incidence of ADRs. Gastro intestinal system ADRs were the most commonly seen. On evaluation of the causality of ADRs, a majority of them were found to have a 'possible' association with the suspected drugs. Majority of the ADRs were 'mild' in severity. No severe life-threatening ADRs were observed during the study period.

REFERENCES

1. Abdela OA, Bhagavathulu AS, Getachew H, Keliya Y.Risk factors for developing drug related problems in patient with cardiovascular diseases attending Gondar University Hospital, Ethopia.J Pharm Bioallied Sci.2016 Oct-Dec;8(4):289-295.
2. An Introduction to Pharmacovigilance. By Patrick Waller. Published 2010 by Blackwell Publishing, ISBN: 978-1-4051-9471-6. Page no 2
3. Acheampong F, et al. Drug related problems and their clinical interventions in a ghanan teaching.Safety in Health.2016;2:15
4. Adusumilli PK, Adepu R. Drug related problems: An overview of various classification systems. Asian J Pharm Clin Res.2014 May 16; 7(4):8-10.
5. Agu KA, Oparah AC. Adverse drug reactions to antiretroviral therapy: Results from spontaneous reporting system in Nigeria. *Adverse Perspect Clin Res* 2013;4(2):117-24. [http://doi:10.4103/2229-3485.111784] [PMID: 23833736]
6. Al Hamid A, Ghaleb M, Aljadhey H, Aslanpour Z.A systematic review of hospitalization result in from medicine –related problems in adult patients.Br J Clin Pharmacol.2013 Nov 28;78(2):202-17.
7. Al-Ariti M, Abu-Hashem H, Al-Mezing M, Said R, Aljadhey H.Emergency department visits and admissions due to drug related problems at Riyadh Military Hospital(RMH), Saudi Arabia. Saudi Pharm J.2014 Jan;22(1):17-25.
8. Alghamdy MS, Randhawa MA, Al-Wahhas MH and Al-Jumaan MA. Admissions for drug related problems at the emergency department of university hospital in the kingdom of Saudi Arabia. J Family Community Med.2015Jan-Apr[cited2017Aug11];22(1):44-48. Availablefrom:https://www.ncbi.nlm.nih.gov/m/pubmed/25657611/DOI:10.1177/0363546512458223
9. Alumran A, Hou XY, Hurst C. Assessing the overuse of antibiotics in children in Saudi Arabia: Validation of parenteral perception on antibiotics scale(PAPA Scale). Health Qual Life Outcomes. 2013 Mar 11; 11:39.
10. Aronson JK, Ferner RE. Classification of terminology in drug safety. Drug Safety 2005; 28: 851-870.
11. Amer Khan .Causality assessment of adverse drug reaction in Pulmonology Department of a Tertiary Care HospitalJournal of Basic Clin Pharm. June 2015-August 2015; 6(3): 84–88. doi: 10.4103/0976-0105.160744
12. American Society of Health System Pharmacists. Top- Priority Actions for Preventing Adverse Drug Events in Hospitals: "Recommendations of An Ex9. Aziz Z, Siang TC, Badarudin NS. Reporting of adverse drug reactions: predictors of under-reporting in Malaysia. Pharmacoepidemiol Drug Saf. 2006;16:223–8. pert Panel.". Am. J. Health-Syst. Pharm. 1996,53, 747-751.
13. American Association of retired person. US: Gregory P; 2017 Oct 1. Medication Administration: why it's important to take drugs the right way.27 Oct 1[cited on 2017 Dec 28]. Available from https://www.aarpmedicareplans.com/hea lth/ administration of medication.
14. Andreazza RS, Castro MSD, Koche PS, Heineck I. Causes of drug-related problems in the emergency room of a hospital in southern Brazil. Gac Sanit.2011 Nov-DEC;25(6):501-6.
15. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC 4310971/#_ffn_sectitle. DOI:10.1016/j.jsps.2013.05.006
16. Barrins-associatES{internet].US : Barrins Associates:2016.Medication ordering and therapeutic duplication.2016 Aug 16[cited 2017 Dec 27]; Available from : http://barrins-assoc.com/resources/compliance-updates/medication-ordering-therapeutic-duplication-psychiatric-hospitals/
17. Basharat S, Asmat S, Dr. Zaka M. Management of drug related hospital admissions. ISSN.2016 Nov;6(11):2250-3153.

18. Batel Marques F, A systematic review of observational studies evaluating costs of adverse drug reactions. Clinicoecon Outcomes Res. 2016 Aug 24;8:413-26. doi: 10.2147/CEOR.S115689. eCollection 2016.
19. Bennett PN, Brown MJ. Clinical Pharmacology. Tenth edition. Churchill Livingstone, Edinburgh, 2008.
20. Beijer HJM and Blaey CJD. Hospitalisations caused by adverse drug reactions (ADR): a meta-analysis of observational studies.Pharm World sci.2002 Apr [2017 Jul 28];24(2):46 54. Available from: https://www.ncbi.nlm. nih.gov/m/pubmed /1206 1133/
21. Belongia EA, et al. strategies for promoting judicious use of antibiotics by doctors and patients. BMJ. 2000 Sep 23; 321(7263):765