International Archives of BioMedical and Clinical Research
E-ISSN: 2454-9894 P-ISSN: 2454-9886
WWW.IABCR.ORG

Original Article

Prescription Auditing of Patients Admitted at Psychiatry ward of a Tertiary Care Hospital of Western UP

Adnan Anwer[1], Syed Ziaur Rahman[2*], Piyush Prakash Singh[3], Mohammad Amir Usmani[3]

[1]*MBBS student, JN Medical College, AMU, Aligarh-202002*
[2]*Department of Pharmacology, JN Medical College, AMU, Aligarh-202002*
[3]*Department of Psychiaty, JN Medical College, AMU, Aligarh-202002*

Received: 20.12.2015
Revised: 21.12.2015
Accepted: 24.12.2015

***Correspondence to:**
Dr. Syed Ziaur Rahman
Associate Professor,
Department of Pharmacology &
Deputy Medical Superintendent,
Jawaharlal Nehru Medical College Hospital,
Aligarh Muslim University
Aligarh 202002, India
E-mail:
rahmansz@yahoo.com

ABSTRACT

Introduction: The World Health Organization (WHO) proposed core-prescribing indicators for prescription audit and drug utilization studies. The focus of Indian studies has mainly been on the WHO core-prescribing indicators such as the range and number of drugs per prescription. Critical evaluation of prescriptions including rational auditing of prescriptions of patients admitted at Psychiatry Ward of Jawaharlal Nehru Medical College Hospital, A.M.U., Aligarh, from the period of 31/05/2013 to 30/05/2015.

Materials and Methods: Permission for retrospective study to access medical records of the past 2 years of all patients admitted in the Psychiatry ward from 31/05/2013 to 30/05/2015 was obtained from the competent authority. Prescriptions of 44 patients (26 female, 18 male) were available in the Central Record Section during this period. The following parameters were taken to analyse and audit prescriptions as per WHO prescribing indicators: 1) Patient details, 2) Mention of diagnosis, legibility & spelling mistakes, 3) Details of the consultant, 4) Use of antibiotics/antipsychotics by various routes, 5) Provision of proper instructions to patients and 6) Additional parameters - Percentage of prescriptions with nutritional supplements and antacids.

Results: Only 36% of prescriptions contained the full names of patients, while age, sex and address were present in 84.09% of the prescriptions. 100% prescriptions were found written with complete diagnosis and contained the signature of the concerned doctor. None of the prescription had the doctor's contact number. A mean number of 3.18 drugs were written per prescription. All prescriptions were legible and 2.27% contained spelling mistakes. Insufficient instructions for both oral and injectable drugs were mentioned on all prescriptions.

Conclusion: As per WHO laid guidelines, study related to drug use indicators are simple as a supervisory tool to assess prescribing patterns by individual doctors. These prescription studies provide scope to improvement in prescribing patterns and promotion of rational use of drug among practitioners.

Keywords: Rational Use of Drugs, Prescription auditing, Prescription monitoring, Irrational use, WHO Drug use indicators

INTRODUCTION

India is recording an alarming 5.2 million injuries each year due to medical errors and adverse events. The biggest sources are mishaps from medications, hospital-acquired infections and formation of blood clots in lower limbs. Because of these injuries, approximately 3 million years of healthy life are lost in India each year.[1] Phillips J. et al, 2001 reported that the most common types of errors were from administering improper dose (40.9%), overdose (36.4%), wrong drug (19%) and wrong route of administration (9.5%) after performing a retrospective analysis of medication errors between the years 1993 to 1998. The investigators also found that the most common causes of errors were performance and knowledge deficits (44%) and communication errors (15.8%). 68.2% of

the medication errors resulted in serious patient outcomes and 9.8% were fatal.[2]

The above statistics clearly indicate an urgent need for vigilance in prescribing patterns of practitioners. Incorrect prescribing patterns not only add to the burden of adverse drug events but also strong indicators of irrational drug use. Prescription auditing is an essential monitoring activity that can help reduce the burden of disease because of medication errors.

The aim of the present study was to analyze and audit the prescribing pattern in inpatients admitted at Psychiatry ward of Jawaharlal Nehru Medical College Hospital, A.M.U., Aligarh, from the period of 31/05/2013 to 30/05/2015.

MATERIALS AND METHODS

Permission to access medical records of the past 2 years of all patients admitted in the Psychiatry ward from 31/05/2013 to 30/05/2015 was obtained from the Institutional Ethics and Research Advisory Committee (IE & RAC).

Total prescriptions of 44 patients (26 female, 18 male) were available in the Central Record Section (CRS) of Jawaharlal Nehru Medical College & Hospital, Aligarh, during the specified period of study. These prescriptions were analysed retrospectively after making standard criteria using WHO[3] and other researchers' guidelines.[4]

Following modified parameters in the light of WHO indicators and other researchers were taken to analyse and audit prescriptions –

1. Patient details like name, age, sex and address.
2. Mention of diagnosis, legibility & spelling mistakes.
3. Details of the consultant like name, signature and contact number.
4. Mean number of drugs per prescription, percentage of drugs prescribed by generic name, percentage of encounters with an antibiotic/antipsychotic prescribed, percentage of encounters with an injection prescribed, percentage of drugs prescribed from national essential drugs list.
5. Use of antibiotics/antipsychotics by various routes.
6. Provision of proper instructions to patients.
7. Additional parameters - Percentage of prescriptions with nutritional supplements and antacids.

RESULTS

Patient details like name, age, sex and address: The full names of patients were mentioned in only 16 out of 44 (36%) of prescriptions while their age & sex was mentioned in all prescriptions. The address was mentioned in 37 out of 44 (84.09%) of prescriptions.

Mention of diagnosis, legibility & spelling mistakes: 44 out of 44 (100%) prescriptions contained the diagnosis. All prescriptions were legible and 1 out of 44 (2.27%) prescriptions contained spelling mistakes in the names of the drugs.

Details of the consultant: 44 out of 44 (100%) prescriptions contained the name of the practitioner, 44 out of 44 (100%) prescriptions contained the signature while none of prescriptions (0%) contained the contact number of the consultant.

WHO drug use indicators: 44 prescriptions were analysed in which total 140 medicines were contained. These were then examined as per WHO drug use indicators.

It was found that average number of drugs per encounter were 3.18 (44 out of 140 medicines). 7 out of 44 (15.9%) prescriptions contained more than 4 drug names. The least number of drugs per prescription was 2 and the highest number of drugs per prescription was 7. The percentage of drugs prescribed by generic name was zero meaning thereby hundred percent of drugs were found prescribed by trade names. The percentage of encounters with an antipsychotic prescribed was 75.0% (33/44) in which the percentage of Benzodiazepine (anti-convulsant and anxiolytic) was 52.27% (23/44). The percentage of encounters with an injection prescribed was 50.0% (22/44) and the percentage of total drugs prescribed from national essential drugs list, 2011 was 46.42% (65/140).

The percentage of antipsychotic prescribed by various routes has been depicted in Figure 1. None of the prescriptions had complete instructions with respect to oral and injectable formulations. The interval between injectable infusions was not specified and the interval between food intake and consumption of oral formulations was not specified in most prescriptions. The total duration of intake of oral and injectable formulations was also not specified in any of the prescriptions. The most common antipsychotic prescribed were Heloperidol, Olanzapine, Resperidone and Lorenzapine.

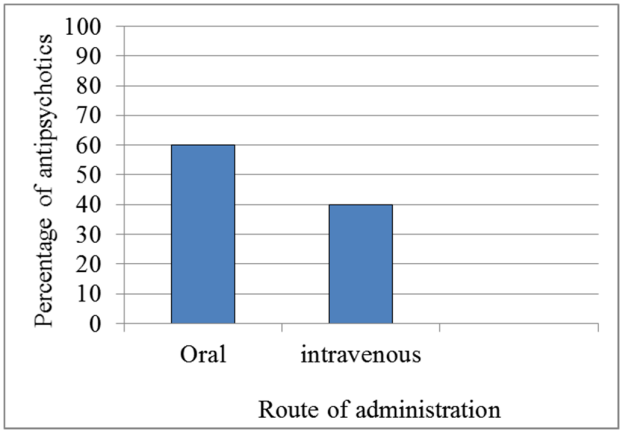

Figure 1: Percentage of antipsychotics prescribed by oral and intravenous routes

Nutritional supplements and intravenous fluid were also seen, if prescribed. The percentage of encounters with nutritional

supplements was 6.81% (3/44), while the percentage of encounters with Intravenous Fluid was 20.45% (9/44). However, the percentage of encounters with two different Intravenous Fluid was 20.45% (9/44).

DISCUSSION

A prescription is an instruction written by a medical practitioner that authorizes a patient to get medicine or treatment from a pharmacist. As medical practitioners and clinics are mushrooming in every part of the country, the quality of health care provided at these centres urgently requires monitoring. The indicators of prescribing practices measure the performance of health care providers in relation to the appropriate use of drugs.

Patient details are an essential part of every prescription. The emphasis in this study has been laid on the full names of patients as often, the mention of only the first name can lead to confusion. The details of the consultant are yet another important part of a prescription. The concerned practitioner might need to be contacted in case of an allergic reaction, queries with respect to the names of the medications or instructions provided and in need of an alternative medicine. Fortunately, in our study, we found that name & signature of all the consultants was present in the prescriptions.

Legibility of prescriptions and accuracy in the spellings of drug names are integral part due to the existence of look-alike and sound-alike drugs (LASA). Confusing drugs with similar names accounts to about 10 percent of all medication errors, according to the Food and Drug Administration.[5] The National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP) defines a medication error as "any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer. Such events may be related to professional practice, health care products, procedures, and systems, including prescribing; order communication; product labelling, packaging, and nomenclature; compounding; dispensing; distribution; administration; education; monitoring; and use."

The WHO drug use indicators are first-line indicators that can be used quickly and efficiently to monitor and assess potential problems in drug use and make necessary modifications. 15.9% prescriptions contained more than four drugs including nutritional supplement. The main concern here is increased incidence of adverse drug events. Often, the patients do not reveal to the prescribing doctor, the concomitant use of prescription and non-prescription drugs, herbal and dietary supplements.

The lack of use of generic name suggests either a strong influence of pharmaceutical companies in prescribing or the ignorance of medical practitioners towards the use of generic names. Unfortunately, in our study, none of the drug was prescribed by its generic name. When it comes to price, there is a big difference between generic and brand name drugs. On average, the cost of a generic drug is 80 to 85 percent lower than the brand name product. In 2010 alone, the use of FDA-approved generics saved $158 billion, an average of $3 billion every week.[6] A similar problem is noted with the use of essential drugs, which is as low as 46.42% in this study. An essential drug list contains cost-effective and safe medicines based on community needs. Such a low percentage may be indicative of unethical arrangements between practitioners and pharmaceutical companies. This may also suggest the ignorance of many patients who believe that expensive medications are faster acting and more effective than the economical ones.

Doctors in some hospitals prescribe three times more antibiotics than doctors in the same departments at other medical centers, according to a new report from the U.S. Centers for Disease Control and Prevention.[7] Intravenous antipsychotics in this study were prescribed for non-emergency cases. More than one antipsychotic was prescribed to the same patient without specifying the interval between them.

Among antipsychotic drugs, only Haloperidol and Olanzapine are listed in National Essential Medicine List 2011 (NLEM 2011). In our study, we found that Risperidone and Lorenzapine were also prescribed which are not listed in NLEM 2011. Besides antipsychotics, other drugs prescribed were antihistaminics, anticholinergic, proton pump inhibitors, and Benzodiazepines. Some patients believe that injectable show better action than the oral formulations.

Certain other groups of drugs commonly prescribed are nutritional supplements (6.81%). It contained Iron tablets and Multivitamin. Inappropriate use of dietary supplements and probably contributes to the high incidence of polypharmacy.

Hence, from the above data, it is clear that prescription auditing is the need of the hour in our health care system. The prescriptions need to be periodically reviewed and evaluated for modifications in the prescribing practices of medical practitioners in order to deliver safer and rational health care services.

CONCLUSION

As per WHO, study related to drug use indicators are simple, supervisory tools used to assess prescribing patterns by individual doctors. We can conclude by stating that there is always a scope of improvement in prescribing patterns and promotion of rational use of drug among practitioners.

What this study adds:

1. What is known about this subject?

Prescription auditing is the need of the hour in our health care system. The prescriptions need to be periodically reviewed and evaluated for modifications in the prescribing practices of

medical practitioners in order to deliver safer and rational health care services.

2. What new information is offered in this study?

There is always a scope of improvement in prescribing patterns and promotion of rational use of drug among practitioners.

ACKNOWLEDGEMENTS

The first author was grateful to ICMR for granting the STS Project (Registration No. 2015-01914) under which the above study was performed. The second author was the project guide while the third and fourth authors enriched the contents of the above study.

CONFLICTS OF INTEREST None declared

FUNDING University Grants Commission.

ETHICS COMMITTEE APPROVAL Approved

REFERENCES

1. 'India records 5.2 million medical injuries a year'. Kounteya Sinha. TNN. 2013 Sep 21, 05.55AM IST. Available from: http://timesofindia.indiati\mes.com/india/India-records-5-2-million-medical-injuries-a-year/articleshow/22832260.cms

2. Phillips J, Beam S, Brinker A, Holquist C, Honig P, Lee LY, Pamer C. Retrospective analysis of mortalities associated with medication errors. American Journal of Health-System Pharmacy. 2001 Oct 1; 58(19):1835-41.

3. How to Investigate Drug Use in Health Facilities: Selected Drug Use Indicators. Available from: http://apps.who.int/medicinedocs/en/d/Js2289e/3.1.html

4. Chaturvedi SK, Sinha P, Chandra PS, Desai G. Improving quality of prescriptions with clinical audit. Indian J Med Sci. 2008 Nov; 62(11):461-4.

5. Medication safety issue brief, Look-alike, sound-alike drugs. American Hospital Association; American Society of Health-System Pharmacists; Hospitals & Health Networks. Hosp Health Netw. 2005 Oct; 79(10):57-8.

6. SAVINGS An Economic Analysis of Generic Drug Usage in the U.S. General Pharmaceutical Association. 2011 Sep; 10.

7. Steven Reinberg. U.S. Hospitals Overuse, Misuse Antibiotics, CDC Says. HealthDay Reporter. Available from: http://consumer.healthday.com/infectious-disease-information-21/antibiotics-news-30/hospitals-overuse-misuse-antibiotics-cdc-685478.html

Cite this paper as:
Anwer A, Rahman SZ, Singh PP, Usmani MA. Prescription Auditing of Patients admitted at Psychiatry ward of a Tertiary Care Hospital of Western UP. Int Arch BioMed Clin Res. 2015 Dec;1(2): 20-23