



DRUG UTILIZATION PATTERN IN OUTPATIENT DEPARTMENTS OF TERTIARY CARE TEACHING HOSPITAL IN U.P.

Pharmacology

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ABSTRACT

Aims and Objective: To evaluate Drug utilization pattern in outpatient department of tertiary care teaching hospital.

Methods: A cross sectional study was carried out at Outpatient Department in a tertiary care teaching hospital to evaluate the Drug utilization pattern during period of November 2018 to April 2019.

Results: Most common group of drugs prescribed by physicians was multivitamin and minerals followed by NSAIDs. The average number of drugs prescribed per patient was 4.1. Polypharmacy was common in prescriptions.

Conclusion: Most of the prescriptions were according to the standard norms of WHO prescriptions and prescribed from the list of essential drug list (India). Present study was done to provide feedback to the clinicians about the rational use of medicines.

KEYWORDS

Prescription, WHO, Drug utilization pattern

INTRODUCTION

World Health Organization (WHO) reports that more than half of all medicines are prescribed, dispensed or sold inappropriately and that half of all patients fail to take them correctly.¹ Drug utilization study, as defined by the WHO, is a structured process which is used to assess the quality of drug therapy by engaging in the evaluation of data on drug prescribing, dispensing and patient use in a given health care environment, against predetermined, agreed upon criteria and standards, with special emphasis on the resulting medical, social, and economic consequences. Drug utilization studies seek to monitor, evaluate and suggest modifications in the prescribing practices with the aim of making the medical care rational and cost effective.² Medicines are essential component of health care delivery system and prevention of disease. Rational and cost-effective drug therapy is the needed for effective health care delivery system in India. Rational and cost-effective drug therapy is the needed for effective health care delivery system in India. Irrational drug prescriptions are very prevalent in the developing countries like India.³ To improve the overall drug use, especially in developing countries; international agencies like the World Health Organization (WHO) and the International Network for the Rational Use of Drugs (INRUD) have applied themselves to evolve standard drug use indicators.⁴

MATERIALS AND METHOD:

A cross sectional descriptive study was conducted in Out Patient Departments of a tertiary care teaching hospital. 800 hundred prescriptions of either sex were randomly collected and screened during July 2018 to February 2019. Verbal consent was taken from the patients interested to include in present study. The results are based upon the data obtained from 800 participants. Data was analyzed using MS Excel and summarized as counts and percentages.

RESULTS AND OBSERVATION:

In present study, 800 prescriptions were randomly collected and screened. We analyzed the prescriptions and found that 3324 drugs were prescribed. Drugs per encounter were 4.1. Drugs prescribed from essential drugs list (India) were 86.5%. Prescriptions with an antimicrobial agent were 45.9% while prescriptions with an injection (IM) were 10.7%. FDC prescriptions were 35.7%. (Table-1) The most common group of drug prescribed was Vitamins and Minerals (29.1%), followed by NSAIDs (26.2%), antibiotics/antimicrobials (17.7%) and drugs for GI tract (15.0%) (Table-2) (Figure-1).

DISCUSSION:

The reference value for average number of drugs in WHO guidelines on rational use of drugs per prescription is 1.6-1.87.⁵ The present study revealed that the average number of drugs prescribed per encounter was 4.1. This was in accordance to the previous studies.^{3,6,7} In present study, we found that most of the prescriptions have 4 or more drugs that suggest a trend of polypharmacy. Polypharmacy increases the risk of wastage of resources, increased cost of treatment, antibiotic resistance and adverse drug reactions. The most common group of drug prescribed was Vitamins and Minerals (29.1%), followed by NSAIDs

(26.2%), antimicrobials (17.7%) followed by drugs for GI tract (15.0%). (Table-2) This data reflects that there is a tendency to prescribe the antiulcer, vitamins & analgesics commonly. In analgesics most commonly prescribed was diclofenac. In Prescription of GI drugs most commonly prescribed drug was pantoprazole. Prescriptions with an antimicrobial agent were 45.9%. (Table-1) The most common antimicrobial agent prescribed was Ofloxacin followed by Amoxicillin-Clavulanic acid combination. These findings were in accordance to previous study.³ According to WHO 15-25% of prescriptions with antibiotics is expected in most of the developing countries where infectious diseases are more prevalent.⁵ This figure is very high in some of the developing countries like Pakistan (78%)⁸ and eastern Nepal (79.9%).⁹ Various studies from India also report a high rate ranging from 40- 80%.¹⁰ Prescription of antimicrobials without laboratory validation promotes multidrug resistance. Drugs prescribed from essential drugs list (India) were 86.5%. This finding was low as compared to that reported by Sutharson L et al, where it was 94.48%.¹¹

CONCLUSION

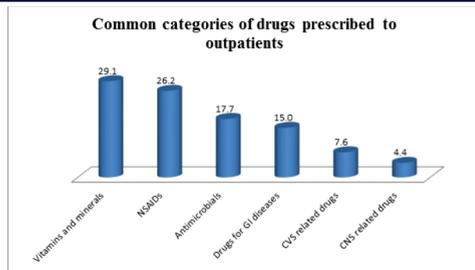
In our study we observed that most of the prescriptions were according to the standard norms of WHO prescriptions and from the list of essential drug list (India). But physician must take care about polypharmacy to avoid drug interaction and also wrong use of antimicrobials to avoid antimicrobial resistance. Present study was done to provide feedback to the clinicians about the rational use of medicines.

Table 1: Prescribing indicators

S.N.	Parameters	Number (%)
1.	Total number of drug prescribed	3324
2.	Total number of prescription analyzed	800
3.	Average number of drugs per encounter	4.1
4.	Drugs prescribed by generic name	3324 (100)
5.	Drugs prescribed from Essential drug list (India)	2876 (86.5)
6.	Total number of prescription with Fixed dose combinations	286 (35.7)
7.	Total number of prescription with Antimicrobials	367 (45.9)
8.	Total number of prescription with injectables	86 (10.7)

Table 2: Common categories of drugs prescribed to outpatients

S.N.	Category of drugs	Number of drugs (%)
1	Vitamins and minerals	968 (29.1)
2	NSAIDs	872 (26.2)
3	Antimicrobials	589 (17.7)
4	Drugs for GI diseases	497 (15.0)
5	CVS related drugs	253 (7.6)
6	CNS related drugs	145 (4.4)



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