

Research Article

Drug utilization pattern at medicine O.P.D at tertiary care hospital at Surendranagar

Vidisha M. Shah* and Dimple S. Mehta

Department of Pharmacology, C. U. Shah Medical College & Hospital, Surendranagar

***Correspondence Info:**

Dr. Vidisha M. Shah:
P.G. Student,
Department of Pharmacology,
C. U. Shah Medical College & Hospital, Surendranagar, India.
E-mail: Vidisha_pharmac@yahoo.com

Abstract

Background: - Pharmacotherapy is among the most powerful intervention to improve health outcomes and it is relatively safe, effective and inexpensive mode of treatment. Presently drug utilization studies are an evolving area. Their scope is to evaluate the present state and future trends of drug usage, to estimate crudely disease prevalence, drug expenditures, appropriateness of prescriptions and adherence to evidence-based recommendations.

Aim: To evaluate factors related to the prescribing, dispensing, administering and taking of Medication at medicine OPD at tertiary care teaching hospital

Materials And Methods:- Patients of all ages and both the sexes attending medicine O.P.D in two months duration and who gave inform consent were included in the study. Drug information of 538 patients was collected and then analysis was done by WHO recommended prescribing indicators.

Results: - According to prescription of 538 patients, the average number of drugs per prescription was 2.73. Amongst which 54.16% of medicine was prescribed from national list of essential medicine. The average number of antibiotics per prescription was 37.40% and the use of injectables was 1.08%. The average number of drugs given by its generic name was 1.36%. The average duration of treatment was 9.23 days.

Conclusion: - This study reveals that prescribing from NLEM was fair. The use of injections were low but drugs prescribed by its generic name needs to be increased.

Keywords: Medicine out patients, Prescription, Drug utilization

1. Introduction

Drug utilization research was defined by WHO in 1977 as “the marketing, distribution, prescription, and use of drugs in a society, with special emphasis on the resulting medical, social and economic consequences”.¹ The WHO-India program on the rational use of Drugs, which has been going on for almost 20 years in India aims at promoting rational prescribing of drugs.² The assessment of drug utilization is important for clinical, educational and pharmaco-economic purposes. Monitoring of prescription and study of drug utilization could identify the associated problems and provide feedback to the practitioner so as to create awareness about the rational use of drugs.³ The therapeutic practice is expected to be primarily based on evidence provided by pre marketing clinical trials, but complementary data from post marketing period are needed to provide an adequate basis for improving drug therapy.⁴

Adoption of the essential medicine list for procurement and supply of medicines, especially in public sector healthcare system, has resulted in improved availability of medicines, cost saving and more rational use of drug.⁵ For an effective utilization of the resources spent on drugs, it is essential that the prescribing and administration of drugs be evaluated from time to time, to quantify the error in such procedures, and look for possible solutions.

2. Materials & Methods

This study was approved by Institutional Ethics Committee (Human) on 27th Sept., 2010. The study was carried out in the medicine Outpatient Department (OPD) in tertiary care hospital at Surendra Nagar over a period of two months (From Sept. 2010 to Nov. 2010). Total 538 patients of either age or sex, visiting for the first time to the OPD, were selected randomly for the study. Patients coming for follow up, children (<12 years), and mentally disabled patients were excluded from the study.

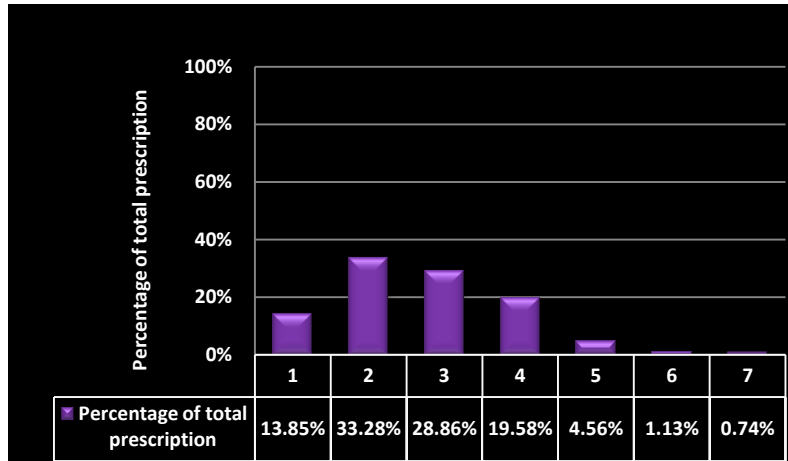
Informed consent of all the patients was taken and they were asked for their prescriptions. The data was analyzed for the WHO recommended prescribing indicators.⁶

❖ Baseline data record included:

1. Patient's profile (name, ID no, address, age, sex)
2. Average number of prescribed medicine.
3. Route of drug administration.
4. Average number of antibiotic prescribed.
5. Average number of drugs prescribed by its generic name.
6. Average number of drugs prescribed by its proprietary (Brand) name.
7. Average number of drugs prescribed from National List Essential Medicine (NLEM).
8. Average duration of treatment.

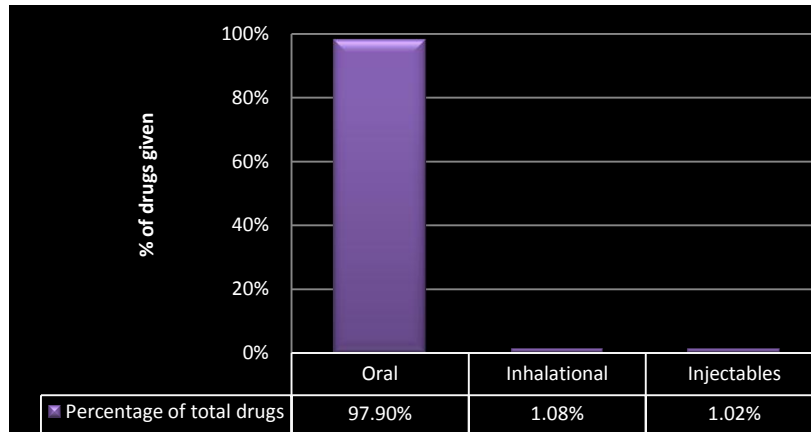
3. Result

Figure 1: Average number of drugs per prescription



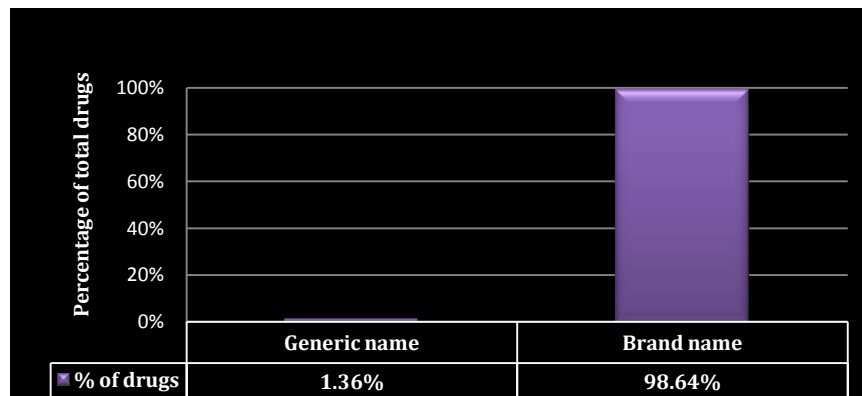
Out of 538 prescriptions, the average no. of drugs per prescription was 2.73. In most of the prescriptions, 2 drugs were prescribed (33.28%), followed by 3 drugs (26.86%), 4 drugs in 19.58% prescription, and 1 drug in 13.85% of prescriptions, 5 drugs were prescribed in only 4.56% of prescription.

Figure 2: Routes of drug administration



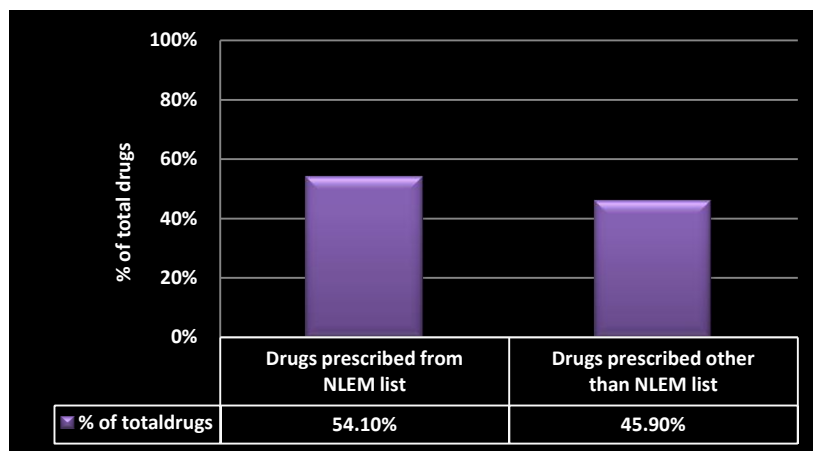
Most of the drugs were prescribed by oral route (97.90%). The drugs given by injection were only 1.08% and 1.02% of drugs were given by inhalational route.

Figure 3: Average number of drug given by generic name



The total no. of drugs prescribed by its generic name were 21 (1.36%) and the dugs given by its proprietary name was 1469 (98.64%). It was seen that most of the drugs were given of different brands & also, same drug of different brands.

Figure 4; Average number of drugs given from NLEM List



Out of 1490 medicines, 806 (54.10%) medicines were prescribed from the NLEM (National List of Essential Medicines) and 684(45.90%) medicines were prescribed out of NLEM.

The percentage encounter with an antibiotic prescribed was found to be 37.40%. Most of the antibiotics were targeted for upper and lower respiratory tract infections (URTI and LRTI). NSAIDs were most commonly prescribed, followed by NSAID combinations. Antibiotic most commonly prescribed was cephalosporins, followed by azithromycin.

4. Discussion

The result of present study shows that average no. of drugs per prescription were 2.73. One Similar study was carried out by Mathur M et al. has shown that average no. of drugs per prescription in medicine department were 2.76.²

Prescribing by generic name is known to reduce the cost of the drug treatment and rationalizing drug therapy. Clinicians often prefer to prescribe by trade names, with which they are familiar and the patients find it easier to procure. This varies from 13.3-93% across the globe which does not compare well with the figure of 1.36% found in this study. In our study, the clinicians have not considered the cost of therapy as they have prescribed most of the drugs by brand names.

There was fair prescribing from NLEM. More than 50% of drugs were prescribed from the list of Essential Medicine. A copy of NLEM was available to all physicians.

The average no. of drugs prescribed by injection was very low. Most of the drugs were given by oral route, which is the convenient way for drug administration and it is also cost effective for the patients.

The average duration of treatment in this study was around 9 days but the treatment depends on the type of disease.

The total no. of antibiotics prescribed was fair, but most of the patients are having viral infections in respiratory cases. So the need of antibiotic is low and it may lead to the development of resistance.

5. Conclusion

To conclude, this study provides few insights into the drug usage patterns in a medicine outpatient department of a tertiary care teaching hospital. The prescribing from NLEM was fair; the use of Injections was low. There is a scope for improvement in case of medicines prescribed by generic name.

Acknowledgement

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