



DRUG PRESCRIBING PATTERNS FOR SKIN DISEASES IN DERMATOLOGY OUTPATIENT DEPARTMENT IN A TERTIARY HOSPITAL IN BANGLADESH

Nadia Islam¹, Sohail Mirza² and Morshed Nasir^{3*}

¹Assistant Professor, Department of Pharmacology, Anwer Khan Modern Medical College, Dhanmondi, Dhaka, Bangladesh.

²Assistant Professor, Department of Dermatology, Shahid Taj Uddin Ahmed Medical College, Gazipur, Bangladesh.

³Professor, Department of Pharmacology, Holy Family Red Crescent Medical College, Dhaka, Bangladesh.

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***Corresponding Author**

Dr. Morshed Nasir

Professor, Department of
Pharmacology, Holy
Family Red Crescent
Medical College, Dhaka,
Bangladesh.

ABSTRACT

Skin diseases in developing countries have a serious impact on people's quality of life where climate, socio-economic status, religions and customs are widely varied in different parts of the country. A cross sectional observational study was done to assess the prescribing pattern in dermatology outpatient department (OPD) in a tertiary care hospital. The study was carried out over six months period from

September 2015 to February 2016 in the Dermatology outpatient department of tertiary care referral hospital in Kapasia upazilla health complex, Gazipur. Data was collected for six months by reviewing OPD cards and prescription data. A total of 1503 cases were analyzed in which the total number of drugs was found to be 3520. Data analysis showed that, average number of drugs prescribed was 2.35 per prescription. During study period, antihistamines (24.36%) were the most commonly prescribed class of drugs followed by anti-parasitics (21.29%), combination preparations (19.32%) steroids (12.09%), antifungals (11.23%), antibiotics (8.04%), others (Multivitamins, antipyretic, retinoid etc.) (3.67%). Clinical pharmacist can conduct such periodic audit to rationalize the prescription, reduce errors and suggest a cost effective management of skin diseases. The programs should conduct into the

hospital for Physicians and Post graduate students, to show comparison and benefits of generic versus branded drugs also to improve generic prescribing practice and to make therapy economic to the patients. Having a steroid and antibiotic prescribing policy will go a long way to minimizing inappropriate prescriptions and also standard treatment guidelines for the treatment of common disease should be formulated.

KEYWORDS: *Skin diseases, dermatology, Prescribing Pattern.*

INTRODUCTION

Skin diseases in developing countries have a serious impact on people's quality of life, it is more so in developing countries where climate, socio-economic status, religions and customs are widely varied in different parts of the country. Various combinational drugs generally use in the treatment of skin diseases like proactive antibiotic, antifungal, benzoyl peroxide, steroids, salicylic acid, anti-histaminic, vitamins and minerals, analgesics usually depends upon prescriber's choice.^[1,2] The World Health Organization (WHO) defined rational use of drugs as patients receiving medications appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period of time and at the lowest cost to them and their community.^[3] The treatment of diseases by the use of essential drugs, prescribed by their generic names, has been emphasized by the WHO and the National Health Policy.^[4] WHO highlights two concomitant problems regarding the drug situation in the developing world: one out of three people living in the developing world are in need of essential drugs although there are concurrent higher rates of inappropriate drug-use and drug resistance.^[5] The WHO also estimates that 50 percent of all medicines are inappropriately prescribed, dispensed, or sold.^[6] It is estimated that third world countries spend 30-40% of their total health budget on drugs some of which are useless and expensive and doubles their expenditure on drugs. This expenditure can be minimized by prescribing drugs by generic name and selection of drugs from essential medicine list.^[7] Therefore, periodic evaluation of drug utilization patterns need to be done to enable suitable modifications in prescription of drugs to increase the therapeutic benefit and decrease the adverse effects. The study of prescribing patterns seeks to monitor, evaluate and if necessary, suggest modifications in the prescribing behavior of medical practitioners to make medical care rational and cost effective.^[8] To monitor, standardize and afford Comparability of results, WHO in collaboration with the International Network for the Rational Use of Drug (INRUD) developed core indicators for assessing drug use.^[9]

1. Average number of drugs per prescription
2. Drugs prescribed by generic name and its percentage
3. Prescription with an antibiotic prescribed and its percentage
4. Prescription with an injection prescribed and its percentage
5. Drugs prescribed from an Essential Drugs List (EDL) and its percentage.

This study utilized these drug-use core indicators to describe patterns of drug use at dermatology department in a tertiary care hospital to provide feedback to the prescriber and to create awareness among them about rational use of medicines.

MATERIALS AND METHOD

The present study was conducted in the Outpatient Department of Dermatology at Kapasia upazilla health complex, Gazipur. Prescriptions of patients attending dermatology OPD, were collected for the duration of 6 months (September 2015 to February 2016) after obtaining requisite permission. All prescriptions issued to patients attending the dermatology outpatient department during this period following each day's consultation were copied out from the case files and recorded in data collection forms adapted from WHO guidelines on how to investigate drug use in health facilities.^[9] Data was obtained from a total of 1503 prescriptions which includes age and gender of the patients, the diagnosis, the drugs prescribed, their dose, strength, frequency, route of administration and duration of treatment. Obtained information was compiled, and analyzed using WHO/DSPRUD Indicators and WHO Recommended clinical guidelines 2013 (Diagnosis and treatment manual).

RESULTS

Total 1503 patients were included during study period. Overall 1503 prescriptions were analyzed amongst 1503 patients. Data analysis showed that, average no. of drugs prescribed was 2.35/prescription which includes injectables, topical and oral formulations. Maximum number of drugs prescribed were topical (65.04%) compared to oral preparations (32.42%) and injectables (2.54%) shown in Table-1. During study, combination preparations (19.32%), others (Multivitamins, antipyretic, retinoid etc.) (3.67%), antihistamines (24.36%), antifungals (11.23%), steroids (12.09%), antibiotics (8.04), antiparasitic (21.29%) drugs were found. Major combinations prescribed were steroids in combination with antibiotics and antifungals. In about (28.89%) instances potent steroids were prescribed while steroids with mild potency were mostly prescribed (32.26%). After collection of data, total 1503 prescriptions were analyzed, the findings pertaining to prescription format which shows that

all the prescriptions carried the name, date, age, gender, address and OPD number of the patients as they are already printed on the hospital OPD cards. The superscription Rx and Prescriber name were written in all prescriptions. The Dosage form, course of duration, route of administration, dosing interval, strength of medication were not mentioned in 0.34%, 3.54%, 1.5%, 1.97%, 0.49% prescriptions respectively.

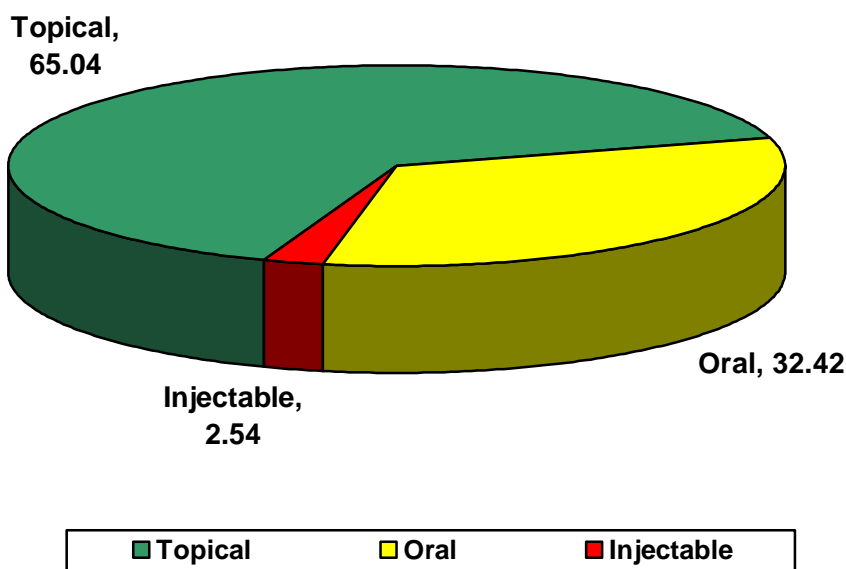


Figure-1: Percentage of drugs prescribed for different routes of administration.

Table-I: Percentage of different steroids prescribed on the basis of potency.

Potency	Percentage of prescribed steroids
Very potent	16.23%
Potent	28.89%
Moderately potent	22.62%
Mildly potent	32.26%

Table-II: Evaluation of prescriptions using WHO indicators.

	W.H.O. indicators	
1	Average number of drugs per encounter	2.35
2	Percentage of drugs prescribed by generic name	10.80%
3	Percentage of prescriptions with an antibiotics prescribed	20.15%
4	Percentage of prescriptions with an injections prescribed	2.54%
5	Percentage of prescriptions with an injections prescribed (EDL)	26.81%

Table-III: Different types of drugs prescribed.

Class of drugs	Percentage
Antifungals	11.23%
Antibacterials	8.04%
Steroids	12.09%
Antihistamines	24.36%
Combination preparations	19.32%
Antiparasitics	21.29%
Others	3.67%

DISCUSSION

In this study, data analysis showed that, average no. of drugs prescribed was 2.35/prescription, which correlates with other two studies carried out by Bijoy KP et al.^[2] and Narwane SP et al.^[10] showed average number of drugs prescribed was 2.39 and 2.7/prescription respectively. A majority of drugs were prescribed in brand names in our study. Average number of drugs per prescription is an important index of prescription audit. In our study the mean number of drugs per prescription was found to be 2.35, it was lower than what had been previously reported in other studies in Western Nepal and.^[11] other parts of India^[12] It is preferable to keep the number of drugs per prescription as low as possible since higher figures lead to increase risk of drug interaction, adverse effect and increased cost to the patient. Our study reports that 10.80% of drugs were prescribed by generic name Our value is more than that reported in other study.^[13] Our study revealed that the percentage of drugs prescribed from WHO essential drug list was 26.81%, which is higher compare to that of the study.

This study finding showed antihistamin as the most commonly prescribed drug class followed by antiparasitic, combination preparation, steroids, antifungal, antibiotics which shows similarity with the study carried out by Narwane SP et al. showing antiallergics as the most commonly prescribed drug followed by antifungal and antibiotic.^[10,11]

Topicals were commonly prescribed compared to the systemic agents. Use of topicals were usually preferred for treating skin diseases as they have site specific action, less systemic absorption resulting in less side effects and convenient for patient use. Majority of topicals were prescribed in combinations followed by antifungals and steroids alone. This finding was comparable with studies by Khan NA et al.^[14] that showed steroid and its combinations were most commonly prescribed topically. The most commonly prescribed systemic agents were antihistamines and Antibiotics followed by antifungals in this study which correlates with the

findings of above study. Analysis of data showed that all the antihistaminic agents were prescribed systemically in dermatology because of disease prevalence with related symptoms of itching.

It is important to choose the right medicine(s) for a patient and in an appropriate manner in order to achieve the best results of medicine therapy. In our study it is heartening to note that more than 90 percentage of medicines, recorded route of administration, dose, frequency of administration and duration of treatment. This positive observation would be a sign of good prescribing patterns in this dermatology outpatient department. The irrational use of drugs is a common occurrence throughout the world. So the prescribing pattern should be improved to avoid imprecise prescription leading to the prescription errors while dispensing the medication by a pharmacist and there is a need to emphasize on rational and appropriate prescribing pattern to be followed in the OPD for better patient care.

CONCLUSION

This study is mainly focused on the dermatological prescribing pattern of drugs in Dermatology outpatient department. The study suggests that there is immense scope of improvement in prescribing in this department. This study reveals that generic prescription is low and suggests that effort must be made to encourage prescribers for generic prescribing which may have a multitude of benefits including cost effectiveness. The percentage of encounters with an injection and systemic steroids was low. This is a welcome sign and has to be encouraged. Having a steroid and antibiotic prescribing policy will go a long way to minimizing inappropriate prescriptions. Also, standard treatment guidelines for the treatment of common disease should be formulated.

The prescription audit can be an eye opener for the prescribers therefore periodic audit should do by the pharmacist. Clinical pharmacist can conduct such periodic audit to rationalize the prescription, reduce errors and suggest a cost effective management of skin diseases.

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