RETROSPECTIVE STUDY OF DRUG UTILIZATION PATTERN FOR SKIN DISEASES IN DERMATOLOGY, DEPARTMENT OF J.L.N. MEDICAL COLLEGE & HOSPITAL, AJMER

Pharmacology

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ABSTRACT

Present study undertaken to describe patterns of dermatological drug utilization in a hospital in Ajmer by measuring WHO delineated drug use indicators. Numbers of prescriptions were highest in the age group of 21-40 years. Among all prescriptions Tenia Corporis is the disease with highest prevalence. Both male and female, Tinea Corporis is most commonly prevalent. Such analysis not only improves the standards of medical treatment at all levels in the health system, but also supports in the identification of drug use related problems such as, drug-drug interaction, poly-pharmacy and adverse drug reaction WHO. Prescriptions of dermatology out-patients were analyzed and the data collected were used to evaluate the following drug use indicators; average number of drug per prescription, average consultation time, percentage of drugs prescribed by generic name, percentage of encounters with an antibiotic prescribed and percentage of drug prescribed from the essential drugs list or formulary. Among 1200 prescription, 157 (13.08%) males and 54(4.5%) females were having Tinea Corporis, followed by 80 (6.66%) males and 23 (1.91%) females were suffering from Scabies. 83 (6.91%) males and 41 (3.41%) males were suffering from Inguinal Dermatitis.

KEYWORDS

Dermatology, Skin Diseases, Adverse drug reaction WHO.

INTRODUCTION

In the clinical literature worldwide approximately 3,000 varieties of skin disease have been recognized, fortunately the occurrences of most of these diseases are rare. Management of these skin diseases are the most important part in both curing these diseases through the use of medicines as well as in preventing the spread of communicable diseases. The overall expression of skin diseases are seen in the form of primary and secondary cutaneous complaints. The problems encountered most widely in patients are allergy and itches.

Various medicines used in the treatment of skin diseases individually and in combinations are proactive antibiotic, steroids, antifungal, benzoyl peroxide, salicylic acid, anti-histaminic, vitamins and minerals and certain analgesics. Extension of rational use of medicines WHO- India program stress on rational use of drugs thereby promotes rational prescribing involving intervention to correct adoption of essential list of drugs, inappropriate drug usage, standard treatment guidelines development, irrational prescribing determining and restricting. All these in turn strengthen the health care delivery system of the nation, if strictly followed. The Periodic prescription audit in form of drug utilization study is a way to improve the quality of prescription and curb the menace of irrational prescribing which has become a global phenomenon. Infectious diseases of the skin are common diseases in developing countries.

In poorer areas of Asia and Africa this figure may be as high as one-half. Millions of children and adults die each year from diseases that could have been prevented or treated with cost-effective and inexpensive essential drugs. Prescribing patterns studies are useful to monitor evaluate and suggest modifications in prescribers, prescribing habits so as to make medical care rational and cost effective. Such analysis not only improves the standards of medical treatment at all levels in the health system, but also supports in the identification of drug use related problems such as, drug-drug interaction, poly-pharmacy and adverse drug reaction WHO. This type of research was landmark in the history of drug utilization and the proponents of this research understood that the correct interpretation of data on drug utilization requires investigations at the patient level. It became clear that we need to know the answers to the following questions.

Why drugs are prescribed;

Who the prescribers are;

For whom the prescribers prescribe;

Whether patients take their medicines correctly;

What the benefits and risks of the drugs are.

MATERIAL AND METHODS

The study conducted by analyzing the copies of prescriptions of patients who had visited the OPD of Dermatology department of J.L.N hospital Ajmer. To avoid undue bias of the doctor during prescribing to a patient, copies of prescriptions from month January 2017 to

December 2017 were collected from the record room of JLN hospital, Ajmer for study. From all collected carbon copies, we randomly selected 100 copies for each month, a total of 1200 copies were selected for the study. From these prescriptions, the information on demographic profile of patients, diagnosis and treatment were collected and tabulated.

- Distribution of prescriptions on the basis of gender and age groups.
- Identification of trend: Poly pharmacy and average number of drugs per prescription.
- Various categories of drugs (antibiotics, antihistaminic, anti-fungal, steroids and other drugs) prescribed and its frequency.
- Number of antibiotics prescribed per prescription.
- Most commonly prescribed drug and its frequency.

Efforts were also made to determine the prevalence of skin diseases and distribution of skin diseases on the basis of age groups and gender.

Inclusion Criteria: - The study included patients of both sexes and all ages suffering from skin diseases Exclusion Criteria: -

1. Diseases other than skin diseases
2. Those prescriptions in which diagnosis was not certain

STATISTICAL ANALYSIS: The data was collected and compiled in Microsoft excel 2007. Descriptive analysis was applied and frequency and numbers were obtained.

Table: Sex wise distribution of prescription

S. No.	Gender	Number of prescription	Percentage
1	Male	675	56.3
2	Female	525	43.7
	Total	1200	100
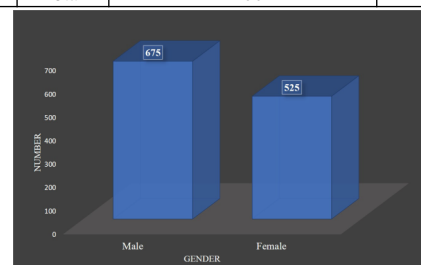
OBSERVATION AND RESULTS

Table shows that out of 1200 prescriptions, 675 (56.3%) were prescribed to males and 525 (43.7%) were prescribed to females. Out of the total 1200 prescriptions, highest number of prescriptions (211, 17.58%) were for Tinea Corporis, followed by Inguinal Dermatitis (124, 10.33%), Acne Vulgaris (121, 10.08%), Scabies (104, 8.7%). Hand foot and mouth disease (13, 1.08%) was the least common

disease among 1200 prescriptions. Among 1200 prescription, 157 (13.08%) males and 54(4.5%) females were having Tinea Corporis, followed by 80 (6.66%) males and 23 (1.91%) females were suffering from Scabies. 83 (6.91%) males and 41 (3.41%) males were suffering from Inguinal Dermatitis. Out of 814 antibacterial drugs, maximum anti bacterial (342) were prescribed in age group of 21-30 years, followed by 227 antibacterial prescribed in 31-40 years of age group. Out of 289 antifungal drugs, majority of antifungal drugs that is 119 were prescribed in age group of 31-40 years, followed by 79 were prescribed in age group of 21-30 years. Out of 52 antiviral drugs, highest numbers of antiviral drugs were prescribed in age group of 0-10 years, followed by 12 of these drugs were prescribed in 11-20 years of age group. Out of 72 anti helminthic drugs, maximum anti-Helminthic drugs (28) were prescribed in age group of 21-30 years of age group, followed by 24 of these drugs prescribed in age group of 31-40 years. Out of 275 steroids drugs, majority of steroids (94) were prescribed in age group of 31-40 years, followed by 53 steroids prescribed in age group of 21-30 years of age group. Out of 856 Antihistaminic, highest numbers of Antihistaminic were prescribed in 31-40 years of age group, followed by 279 of these drugs prescribed in 21-30 years age group. Out of 133 NSAIDS, highest numbers of NSAIDS (32) were prescribed in age group of 0-10 years, followed by21 prescribed in 11-20 years of age group. Result shows that out of 4357 drugs were prescribed in 1200 prescription under study. 4 drugs were prescribed to 490 (40.83%) patients, whereas 3 drugs were prescribed to 394 (32.83%) patients. A small number of patients were prescribed 5 (72, 6%) and 6 (92, 7.65%) drugs also. Average number of drugs prescribed per prescription was 3.63. And 4357 drugs prescribed to 1200 patients, (856, 19.64%) were Anti histaminic, followed by antibacterial (814, 18.68%), Antifungal (829, 6.63%), Steroids (275, 6.31%), antiviral (52, 1.19%) Anthelmintic (72,1.65%), NSAIDS (133, 3.05%), Emollients (822, 18.10%), Vitamins (789, 18.10) and other drugs (255, 5.90%). Total 814 Antibacterial, Fusidic Acid was prescribed (292, 35.87%) in highest number, followed by Clindamycin (253, 31.08%), 856 Antihistaminic drugs, Chlorpheniramine was prescribed in highest number (441, 51.51%), followed by Levocetirizine (322, 37.61%), 289 Antifungal drugs, Clotrimazole was prescribed in highest number (136, 47.05%), followed by Fluconazole (74, 25.60%), 275 Steroids, Betamethasone drugs was prescribed in highest number (257, 93.45%) followed by Clobetasol propionate (12, 4.37%). Shows that Chlorphenamine is the most common drug prescribed 441(10.12%) times, followed by Levocetirizine was prescribed 322, (7.39%) times. Out of 4357 dosage forms, tablets were prescribed in highest number (2671, 61%) times followed by cream (1003, 23%). Shows that out of 814 prescriptions, 1 Antibacterial was prescribed in 630 prescriptions, followed by 2 Antibacterial were prescribed in 156 prescriptions and more than 2 Antibacterial were prescribed in 28. Out of 289 prescriptions 1 anti-fungal was prescribed in 269 prescriptions while 2 anti-fungal were prescribed in 20 prescriptions. Only 1 Antiviral was prescribed in 52 prescriptions. Only 1 Anthelmintic drug was prescribed in 72 prescriptions. Out of 856 prescriptions 1 antihistaminic was prescribed in 776 prescriptions, while 2 antihistaminic were prescribed in 80 prescriptions. 1 steroid was prescribed in only 275 prescriptions. Out of 133 Prescriptions, 1 NSAID was prescribed in 126 prescriptions.

CONCLUSION

Following conclusions are drawn from the present study: Number of male patients was slightly higher. Prescriptions were highest in the age group of 21-40 years. Tenia Corporis is the disease with highest prevalence. Among both male and female, Tinea Corporis is most commonly prevalent. Between 11-20 years of age group Acne Vulgaris is the most common disease while in 31-40 years of age group Tenia Corporis is most common disease.

Folliculitis is most common in age group of 61-70 years of age group. Antibacterial were prescribed mainly in 21-30 years of age group patients. Antihistaminic, Antifungal and steroids were prescribed in 31-40 years of age group. A maximum of 3 to 4 drugs were prescribed in majority of prescriptions that shows prevalence of polypharmacy. Antihistaminic were prescribed in maximum number, followed by antibacterial. Fusidic Acid was the antibacterial, prescribed in highest frequency, followed by Clindamycin. Chlorpheniramine was the Antihistaminic prescribed in highest number, followed by Levocetirizine. Clotrimazole was most commonly prescribed antifungal, followed by Fluconazole. Betamethasonewas the most common steroids prescribed, followed by Clobetasol propionate Chlorphenamine was the most commonly prescribed drug in whole study. Tablet was most commonly prescribed dosage form among all prescriptions. Antifungal drugs and Antihistaminic were prescribed in Tenia Corporis. Antibacterial were prescribed mainly in Acne Vulgaris. Steroids were prescribed mainly in Inguinal Dermatitis.

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