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Original Research Article

A prospective observational study of prescription pattern in dermatology outpatient department of associated hospitals of Rajasthan University of Health Sciences-college of medical sciences, Jaipur

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ABSTRACT

Background: Skin diseases are chronic in nature and they require lifetime treatment. Prescription pattern reflects health professional attitude towards the disease and role of drugs in its treatment. The study of prescription pattern is important to make medical care rational and monitoring adverse drug reactions.
Methods: An observational and prospective study was carried out in Skin and VD department along with department of pharmacology, RUHS college of medical sciences, Jaipur. Data collection was done in three months after ethical approval. Data was entered and analysed with latest Microsoft Excel version. Descriptive statistics were used to analyse the results.
Results: During the study period, a total of 979 prescriptions were included and analysed, out of which the usage of dermatological drugs was maximum among males (n=520, 53.11%). Total 2848 drugs were prescribed in 6 different dosage forms. The most common dosage form prescribed was tablet (1267, 44.49%) followed by cream (685, 24.05%). Total 1632 (57.30%) drugs were prescribed through oral route and 1216 (42.70%) drugs were prescribed through topical route. the present study depicted that dermatophytosis (n=243, 24.82%) was one of the most common dermatological manifestations. antihistaminic (673, 23.63%) were the most commonly prescribed drug.
Conclusions: The study of drug use is an effective tool to promote rational drug prescribing. Such type of study will help in formulation of proper antibiotics, drugs policy, prescription of cost-effective drugs, improvement in the patient compliance and reduction in undesirable effect of drugs.

Keywords: Antihistaminic, Antifungal, OPD, Prescription pattern, Skin diseases

INTRODUCTION

Skin is the part of integumentary system that constitutes the largest organ of human body.[1] it is affected by various extrinsic factors like environmental, chemical, infectious agents and intrinsic factors like metabolic, genetic and immunological. Many systemic diseases are also identified by their dermatological manifestations.[1,2] Skin diseases are common and cause a huge disease burden globally. Collectively skin diseases are the 18th leading cause of health burden worldwide and it was 4th leading cause of fatal health burden in 2010 globally.[3] The skin disorders have serious damaging effect on quality of life of the patients by affecting physical, social and psychological factor.[4] The prevalence of skin disease in the general population varies from 11.16 % to 63 % as seen in various studies.[5] Most common skin disease in India, dermatophytosis, acne, psoriasis, dermatitis, miliaria, pyoderma, melasma, lichen plans, urticaria, folliculitis, pale,

impetigo, xerosis, wart, alopecia areata, lichen simplex, vitiligo and eczema.[6] Common drug prescribed in Various combination of drugs generally used in the treatment of skin diseases such as proactive antibiotic, anti-histaminic, antifungal, steroids, salicylic acid, vitamins and minerals, analgesics and benzoyl peroxide.[7] Most of the skin diseases are chronic in nature and they require lifelong treatment. Therefore, appropriate diagnosis by physician and rational prescription of drugs based on his understanding of both risk and benefit of drugs is important component of drug therapy.[6] In India, there are various problems in prescription pattern of drugs like irrational drug combinations, overuse of multivitamins, unnecessary use of antibacterial in fungal conditions and prescribing drugs from same class. It contributes to the emergence of antimicrobial resistance. Till now very few systematically analyzed data are available on the drug prescription pattern, in dermatology Outpatient department (OPD) in north India.[8] Hence, this study is an attempt to assess the drug prescribing patterns in these patients at tertiary care hospital in Rajasthan.

METHODS

An observational and prospective study was carried out in Skin and VD Department along with department of pharmacology, RUHS college of medical sciences, Jaipur. Patients visiting the Skin and VD department of the institution and those satisfying the inclusion and exclusion criteria. 979 patients were included in the study. Written informed consent was obtained from each patient. Once the consultation by the dermatologist is over, details in the prescriptions were recorded in case record form. Demographic data includes age, gender, diagnosis, number and class of drugs, dose, route, dosage form, duration and frequency of medication were recorded in case record Performa. Data collection was done in three months (September 2022 to November 2022) after ethical approval.

Results were expressed in terms of percentage. Data was entered and analysed with latest Microsoft Excel version. Descriptive statistics were used to analyse the results.

RESULTS

During the study period, a total of 979 prescriptions were included and analysed, out of which the usage of dermatological drugs was maximum among males (n=520, 53.11%) as shown in (Table 1), the highest number of cases fell in the age group of 28-37 yrs. (n=363, 37.07%) The total number of different drug products prescribed were 2848. Therefore, the average number of drugs per encounter was 2.75. The usage of dermatological drugs was maximum among males (n=520, 53.11%) followed by females (n=459, 46.89%) (Table 2). Total 2848 drugs were prescribed in 6 different dosage forms (Figure 1). The most common dosage form prescribed was tablet (1267, 44.49%) followed by cream (685,24.05%).

Table 1: Age wise prevalence of dermatological drug use.

Age (years)	N	%
28-37	363	37.07
18-27	318	32.48
48-57	101	10.32
38-47	95	9.71
58-67	63	6.44
68-77	39	3.98
Total	979	100

Table 2: Gender wise prevalence of dermatological drug use.

Gender	N	%
Male	520	53.11
Female	459	46.89
Total	979	100

Table 3: Drugs prescribed through various route.

Routes of Administration's	Number of drugs prescribed	%
Oral	1632	57.30
Topical	1216	42.70
Total	2848	100

Table 4: Distribution of patients based on illness.

Type of illness	N	%
Dermatophytosis	243	24.82
Acne Vulgaris	207	21.14
Urticaria	127	12.97
Dermatitis	107	10.93
Scabies	79	8.07
Pigmentary Disorder	78	7.97
Psoriasis	69	7.05
Lsch	39	3.98
Others	20	2.04
Alopecia	10	1.03
Total	979	100

Overall analysis of the 2848 drugs, the most common route of the prescribed drug was oral followed by topical (Table 3). Total 1632 (57.30%) drugs were prescribed through oral route and 1216 (42.70%) drugs were prescribed through topical route. Based on disease distribution, the present study depicted that dermatophytosis (n=243, 24.82%) was one of the most common dermatological manifestations and least common was alopecia (10, 1.03%) (Table 4). Common class of drugs prescribed in dermatology OPD out of which, antihistaminic (673, 23.63%) were the most commonly prescribed drug under dermatology clinic followed by antibiotics (549, 19.28%) followed by Antifungals (544, 19.10%), however vitamins and minerals and antiparasitic class of drugs were least prescribed (Table 5).

Table 5: Common class of drugs prescribed (n=2848).

Class of drugs	N	%
Antihistaminic	673	23.63
Antibiotics	549	19.28
Antifungals	544	19.10
Corticosteroids	314	11.03
Keratolytics and emolients	255	8.95
Others	209	7.34
Antiparasitic	206	7.23
Vitamins &minerals	98	3.44

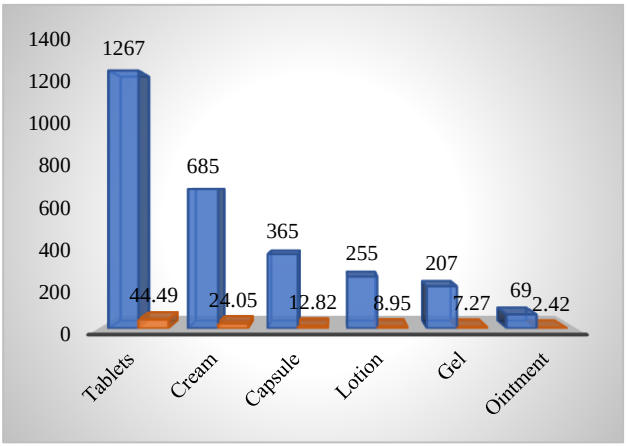

Figure 1: Analysis of various dosage forms used in the prescribed drug.

DISCUSSION

This study analysed 979 prescriptions pattern of drugs in the outpatient department of Dermatology, associated hospital RUHS CMS, Jaipur. prescriptions pattern studies can aid in the improvement of quality of treatment and prescribing pattern of dermatological drugs Thus ultimate aim of the study is to help the dermatologist in achieving rational treatment to their patients. Our study showed male preponderance for dermatological diseases which is similar to study by Dayal et al in 1977.[9] The commonest age group suffering from skin diseases was 28-37 years (n=363) which was comparable to the study done by Kaur.[10] The most common disease pattern seen in patients attending the dermatology OPD of our study was primarily dermatophytosis (243,24.82%) followed by acne 15.60%, followed by contact dermatitis 12%. Study conducted by Kushwaha et al.[11] found that the greatest number of patients were of tinea in 29.17% followed by acne vulgaris in 18.75% of patients which is similar to our findings. Our study finding showed antihistaminic as the most commonly prescribed drug class followed by antifungals and antibiotics which was similar to the study carried out by Narwane et al.[12] Tablets were the most common dosage form prescribed (44.49%) followed by cream (24.05%) and capsules (12.82%) which are comparable to the study by Pathak et al.[1]

Limitations

Having small study duration, the results of present study may not be applicable on general population, suffering from skin diseases as it does not include seasonal variations. This study does not include cost analysis; further research can be carried out on this.

CONCLUSION

This study demonstrated that prescriptions of drugs used in dermatology OPD. The study of drug use is an effective tool to promote rational drug prescribing. Despite all the limitations such as small sample size, shorter study duration and single study centre etc. the study may prove to be an eye opener to health care provider. Various interventions strategy as introduction of hospital formulary, standard treatment instructions, list of essential drugs and prescription control by institutional regulatory authorities, judicious use different drugs, regularly sensitize the doctor about the need for rational prescription prescribing by conducting ongoing medical education; patient education will decrease risk of side effects and can be of great value treating dermatological conditions. Such type of study will help in formulation of proper antibiotics, drugs policy, prescription of cost-effective drugs, and improvement in the patient compliance and reduction in undesirable effect of drugs.

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