



**ORIGINAL RESEARCH PAPER**

**Pharmacology**

**PRESCRIPTION PATTERN OF COMMONLY USED DRUGS IN DERMATOLOGY OPD AT TERTIARY CARE HOSPITAL.**

**KEY WORDS:** Prescription pattern, Dermatology ,OPD

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**ABSTRACT**

**Aim** of the study is to determine the prescription pattern of commonly used drugs in Dermatology OPD. Study design: This is observational and cross-sectional study design was conducted in department of Dermatology along with of Dept. of Pharmacology at tertiary care teaching hospital.

**Result:** A total of 500 OPD prescriptions were with basic demographic parameters and drug prescriptions were included. Common class of drugs prescribed was Antifungal (21.43%) followed by antibiotics (19.14%) however chelating agent, Phenol and vasodilator class of drugs were least prescribed drugs.

**Conclusion:** As per WHO, Drug utilization studies or research are tools that deals with the marketing, distribution and prescription pattern of drugs and helps to assess the subsequent impact of these drugs on medical and socioeconomic status of patients. Drug utilization study is an effective tool to promote rational and cost-effective drug prescription.

**Introduction:**

The skin disorders have serious detrimental effect on quality of life of the general population by increasing the suffering in terms of physical, social, psychological as well as it increases financial burden as most of the skin diseases are chronic and requires longer duration of treatment. The pattern of skin diseases varies from one country to another and across different parts within the same country 1. The prevalence of skin disease in the general population varies from 11.16 % to 63 % as seen in various studies.2 Dermatological conditions account for up to 2% of consultations in general practice worldwide.3 Commonly prescribed drugs by dermatologists in clinical practice for a variety of reasons. Since drug prescriptions form a very important point of contact between the health care provider and patients, there have been calls for their rational use. Rational use of drugs means that right drugs should be prescribed for the right patient in adequate dose for the sufficient duration. 4

The successful outcome of therapy would depend very much on the choice of the proper use of drugs, which represents the important aspect of prescription.5 The next phase is the choice of a regimen such as what dose and duration are needed and route of administration. The monitoring efficacy, adherence to local guidelines and policies is also other phase.6 To our knowledge, this study represents an attempt at satisfying the knowledge gap and its findings can help develop proper educational tools to limit the irrational use of antibiotics, and other class of drugs by dermatologists in our skin OPD. This study may help in improving quality of prescription policy and prevent antibiotic resistant which is major global concern now a days.

**Materials and Methods**

**Aim of the study:** To determine the prescription pattern of commonly used drugs in Dermatology OPD at Andhra Medical College, Visakhapatnam.

**Ethical Consideration:** The study was started after getting approval from the Institutional Ethical Committee.

**Study Design:** This is observational and cross-sectional study design was conducted in department of Dermatology along with of Dept. of Pharmacology at tertiary care teaching hospital.

**Study Centre:** Dept. of Dermatology and Pharmacology, Andhra Medical College, Visakhapatnam.

**Study Period:** From January 2013 to April 2013. All the prescriptions issued to the patients attending the dermatology outpatient department following the

consultation were entered in the case record forms. Prescriptions were collected on three days in a week for a period of three months from January 2013 to April 2013. Total 500 prescriptions were collected during the study period.

**Inclusion criteria:** It included only OPD patients, first time visitors and newly diagnosed patients. For this prescriptions were collected from outpatient departments and also the help of hospital medical record department (MRD) section were taken to collect the data in days when prescriptions could not be collected from OPD due to some unavoidable reasons.

**Exclusion criteria:** Follow up patients were not included in the study

The data collected included age, gender, diagnosis, number and class of drugs, dose, duration, strength, quantity to be applied and frequency of administration.

**Statistical analysis :** SPSS 21 was used for statistical analysis. Results were expressed in terms of percentage. Data was entered and analyzed with latest Microsoft Excel version. Descriptive statistics were used to analyse the results.

**Results:** In all, a total of 500 OPD prescriptions were collected and analyzed for demographic profile, disease incidence and drug prescription. The demographic profile of the patients is depicted in Table 1. A total of 500 patients were enrolled into the study. Out of which 258 (51.6%) male and 242 (48.4%) female were observed. The majority of patients (23%) were in the age group 21-30 years as shown in Table no 1.

**Table 1: Demographic profile of patients (n=500). Age distribution and gender distribution of patients.**

Variables	Characteristics	Frequency	Percentage
Gender	Male	258	51.6
	Female	242	48.4
	Total	500	100
Age	0-10 Yrs	19	3.80
	11-20 Yrs	97	19.40
	21-30 Yrs	115	23
	31-40 Yrs	99	19.8
	41-50 Yrs	70	14
	51-60 Yrs	58	11.6
	> 60 Yrs	42	8.4
	Total	500	100%

Table 2 shows the Distribution of some common skin diseases. Tinea (18.40%), Acne (15.60%) and contact dermatitis (12%)

were the most common diagnosed diseases (28.4%), while xerosis (1.20%) and Syphilis (0.80%) were had the lowest prevalence among all diagnosed diseases.

**Table 2: Distribution of some common skin diseases**

Diseases	Frequency	Percentage (%)
Tinea	92	18.40
Acne	78	15.60
Contact dermatitis	60	12
Psoriasis	32	6.74
Drug induced lesions	28	5.60
Acneform rashes	22	4.40
Urticaria	20	4.00
Miliaria	18	3.60
Pityriasis versicolor	17	3.40
Pyoderma	16	3.20
Melasma	14	2.80
Vitiligo	10	2.00
Wart	9	1.80
Leprosy	8	1.60
Folliculitis	8	1.60
Lichen planus	8	1.60
Herpes zoster	8	1.60
Furuncle	8	1.60
Candidiasis	7	1.40
Eczema	7	1.40
Lichen simplex	7	1.40
Impetigo	7	1.40
Keloid	6	1.20
Xerosis	6	1.20
Syphilis	4	0.80
Total	500	100%

As Table 3 shows, Common class of drugs prescribed in dermatology OPD out of which , Antifungals (21.43%) were the most commonly prescribed drug under dermatology clinic followed by antibiotics (19.14%) followed by H1 antihistaminics (17.55%), however chelating agent ,Phenol and vasodilator class of drugs were least prescribed.

**Table 3: Common class of drugs prescribed (n=1880 drugs).**

Drug class groups	No. of drugs prescribed	Percentage of total drugs prescribed
Antifungals	403	21.43
Antibiotics	360	19.14
H1 antihistaminics	330	17.55
Antiacne	195	10.37
Corticosteroids	161	8.56
Adsorbants and protectives	60	3.19
Keratolytics	57	3.03
Anthelmintics	46	2.44
Proton pump inhibitors	45	2.39
Antipsoriatic drugs	34	1.8
H2 blockers	34	1.8
Antiemetics	33	1.75
NSAIDs	26	1.38
Astringents	21	1.11

Ectoparasiticides	17	0.90
Moisturizers	15	0.79
Vasodilators	15	0.79
Phenol	14	0.74
Chelating agents	14	0.74
Total	1880	100 %

Table 4 presents the distribution of prescribed drugs according to the route of administration [dosage forms]. An oral route was highly prescribed in 43.71% followed by topical route which was prescribed for 26.22% of cases.

**Table 4. Various dosage forms prescribed.**

Routes of administration	Frequency	Percentage
Oral	800	43.71
Parenteral	100	5.46
Topical	480	26.22
Combination (systemic & local)	450	24.59
Total	1830	100

**Discussion:** As per WHO, Drug utilization studies or research are tools that deals with the marketing, distribution and prescription pattern of drugs and helps to assess the subsequent impact of these drugs on medical and socioeconomic status of patients.<sup>7</sup>The factors associated with high prevalence of skin diseases include low socioeconomic status, malnutrition, overcrowding, and poor standards of hygiene.<sup>8</sup> The high prevalence rate and moderate morbidity makes the skin diseases very important from public health point of view.

Our study showed male preponderance for dermatological diseases which is similar to study by Dayal et al in 1977<sup>9</sup> In the present study most of patients belongs to age group of 21-30 (19.40%) which is similar to findings of Chakrawarty et al 10 study where majority of patients i.e 32.63% were in same age group. Tegegne et al 11 study results were also in accordance with our findings. The most common disease pattern seen in patients attending the dermatology OPD of our study was primarily tinea 18.40% followed by acne 15.60%, followed by contact dermatitis 12%. Our results are similar to study conducted by Sangeetha et al<sup>12</sup> who reported tinea (20.5 %) in most number of patients, pyoderma (14.29%), fungal infection (14.24%) and psoriasis (5.77%) as the major skin diseases. Kushwaha et al 13 found that most number of patients were of tinea in 29.17 % followed by acne vulgaris in 18.75 % of patients which is similar to our findings. In the present study antifungal were given (21.43%) in most of patients which is similar to findings of Gupta et al 14. Motghare et al 15, Kushwaha et al 13 found that antifungal were second most common drugs prescribed in skin OPD.

In our study oral dosage formulations was used in majority of (43.71%) patients, which is similar to findings of Pathak et al 16 in which oral formulations (tablets and capsules) were given in 39.11 % of patients. Chakrawarty et al<sup>10</sup> study also found that oral dosage forms were given in most number of patients (19.59 %) most number of patients which is in accordance with our result.

**CONCLUSION:** The present study demonstrated the prescription patterns of drugs used in dermatology OPD. Drug utilization study is an effective tool to promote rational and cost-effective drug prescription. Various intervention strategies like introduction of hospital formulary, standard treatment guidelines, essential drug list and prescription control by institutional regulatory authorities, judicious use of different drugs, sensitize the physicians regularly regarding the need of rational prescription; patient education will lower the risk of undesirable effects, and can be of great value in

treating dermatological conditions. 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.

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Conflict of interest:None declared

Ethical approval:The study was approved by the Institutional Ethics Committee.

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