

DRUG UTILIZATION PATTERN FOR SKIN DISEASES IN DERMATOLOGY OPD AT TERTIARY CARE HOSPITAL OF WESTERN MAHARASHTRA

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ABSTRACT

Background: Periodic auditing of prescriptions in terms of drug utilization study is an important tool to enhance the efficacy of the treatment, to decrease the risk of the adverse effects, to give cost-effective treatment and to provide useful feedback to the clinician. Prevalence of dermatological diseases is very high throughout the world, and in day to day practice, a quarter of the cases are related with dermatological manifestations. In studies conducted in the Out Patient Department (OPD) of dermatology in North Palestine and Western Nepal, irrationalities in the prescriptions have been reported. **Aim:** To study the drug utilization pattern for skin diseases in dermatology OPD at tertiary care hospital of Western Maharashtra. **Methodology:** The retrospective analysis of dermatology OPD records of 6 months (1st March 2018- 31st August 2018) was carried out during the study period (1st September 2018 to 30th November 2018). The proforma for collecting data was designed. Demographic details, diagnosis and treatment given for each patient were recorded. The data collected was condensed, and the master chart was prepared for data analysis. **Result:** During the study period, a total of 3869 patient's case records were studied and analysed. A maximum number of patients (26.5%) found in the age group 31-40 years, followed by 23.5% of patients in the age group 21- 30 years. Fungal infection was found in 39.6 % of patients followed by acne in 14.2% patients and eczema in 9.1% of patients. Drugs most commonly prescribed were antihistaminics (45.02%) followed by antifungal (39.6%) and steroids (27.8%). Levocetirizine (74.07%) and hydroxyzine (16.5%) were the most commonly prescribed antihistaminics. Itraconazole (58.17%) and Griseofulvin (24.67%) were the most commonly used oral antifungal drugs. Miconazole (73.73%) was the most commonly used topical antifungal drug, followed by ketoconazole (12.45%). Among steroids, prednisone (52%) and betamethasone (38.05%) were the most commonly used steroids by oral route while clobetasol (68.09%) and mometasone (19.5%) were the most commonly used steroids by topical route. Our study revealed that the percentage of drugs prescribed from the WHO essential drug list was only 23.87%. Drugs which prescribed by the generic names were less than <1%. **Conclusion:** Treatment protocols used in the management of skin disorders were near to the standard guidelines.

Keywords: Drug utilization; Prescription pattern; Dermatology; Skin disorders.

INTRODUCTION

As per WHO, Drug utilization study is one of the important tool that deals with the marketing, distribution and prescription pattern of drugs and helpful to assess the subsequent impact of these factors on the medical and socioeconomic status of patients [1]. Drug utilization studies are very important in the understanding of the prescription pattern of drugs as well as to find out the quality of prescription in terms of rationality, drug interactions and financial burden of disease to the individual. Periodic auditing of prescriptions in term of drug utilization study is an important tool to enhance the efficacy of the treatment, to decrease the risk of the adverse effects, to give cost-effective treatment and to provide useful feedback to the clinician [2, 3].

Prevalence of dermatological diseases is very high

throughout the world, and in day to day practice, a quarter of the cases are related to dermatological manifestations [4, 5]. Skin disorders have been reported as 18th leading cause of health burden worldwide and 4th leading cause of nonfatal health burden in 2010 globally [6]. Worldwide, 2% of the Outpatient Department (OPD) consultations are related to skin disorders [7]. Skin disorders such as pyoderma, acne, urticaria, dermatitis, scabies, fungal skin infections and alopecia are common in India [8]. In studies conducted in the Out Patient Department (OPD) of dermatology in North Palestine and Western Nepal, irrationalities in the prescriptions have been reported [2, 9]. Similar problems were also detected in studies conducted among dermatologic outpatients in India. [10, 11].

In collaboration with dermatology OPD, we had planned the present study to find out the pattern of skin diseases in this region and the common drugs prescribed for them.

MATERIAL AND METHODOLOGY

Study Design: It was a descriptive, cross-sectional, retrospective observational study.



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Study period: The study was conducted during the period of 1st September 2018 to 30th November 2018.

Study Place: Study was conducted in the dermatology department of tertiary care hospital of Western Maharashtra

Ethical Approval: The study was conducted after obtaining the permission of the Institutional Ethics Committee and permission also taken from the department of dermatology.

Inclusion Criteria: OPD records of the patients who visited dermatology OPD between the period 1st March 2018 to 31st August 2018 were analysed during the study period (1st September 2018 to 30th November 2018).

Exclusion Criteria: Incomplete data entry records were excluded from the study.

Methodology:

The retrospective analysis of dermatology OPD records of 6 months (1st March 2018- 31st August 2018) was carried out during the study period. The proforma for collecting data was designed. Demographic details, diagnosis and treatment given for each patient were recorded. The data collected was condensed, and the master chart was prepared for data analysis.

Statistical analysis: The overall information generated was entered in Microsoft excel sheet (2013 version), and results were expressed in the form of a percentage.

RESULTS

During the study period, a total of 3869 patient’s case records were studied and analysed. Out of 3869 patients, 2361 (61%) patients were male, and 1508 (39%) patients were female. A maximum number of patients (26.5%) found in the age group 31-40 years, followed by 23.5% of patients in the age group 21- 30 years. Fungal infection was found in 39.6 % of patients followed by acne in 14.2% patients and eczema in 9.1% of patients. Antihistaminics were the most commonly prescribed drugs (45.02%), followed by antifungal (39.6%) and steroids (27.8%). Several drugs prescribed per patient were varied in between 1 to 7. The average number of drugs per prescription was found to be 2.72.

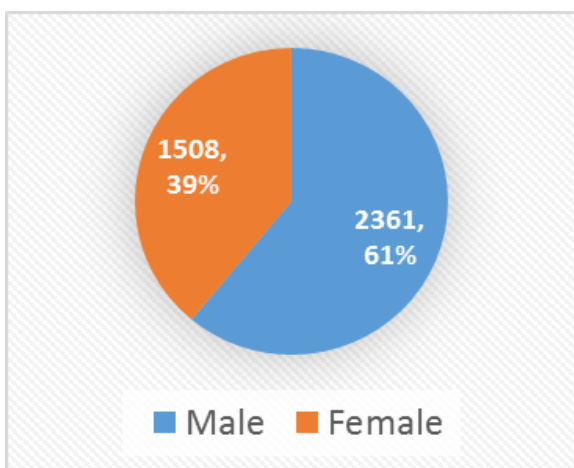


Fig 1. Gender wise distribution of the patients

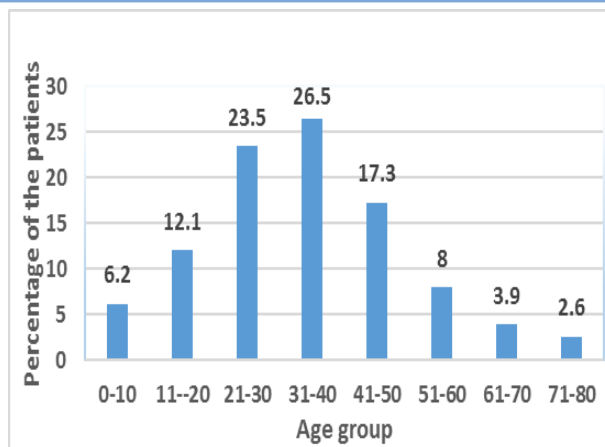


Fig 2. Age group wise distribution of the patients in percentage

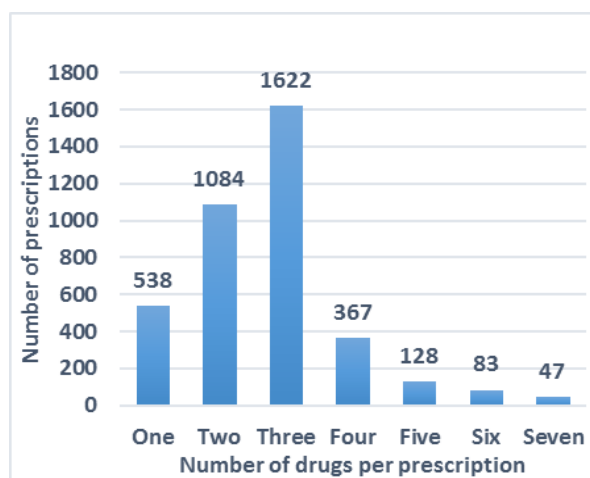


Fig 3. Number of drugs per prescriptions

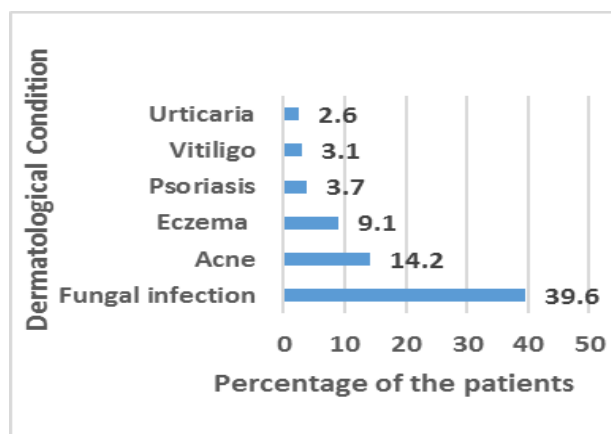


Fig 4. Distribution of common skin disease

Levocetirizine (74.07%) and hydroxyzine (16.5%) were the most commonly prescribed antihistaminics. Itraconazole (58.17%) and Griseofulvin (24.67%) were the most commonly used oral antifungal drugs. Miconazole (73.73%) was the most commonly used topical antifungal drug, followed by ketoconazole (12.45%). Among steroids, prednisone (52%) and betamethasone (38.05%) were the most commonly used steroids by oral route while clobetasol (68.09%) and mometasone (19.5%)

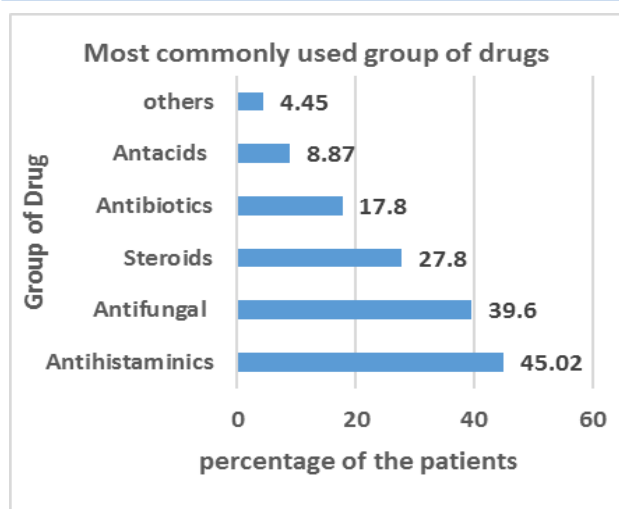


Fig 5. Most commonly used group of drugs

were the most commonly used steroids by topical route. Benzoyl peroxide (62.73%) was the most commonly used topical preparation for acne, followed by adapalene (22.14%) and tretinoin (10.15%).

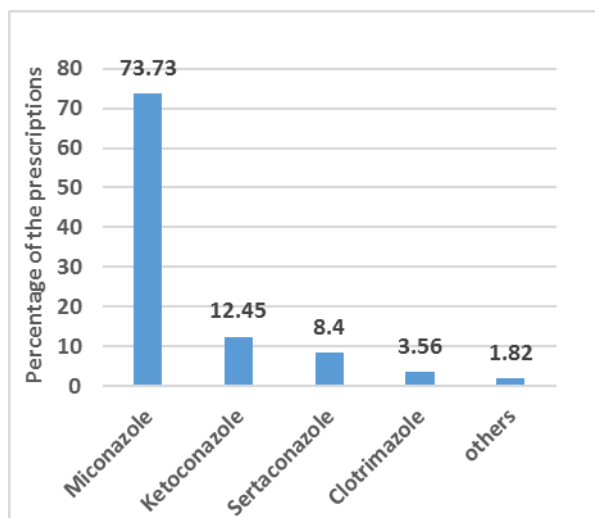


Fig 6. Most commonly used topical antifungal drugs

Amoxicillin+ clavulanic acid (48.04%), azithromycin (30.04%) and doxycycline (16.11%) were the most commonly prescribed antibiotics in various dermatological conditions. Our study revealed that the percentage of drugs prescribed from the WHO essential drug list was only 23.87%. Drugs which prescribed by the generic names were less than <1%

DISCUSSION

In our study, we have analysed the case records of 3869 patients. Out of 3869 patients, 2361 (61%) patients were male, and 1508 (39%) patients were female. A maximum number of patients (26.5%) found in the age group 31-40 years, followed by 23.5% of patients in the age group 21- 30 years. The similar result was observed in the study conducted by Pathak AK et al. [12] Fungal infection (39.6%) was the most common skin disorder noted in the patients followed by acne (14.2%) and eczema (9.1%). A similar study conducted by Mothare

VM et al. found scabies was the most common skin disorder while acne was the most common skin disorder noted in the study conducted by Pathak AK et al. [12, 13]. An average number of drugs per prescription is considered as an important index of prescription analysis. In our study, the average number of drugs per prescription was noted to be 2.72. An average number of drugs per prescription was found to be very low as compared to similar studies conducted by Sarkar et al. and Narwane et al. [9,10].

The most commonly prescribed drugs in our study were antihistaminics (45.02%) followed by antifungal drugs (39.6%) and steroids (27.8%). In the study conducted by Tikoo D et al., antihistaminic was the most commonly prescribed drug group [14]. Most probable reason for the maximum use of antihistaminic drugs could be due to itching associated with many dermatological conditions like fungal infections, eczema, psoriasis, scabies etc. In our study, we found that levocetirizine was the most commonly used antihistaminic drug, followed by hydroxyzine. Similar observation was also noted in the study conducted by Mohamed Saleem TL et al. [15] In our study; we found that itraconazole was the most commonly used oral antifungal drug and miconazole was the most commonly used topical antifungal drug. A similar study conducted by Mohamed Saleem TL et al. found that fluconazole was the most commonly used oral and miconazole was the most commonly used topical antifungal drug [15].

In our study, we found that clobetasol was the most commonly used topical steroid and prednisone was the most commonly used oral steroid. Similar findings also found in the study conducted by Mohamed Saleem TL et al. [15] Amoxicillin + clavulanic acid, azithromycin and doxycycline were the most commonly used antimicrobial drugs. In our study, we came to know that <1 % of drugs were prescribed by the generic name. This value less than that reported in the study conducted by Sarkar C et al. and Muhammad J. et al.[9, 16] Our study found that the percentage of drugs prescribed from WHO essential drugs list was only 23.87%, which is lower as compare to that found in the study conducted in North India by Alam K et al. [17] The low rate of prescribing from WHO essential drug list may be contributed by excessive use of antihistaminics, antibiotics and several topical steroid preparations which are not included in WHO essential drug list.

CONCLUSION

Treatment protocols used in the management of skin disorders were near to the standard guidelines. However, drugs prescribed by the generic name were very few. Also, only a few drugs were prescribed from the WHO essential drug list.

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