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A PROSPECTIVE OBSERVATIONAL STUDY OF DRUG PATTERN ON SKIN DISEASES AT A TERTIARY CARE HOSPITAL

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Abstract

Background: Skin diseases have a serious impact on an individual's health related quality of life. Occasionally skin diseases can be a manifestation of systemic diseases. Prescribing pattern studies are pre requisite for the formulation of drug policies. They offer useful methods for teaching and training in drug therapy and also identify the problems that arise from drug usage in healthcare delivery system and highlight the current approaches to the rational use of medicines.

Aim: The aim of this prospective study is to assess the drug pattern of skin diseases in tertiary Care hospitals and their impact on patient's health related quality of life. The objectives for this study were to perform an evaluate the prescribing pattern of skin diseases & assess the effect of skin conditions on patients quality of life.

Methodology: A Prospective observational study was conducted in 190 adult patients presenting to the Department of Dermatology at various Tertiary Care Hospitals, Guntur, Andhra Pradesh, India for a period of 6 Months. Prescriptions of 190 patients attending dermatology outpatient department were collected and analysed. The variables assessed from the prescriptions includes the demographic profile of the patient, age, gender, socio - economic status, various common conditions related to skin, various classes of drug prescribed with their dosage form, dose, frequency and duration of administration.

Results: In this study, a total of 190 populations were analysed among them majority of population accounting 53% of males and 47% of females. And the predominant age group of the presenting population was 21-30 years accounting 24%. The most common skin diseases are Tinea corporis (32.1%), Scabies (15.2%), Acne Vulgaris (8.9%), Urtricaria, and Eczema. Mostly patients were prescribed with anti-histamines, corticosteroids and antifungal medications.

Conclusion: From this study, we conclude that male population of age between 21-30 years are more prone to skin diseases. Fungal infections formed the majority of presenting disease conditions and the effect on patient's Quality of life was small to moderate and large effect on patient's quality of life was considerably negligible. The most common disease among study population is Tinea corporis. The most common drugs & dosage form prescribed in our study were anti-histamines& corticosteroids used as a topical ointments.

***Key Words*:** Skin diseases, Dermatology, Prescription, Polypharmacy, outpatient department.

INTRODUCTION

Skin is the outermost covering of human body constituting multiple layers and is the first line of defence from exogenous components and guarding all the organs beneath it[1]. The chief function of skin is to protect the human body from pathogens and also maintenance of body's homeostasis by preventing loss of water and maintaining constant body temperature[2, 3]. The skin is the largest organ of the body, forming the outermost surrounding layer; separates the body from the surroundings environment. Skin disorders are considered to be one of the most leading reasons for patients attending primary health care facility in the world[4, 5, 6]. Even though they do not show a significant increase in patients, morbidity and mortality they have a profound impact on patients' health related quality of life[7]. These occur frequently

And most of the people develop some kind of skin condition at some time in their life. Skin conditions may be infected, non-infective, autoimmune, genetic or idiopathic in origin requiring a wide range of treatment regimen[8]. Skin diseases comprise both acute and chronic conditions and hence cause both short term and long term impact. Chronic skin conditions are usually the ones impairing patient's quality of life to that of acute conditions[9, 10]. Skin disorders are numerous, ranging from simple sunburn and blisters to complex eczema and skin cancer. Most of these are detected by physical changes in the skin and the rest can be detected by skin biopsies or laboratory data (serum evaluation) if the condition is infectious in origin[11, 12, 13].

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MATERIALS & METHODS

This prospective observational study was conducted at multi-cantered hospital in Out-patient department of Dermatology & Venereology in Dr.Shakeela's Skin Care Center & Amaravathi Skin Care Center, Guntur from **September 2018 – February 2019.**

Study Population: A total of 190 random participants, both male and female were included in the study. Patients suffering with mentally ill and those who were not amenable to participate in the study, patients in whom the interpretation was not yet confirmed were taken under exclusion criteria.

Data Collection and Analysis: In this prospective observational study the patients of all age groups are taken in dermatology outpatient department. Patient demographic details i.e. age, gender, date of visit to hospital, past medical history, medication history, diagnosis, drugs prescribed are collected from patient's records and documented in data collection form. Prescription pattern in various skin diseases are calculated using appropriate tools. The data obtained from the questionnaires was analysed in Microsoft Excel 7.0 (Microsoft Corporation).

RESULTS & DISCUSSION

1.GENDER DISTRIBUTION: In this study, a total of 190 populations attending primary dermatology care clinic were interviewed in the study among whom the majority were males who constituted account of 53% (n= 101) and females constituted 47% (n=89). The mean age of males was found to be 30 years and that of females was 29 years respectively.
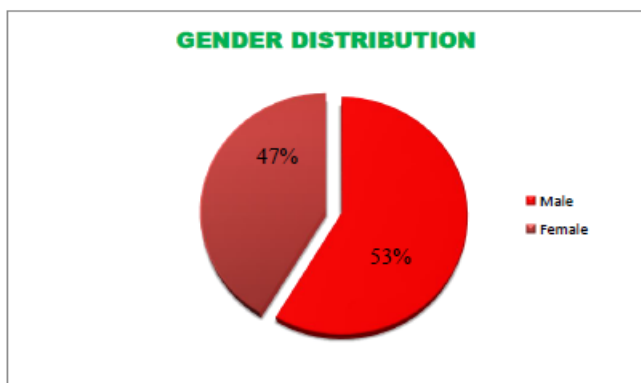

Fig 1: Gender Distribution among the Study Population (n=190)

2. AGE GROUP DISTRIBUTION:

S.No	Age Group (Years)	No. of Population	Percentage (%)
1.	1-9	8	4%
2.	10-20	30	16%
3.	21-30	45	24%
4.	31-40	39	21%
5.	41-50	33	17%
6.	>80	35	18%

Table 1: Age Group Distribution in Study Population (n=190)

According to the age group analysis no. of cases in age group of zero to nine were four percentage (n=8), 10 to 20 age group were 16% (n=30), 21 to 30 age group were 24% (n=45), 31 to 40 age group were 21% (n=39) population, 41-50 age group were 17% (n=33), greater than 80 age group were 18% (n=35) patients identified. This data reveals that the patients aging between **21-30 years** were found to be high followed by **31-40 years** of age group.

3. DISEASES ANALYSIS AMONG THE STUDY GROUP:

In this demographic profile, the disease analysis of among the 190 prescriptions, the most commonly presenting conditions encountered in the course of study were Tineacorporis 61 (32.1%). This was followed by scabies accounting 29 of the among present study (15.2%).Acne Vulgaris followed the above conditions Constituting 23 of the presenting cases (8.9%). This was followed by Eczema, urticaria(11.3%),Eczema(8.4%),Melasma(6.3%),Psoriasis(6.3%) vitiligo(3.04%) , and the reaming were less frequent complaints as shown in the figure 2.
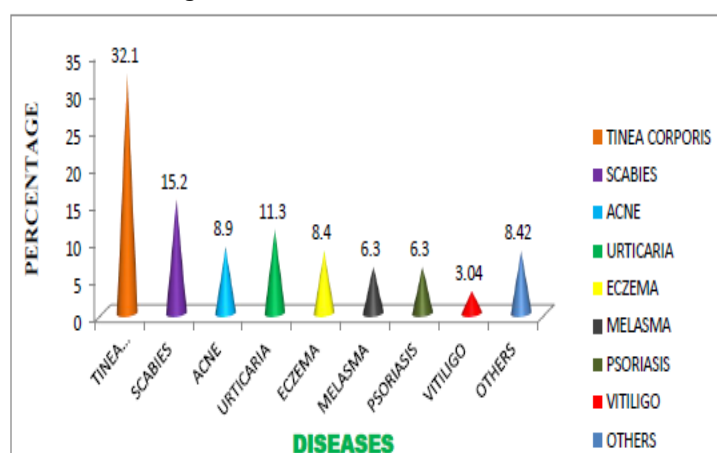

Fig 2: Disease analysis among the Study Group

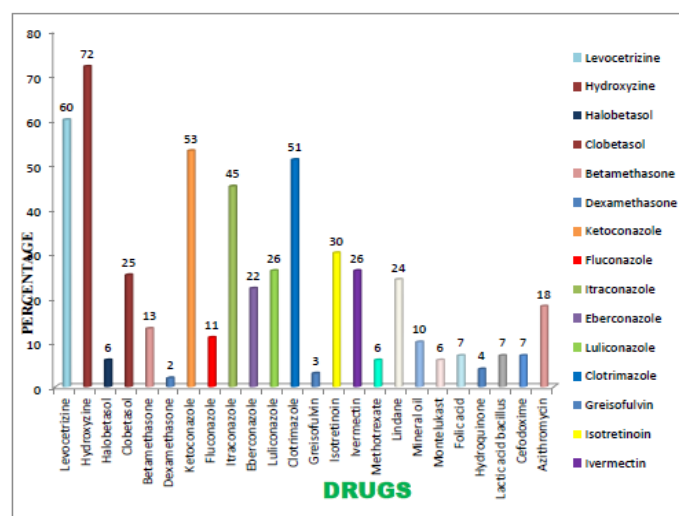## 4. PRESCRIPTION PATTERN ANALYSIS IN STUDY POPULATION:

Fig: 3 Prescription Pattern Analyses in Study Population.

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Among 190 prescriptions the most commonly prescribed drugs are Hydroxyzine 25 mg per oral (Atarax) 72 populations' encounted in the course of study. Followed by Levocetrizine 60 members accounting among the present study. Later followed by halobetasol constituting 6 persons ,Clobetasol 25 prescrpitions, Betamethasone 13,Dexamethasone 2, Ketoconazole 53, Fluconazole 11, Itraconazole 45, Eberconazole 22, Luliconazole 26, Clotrimazole 51, Greisofulvin 3, Isotretinoin 30, Ivermectin 26, Methotrexate 6,Lindane 24, Mineral oil 10, Montelukast 6, Folic acid 7, Hydroquinone 4, Lactic acid bacillus 7, Cefodoxime 7, Azithromycin 18 of the presenting study population.

CONCULSION: The study accounts to the conclusion that males are more prone to skin diseases compare to females at the age of between **21-30 years** who are daily wagers. Tinea corporis is the major skin disease in both the genders. Because in Guntur district the average whether condition is warmer throughout the year in which skin diseases are more likely to spread in this climatic condition, and other risk factors for skin diseases include sedentary life style, environmental factors, crowded population as Guntur is one of the most densely populated cities, and due to lack of personal hygiene, lack of knowledge about spreading of infections. As a clinical pharmacist we have to educate the public regarding risk of spreading infection, before that we have to educate them about hygiene and prevention of attacking the disease. The study accounts to the conclusion that in controversy to many other studies conducted on pattern of, skin conditions. To conclude all together, though skin conditions have no profound impact on patients' quality of life they have small to moderate impact on the patient's life in various perspectives and hence skin care and hygiene are to be taken regularly by population of any age and region. These studies suggest that the prescribers to consider factors as poly pharmacy, rationality of prescription and cost benefit analysis before writing any prescription. Hospital authority should also take concrete steps to ensure generic prescribing to reduce the cost of treatment and to sensitize the physicians regularly regarding the need of rational prescribing by conducting continuing medical education. But the involvement of clinical pharmacist in clinical practice should be increased for the proper usage of medication and better outcome.

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