

PREVALANCE OF VARIOUS SKIN DISORDERS AND PRESCRIBING PATTERN OF ANTIHISTAMINES IN TERTIARY CARE HOSPITAL, PUNE

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ABSTRACT

Objectives: Dermatological conditions account for up to 2% of consultations in general practice worldwide. Skin diseases in developing countries have a serious impact on quality of life. The objective of the present study is to assess the prevalence of various skin diseases and to assess the drug utilization pattern of antihistamines in Dermatology Outpatient Department.

Methods: A prospective study was carried out in Dermatology department of Bharati Hospital and Research Centre, Pune. The data collection form was prepared which includes patient and medication related information. The prescriptions were analyzed for common skin conditions and prescription patterns.

Results: During the study period 320 prescriptions were analyzed including males 158 (49.37%) and females 162 (50.62%). The maximum number of patients (38.75%) were in the age group of adults (20 to 30 years) and minimum were children (<10 yrs) is 6.25%. Most of them were having Acne problems (31.25%), followed by Eczema (8.75). Antibiotics (31.91%) were mostly prescribed class of drugs, followed by steroids (20.33%) and antihistamines (17.73%). Among antihistamines, Levocetirizine is mostly prescribed (66.66%). Antihistamines were mostly prescribed in skin problems like Urticaria (20.0%), followed by Dermatitis (18.66%). Ranitidine is prescribed along with other antihistamines to treat Urticaria (hives).

Conclusion: Most of the patients were having Acne problems. Antihistamines were mostly prescribed in allergic conditions and rashes. Majority of drugs were prescribed in brand names. Periodic evaluation of prescribing pattern is necessary to improve prescribing standards.

Keywords: Dermatology, prescribing pattern, Out Patient Department, Drug Utilization, Antihistamines.

INTRODUCTION

Skin diseases in developing countries have a serious impact on people's quality of life, it is more so in India where climate, socio-economic status, religions and customs are widely varied in different parts of the country[1]. Occasionally skin diseases can be a manifestation of systemic diseases. Dermatological conditions account for up to 2% of consultations in general practice worldwide. Dermatological problem in India manifests as primary and secondary cutaneous complaints. In India the most prevalent dermatological condition include but not limited to dermatitis, urticaria, fungal skin infection, acne, alopecia and conditions such as psoriasis, skin cancer and adverse drug reaction on the skin are less prevalent[2]. Usually for peak level skin disorder, the therapy of skin problems is longer for complete removal of problems[3,6]. However the most crucial phase in the treatment of any disease is appropriate diagnosis, which is based on the physician's clinical experience and diagnostic test[3,5]. The second most crucial phase in the treatment is the rational prescribing, which is based on physician's knowledge on the risk and benefits of the drug to be prescribed[2].

The pattern of drug use in a hospital setting need to be monitored intermittently in order to analyze their rationality[3,7]. Periodic auditing of prescriptions is essential to increase the therapeutic efficacy, decrease adverse effects and provide feedback to prescribers therefore used to oversee, monitor and analyze the observance of standards of medical treatment at all levels of the health care delivery system[3,8].

Collection of data on the utilization of drugs at the hospital out-patient level has been shown to be an effective tool to constitute guidelines for improving drug utilization patterns. This has resulted in more effective and rational therapy as well as economic benefits in the use of drugs[3,9].

Antihistamines are used widely to treat the symptoms of various allergic reactions like allergic rhinitis and urticaria and hay fever etc. They are used for the prevention of motion sickness and morning sickness as well. Their efficacy, tolerance and safety in humans have been widely established and hence they make up one of the

largest groups of pharmaceutical agents used worldwide. As per our knowledge, very few systematically analyzed data are available on the antihistamines use pattern in dermatology in India. Hence, the present study was undertaken in patients taking treatment under the dermatology outpatient department (OPD) of the teaching hospital to generate baseline data and analyze various aspects of drug prescribing practices[4].

MATERIAL AND METHODS

OBJECTIVE

To assess the prevalence of various skin diseases.

To assess the drug prescription pattern of antihistamines.

METHODS

A prospective study was carried out in department of dermatology of Bharati Hospital and Research Centre, Dhankwadi, Pune, Maharashtra, India. A data collection form was prepared which includes patient as well as medication related information. 320 prescriptions were collected during 4 months of study period. All relevant and necessary information for the study was collected from the outpatient department cards, treatment charts. Patient related parameters includes age, sex and drug related data such as name of the drug, dosage form, dosing frequency, duration, route of administration and diagnosis data also noted. Obtained information was compiled, scored and analyzed.

RESULT

Overall 320 prescriptions were analyzed amongst the patients during the study period. Table 1 provides the age and sex distribution of the patients. The number of males were 158 (49.37%) while number of females were 162 (50.62%) with male to female ratio of 0.97. The maximum number of patients (38.75%) were in the age group of adults (20 to 30years) and minimum numbers of patients (6.25%) were in the age group of children (<10 yrs).

The maximum numbers of patients were having Acne problem (31.25%), followed by Eczema (8.75%) and Psoriasis (6.87%), and least number of patients with candidiasis problem (0.93%)

Maximum number of drugs prescribed were topical (53.90 %) compared to oral (46.09 %). Steroids were mostly prescribed topically. Topicals were commonly prescribed compared to the oral agents. Antibiotics (31.91%) were the most commonly prescribed class of drugs, followed by steroids (20.33%) and antihistamines (17.73%). Average number of drugs prescribed was 2.64/prescription which includes topical and oral formulations

Among the antihistamines, levocetirizine is most commonly prescribed drug (66.66%), followed by Hydroxyzine (13.33%), loratidine (9.33%).

Antihistamines were mostly prescribed in skin problems like Urticaria (20%), followed by Dermatitis (18.66%). Ranitidine is prescribed along with other antihistamines to treat Urticaria(hives). Levocetyrizine is prescribed mostly in all skin diseases like Urticaria, Dermatitis, Eczema, Acne and Psoriasis.

DISCUSSION

The number of males were 158 (49.37%) while number of females were 162 (50.62%) with male to female ratio of 0.97 which is not similar to the study conducted by Bijoy KP et al [3] and S. P. Narwane et al [10], where males are more than females. The maximum number of patients were in the age group of adults (20 to 30years) is 38.75% which is in line with study conducted by Bijoy KP et al [3] and Sarkar et. al [9]. Average number of drugs prescribed was 2.64/prescription in our study which correlates with other two studies carried out by Sarkar C et al [9] and Narwane SP [10] et al showed average number of drugs prescribed was 2.42 and 2.7/prescription respectively. Our study depicted slightly lower average number of drugs/ prescription compared to previous studies. Our study findings showed most of the dermatological conditions in the OPD are with Acne problems (31.25%) followed by Eczema and Psoriasis. The common fungal infections found includes tinea cruris, tinea corporis and candidiasis and among the sebaceous gland disorder maximum number of patient were of acne (grade I, II and III) with or without Post Inflammatory Hyper pigmentation (PIH). The reason responsible for the above finding can be humid environmental condition and poor hygiene. This data differs from the study carried out in Nepal [11] showing the Cutaneous infections (40%) as the most common dermatologic condition followed by eczema (31%). A great majority of drugs were prescribed in brand names in this study which is in contrast to the study conducted by Sarkar et al [9] where only 13% (91 out of 708) of the drugs were prescribed in generic names. Our study finding showed antibiotics as the most commonly prescribed drug class followed by steroids and antihistamines which differ from the study carried out by Narwane SP et al [10] showing antiallergics as the most commonly prescribed drug followed by antifungal and antibiotic. We also found that antibiotics were another class of drugs most commonly prescribed for the treatment of acne. Among the antibiotics clindamycin, azithromycin and minocycline were commonly prescribed, as these are the first line therapy and found to be effective for the treatment of acne. Topicals were commonly prescribed compared to the oral agents. Use of topicals were usually preferred for treating skin diseases as they have site specific action, less systemic absorption resulting in less side effects and convenient for patient use. This finding was comparable with studies by Khan NA et al [12] and Sarkar C et al [9] that showed steroid and antibiotics were

most commonly prescribed topically. Corticosteroids were among the most widely used drugs in dermatology and one has to view their usage in the light of their limitations and adverse effects. Topical corticosteroids are mainly used for non-infective dermatologic disorders associated with inflammation such as psoriasis, atopic dermatitis, contact dermatitis. Potent topical steroids used on areas like face and flexures or when used under occlusion may lead to Cutaneous side-effects like striae, atrophy, steroid acne and hypertrichosis. So, careful consideration of patient's age, potency of steroid prescribed, site of application and efficacy of prescribed corticosteroid need to be taken into consideration. However, in this study adequate prescribing information, other advices and cautions regarding corticosteroid use was maintained in majority of the prescriptions. . Moreover, our study showed there was a correlation between classes of drug prescribed with the disease encountered. Antihistamines were mainly prescribed in allergic conditions and rashes. Among the antihistamines, levocetirizine is most commonly prescribed drug (66.66%), followed by Hydroxyzine (13.33%), loratidine (9.33%). Most of the antihistamines were prescribed for skin problems like urticaria (20.00%) followed by dermatitis (18.66%) and eczema (16.00%). Ranitidine is mostly prescribed along with other antihistamines to treat Urticaria(hives). Analysis of data showed that all the antihistaminic agents were prescribed orally in dermatology because of disease prevalence with related symptoms of itching (associated with fungal infection, scabies, eczema and dermatitis). Vitamin A may be helpful in acne, psoriasis and ichthyosis. Retinoid (isotretinoin, acitretin) are commonly used in treatment of acne and psoriasis respectively, but is a potent teratogen thus limiting its use in women with child bearing potential. The commonly prescribed retinoids found in our study were a dapalene and tretinoin either alone or in combination with clindamycin as an antibiotic. Frequency and duration of administration was specified in majority of prescriptions (95%) for topical administered drugs which shows quite rational prescribing but dose/strength was specified in (33.85%) prescriptions only which shows that the prescribing pattern should be improved to avoid imprecise prescription leading to the prescription errors while dispensing the medication by a pharmacist and there is a need to emphasize on rational and appropriate prescribing pattern to be followed in the OPD for better patient care.

CONCLUSION

Many patients were having Acne problem and least number of patients have candidiasis who came to skin OPD during the study period. Antihistamines were mainly prescribed in allergic conditions and rashes like Urticaria followed by Dermatitis. Levocetirizine is most commonly prescribed antihistamine followed by Hydroxyzine and Loratidine. Ranitidine is prescribed along with other antihistamines to treat Urticaria(hives). Levocetyrizine is prescribed mostly in all skin diseases like Urticaria, Dermatitis, Eczema, Acne and Psoriasis.

Periodic evaluation of prescribing pattern is necessary to improve prescribing standards. There is a clear need for development of standard treatment guidelines and educational initiatives to encourage the rational and appropriate drug use.

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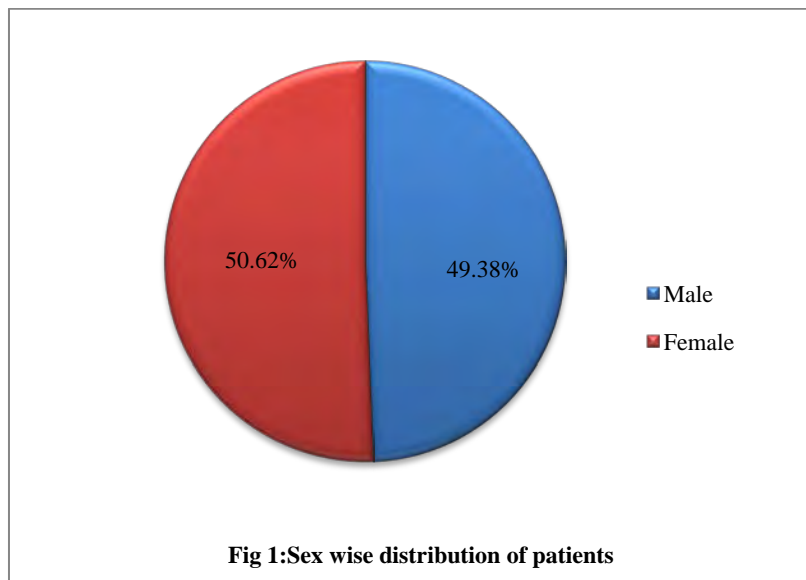


Fig 1: sex wise distribution of patients

Gender	Percentage(%)
Male	49.38
Female	50.62
Total	100

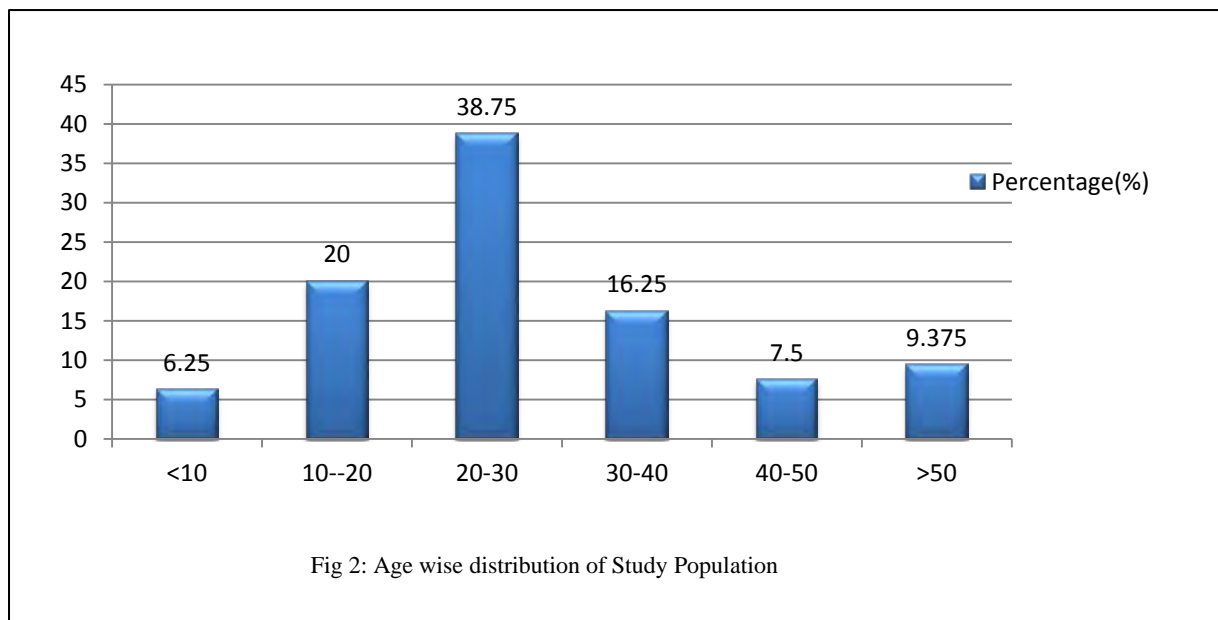


Fig 2: Age wise distribution of Study Population

Table 3: Utilization pattern of antihistamine drugs in the study

Drug	No.of Drugs	(%)
Levocetirizine	100	66.66
Hydroxyzine	20	13.33
Loratidine	14	9.33
Ranitidine	12	8
Dexchlorpheniramine	4	2.66
Total	150	100