



## **Prescribing Patterns of Glucocorticoids In the Skin OPD of A Tertiary Care Teaching Hospital, Palakkad**

**Diya Sarju<sup>1\*</sup>, Julia Joseph<sup>1</sup>, Prejith Prem<sup>1</sup>, AnusreeRaj.S<sup>1</sup>, Sivakumar R<sup>1</sup>**  
*1.Grace College of Pharmacy, Palakkad – 678 004*

### **ABSTRACT**

DUE helps to improve the quality and cost effectiveness of drug use and there by helps to improve the patient care. It helps in identifying ADR, optimizing the drug therapy etc. Glucocorticoids are widely prescribed. In spite of these actions they produce several ADE which should be monitored. Till now, effective treatment guidelines for Glucocorticoids are not available, so our study aims to bring out a prescribing pattern for steroids. A prospective, observational study was conducted from November 2015 to April 2016. About 106 patients were included in the study. Of the 106 prescriptions analyzed, Clobetasol was most commonly prescribed topical corticosteroid (30%) and Prednisolone was most commonly used in systemic routes (25%). Diseases like contact dermatitis (26.41%) and eczema (25.47%) were most commonly seen. 35 prescriptions contained fixed dose combination (25.92%). Most of the prescriptions contained monotherapy (64.15%). The generic name, strength, quantity to be used, site of application were not mentioned in most of the prescriptions. Frequent periodic prescription monitoring is essential for better healthcare outcomes for the patients.

**Keywords:** Glucocorticoids, Drug Utilization Pattern, Dermatitis, Eczema

\*Corresponding Author Email: diyasarju@gmail.com

Received 24 April 2016, Accepted 30 April 2016

Please cite this article as: Sarju D *et al.*, Prescribing Patterns of Glucocorticoids In the Skin OPD of A Tertiary Care Teaching Hospital, Palakkad. American Journal of Pharmacy & Health Research 2016.

## INTRODUCTION

Drug utilization has been defined as the marketing, distribution, prescription and use of drug in a society with special emphasis on resulting medical and social consequences. Developing countries have limited funds available for health care and drug and it become very important to prescribe drug rationally so that the available funds can be utilized for treating a large number patient.<sup>1</sup>

Prescription order is an important transaction between the physician and the patient. It is a reliable tool for systematic scientific study over the drug transaction. It brings together the patients diagnostic acumen and the physician's instruction protocol.<sup>2</sup> Rational practice of drugs prescription is mandatory in clinical practice but it is seen frequently that there is rise of irrational prescription of drugs in various fields of medical management. Drug utilization pattern in both in & out patients departments of various teaching care hospital & medical care providing institutions must need a proper intermittent & judicious monitoring to minimize irrational practice of drug prescription, to analyze the rationality of every prescriptions, to offer suitable modifications in prescribing pattern to increase the therapeutic benefits and reduce adverse effects.<sup>4</sup>

Over the years it has become increasingly apparent that corticosteroids are being abused by doctors & patients alike.<sup>3</sup> Corticosteroids being the mainstay in the management of various Dermatoses like eczema, Psoriasis, Vitiligo, Lichen Planus, Atopic Dermatitis, Contact Dermatitis, Alopecia Areata, LSC, Discoid Lupus Erythematosus, drug rash to name a few, there is always an imperative need to monitor the rational use of this drug.<sup>4</sup>

Most of the skin diseases are chronic and require treatment for a prolonged period which holds the risk of adverse effects. Among the drugs used in dermatology are antibiotics, Antifungals, Scabicides, Vitamins, Antiallergics, Keratolytics, Emollients, and Topical corticosteroids. Of all these, topical corticosteroids constitute the mainstay of treatment for many skin conditions.<sup>5</sup> The amount of corticosteroid which is prescribed, dispensed and applied should be considered carefully because too little steroid can lead to a poor response, and too much can increase the risk of adverse effects.<sup>6</sup>

Derive the optimum benefit with least adverse effects; various factors have to be taken into consideration while prescribing, including the nature of the disease, age of the patient, site affected, and the pharmacology of the corticosteroids like potency, frequency of use and the vehicle.<sup>7</sup>

The main aim of drug utilization research is to facilitate the rational drug use. Without a precise knowledge of how drugs are being prescribed and used, it is difficult to suggest measures to improve the prescribing habits<sup>8</sup>The patterns of drug use in a hospital setting need to be monitored intermittently in order to analyze their rationality and to offer feedback and/or suggestions to drug prescribers so as to enable and effect suitable modifications in prescribing pattern to increase the therapeutic benefits and reduce adverse effects.<sup>9</sup>

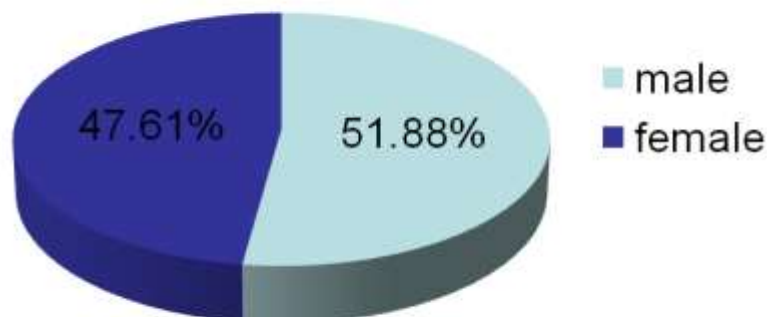
## MATERIALS AND METHOD

Permissions from the institutional authorities were taken prior to the initiation of the study. This is a prospective observational study conducted at Karuna Medical College, Chittur, Palakkad, India, from November 2015to April 2016.

During the study period 106 prescriptions were randomly collected and analyzed .All the relevant data like age, sex, weight, details of the drugs prescribed etc were noted in the data collection form.

## RESULTS AND DISCUSSION

Among the 106 patients included in the study 55 were male (51.88%) and 51 females (47.61%) Figure 1. Among the study population most were from the age group of 20-40(46.22%) followed the 40-60 age groups (23.58%) Table 1



**Figure 1 : Gender wise distribution of subjects**

Most of the prescriptions contained topical steroids (65.18%) followed by systemic ones (34.80%) Figure 3. The most commonly used topical Glucocorticoids was Clobetasol propionate (30%).Prednisolone was most commonly prescribed among the systemic glucocorticoids(25%)Figure 2.

Contact dermatitis (26.41%) and eczema (25.47%) were the most frequently visited illness Table 2. Depending on the potency more potent drugs were prescribed the most followed by less potent .Most of the prescriptions contained a single Glucocorticoids (64.15%) and many of the prescriptions lack the important details like generic name, strength, quantity to be used, were not

mentioned in the case of topical corticoids Table 4. among 35 prescriptions fixed dose combinations were used (25.92%) Table 3. Also among 106 prescriptions analyzed 9 contained polypharmacy.

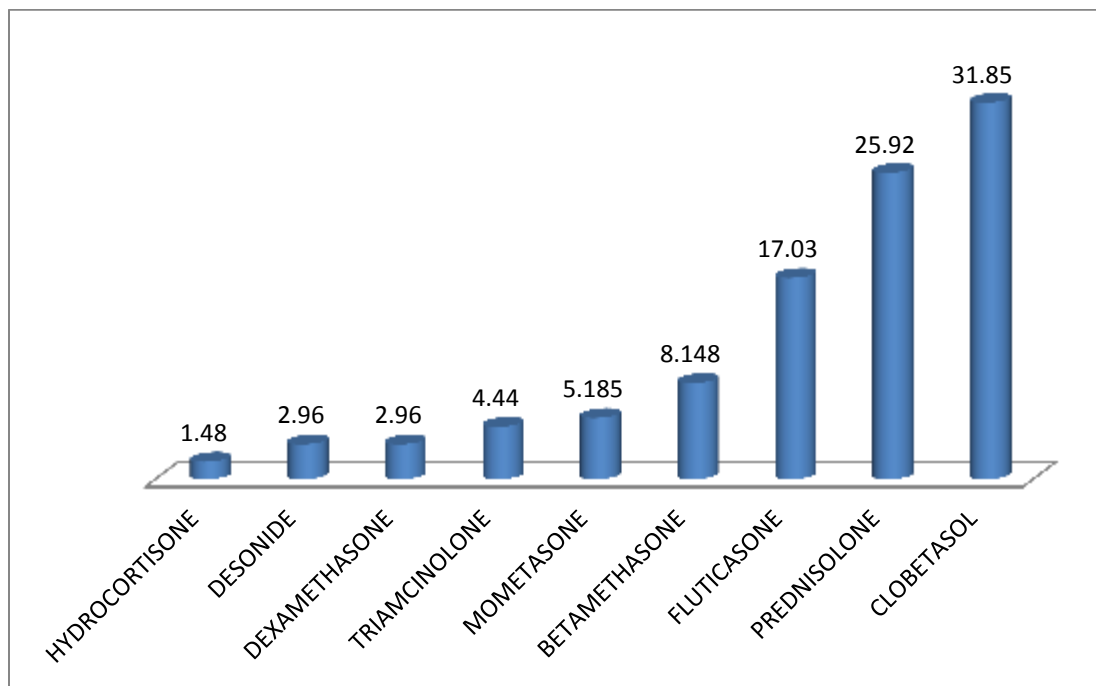


Figure 2: Mostly prescribed Glucocorticoids

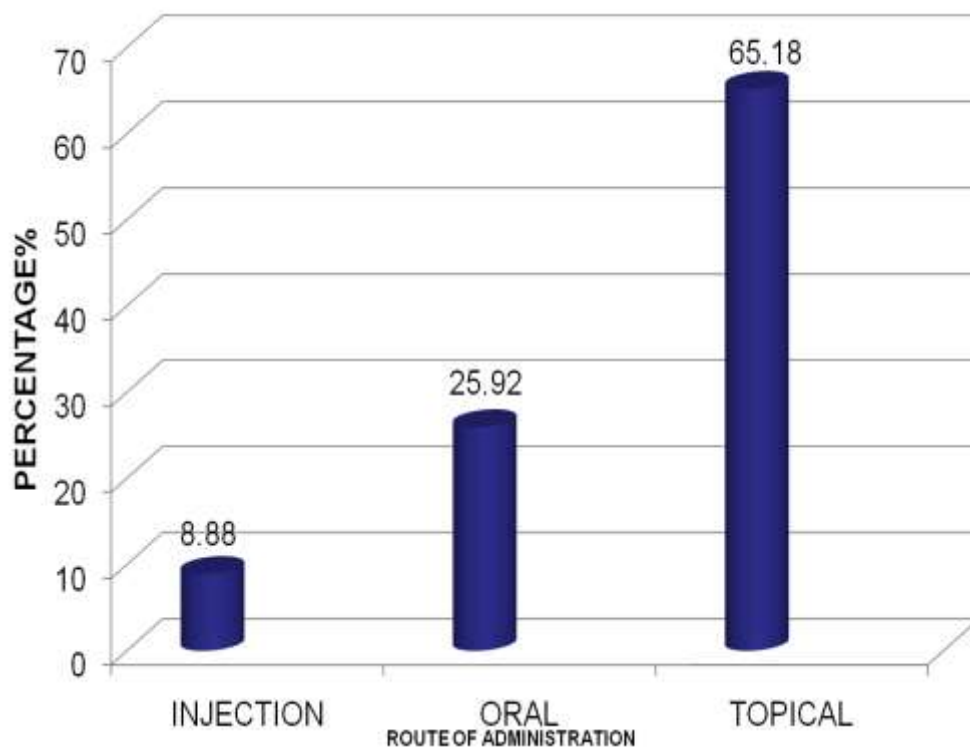


Figure 3: Most commonly used route of administration

**Table: 1 Age wise distribution of the subjects**

Age group	Number of patients	Percentage (%)
<20	8	7.5
20-40	49	46.22
40-60	25	23.58
60-80	22	20.95
≥80	2	1.90

There is no significant difference between male and female gender in the case of visiting the dermatologist. Mostly males are more prone to these diseases and most common age group affected are 20-40.in accordance with the use of Glucocorticoids in dermatology Department and the results are comparable with Madarkaretal 2014 .

Our study was comparable to the study Monalisajena et al 2014 and the results were approximately same in concern with the most commonly used route of steroid administrations. Fixed Dose Combinations (FDCs) of topical Glucocorticoids were used with antifungal, salicylic acid, antibiotics, which was seen among (25.92%) of the prescriptions.

Clobetasol was most commonly used in topical routes and Prednisolone in oral route and Triamcinolone Acetonide in injection forms. In our study we also found that potent drugs were prescribed mostly (50.37%) for minor infections rather than less potent ones and among 106 prescriptions analyzed we could find 9 Polypharmacy.

In most of the prescriptions we analyzed generic name was not used which correlates with monalisajena et al 2014.clear explanations regarding strength ,frequency, quantity to be used are not mentioned in most of the prescriptions. Clear explanations regarding these should be provided by the healthcare professionals to the patients for obtaining better outcomes and minimal ADRs.

**Table: 2 Diseases mostly prescribed with corticosteroids at dermatology department**

Disease	Number	Sample no:106 Percentage (%)
Contact dermatitis	28	26.41
Eczema	27	25.47
Psoriasis	9	8.49
Lichen planus	9	8.49
PMLE	7	6.66
Pruritis	7	6.66
Scabies	2	1.88
Vitiligo	2	1.88
Urticaria	2	1.88
Leprosy	1	0.943
Tinea corporis	1	0.943

Prurigo	1	0.943
Others	10	9.43

**Table: 3 fixed dose combinations used**

Brand name	Generic name	Number (n=106)	percentage
Fucibate cream	Fusidic acid 2% +Betamethasone 0.1%	4	11.43%
HH Fudic cream	Fusidic acid 2% +Mometasone	4	11.43%
Propysalic NF6 ointment	Clobetasol 0.05%+Salicylic acid	4	11.43%
Clop G cream	Clobetasol+Gentamycin	4	11.43%
Closalve F cream	Clobetasol 0.05%+ Fusidic acid 2%	3	8.57%
HH Zole	Clotrimazole+Mometasone	3	8.57%
Topisal ointment	Clobetasol 0.05%+Salicylic acid	3	8.57%
Candid B	Clotrimazole+Betamethasone	2	5.71%
Lobate GM	Clobetasol+Miconazole+ Neomycin	2	5.71%
Tyza M cream	Terbinafine+Mometasone	1	2.86%
Fluticort cream	Hydrocortisone +Fluticasone	1	2.86%
Fudic BNF cream	Fusidic acid +Beclomethasone	1	2.86%
HalosysS ointment	Clobetasol+Salicylic acid	1	2.86%

**Table: 4 Information's not included in the prescription**

Parameters	Not specified	Percentage
Generic name	70	66.03%
Strength	69	65.09%
Quantity to be used	71	66.03%
Duration of treatment	60	56.06%
Site of application	56	52.83%
Frequency of application	20	18.86%

## CONCLUSION

The present study reveals that potent steroids were most commonly used and the prescriptions with Glucocorticoids contains inadequate information's in majority of cases .Generic name of the drugs should be included in the prescriptions as it brings flexibility to the dispensing pharmacists .Intermittent monitoring evaluation and therapeutically analysis of the prescriptions of corticosteroids can bring out better outcomes and least adverse effects.

## REFERENCES

1. Chetan Javsen, Rajesh kumar Suman, Vithal G. Patil, Y A Deshmukh, etal. To Study Prescription Pattern of Corticosteroids in Skin OPD in Tertiary Care Teaching Hospital. Asian J of Pharma and Toxi 02 (04); 2014; 23-26.
2. Mahajabeen Madarkar, Srinath M Kambil, Ramesh Bhat M, Sukumar D et al. Pattern of prescribing practices of topical corticosteroids in the outpatient dermatology department of tertiary care hospital. Asian j pharm clin res, vol 8, issu1, 2015, 149-151.

3. Lunde PKM, Baksaas L *et al.* The methodology of drug utilization studies. WHO Reg Pub Eur Series 17, 1979.
4. Monalisa Jena, Maitreyee Panda, Nibedita Patro and Swati Mishra *et al.* Pattern of utilization of corticosteroids in department of dermatology at a tertiary care teaching hospital .J of Chem and Pharm Res, 2014, 6(8):86-91.
5. Rathod SS, Motghare VM, Deshmukh VS, Deshpande RP, Bhamare CG, Patil JR *et al.* Prescribing practices of topical corticosteroids in the outpatient dermatology department of a rural tertiary care teaching hospital. Indian J Dermatol 2013;58:342-5.
6. Ference JD, Last AR. Choosing Topical Corticosteroids. Am Fam Physician 2009;79:13540.
7. Kafle KK, Rajbhandarism, Srivastava K, Regmi S. Drug prescribing in out-patient departments in teaching hospital in Nepal. Indian J Pharmac 1991;23 : 219-221.
8. Nazmia Y. mirza, Sagun Desai and Barnaganguly. Prescribing pattern in a paediatric outpatients department in Gujarat. Bangladesh j pharmacol 2009; 4:39-42.
8. Mirshad PV, Afzal Khan AK, Fasalul Rahiman OM, Mohammed Muneersha TK *et al.* Prescription audit of corticosteroid usage in the department of dermatology at a tertiary care teaching hospital .Int J Basic ClinPharmacol. 2013 Aug;2(4):411-41



**AJPHR is**  
**Peer-reviewed**  
**monthly**  
**Rapid publication**  
Submit your next manuscript at  
[editor@ajphr.com](mailto:editor@ajphr.com) / [editor.ajphr@gmail.com](mailto:editor.ajphr@gmail.com)