

## PATTERN OF PRESCRIBING PRACTICES OF TOPICAL CORTICOSTEROIDS IN THE OUTPATIENT DERMATOLOGY DEPARTMENT OF TERTIARY CARE HOSPITAL

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### ABSTRACT

**Objectives:** Prescription order is an important transaction between the physician and the patient. Introduction of topical corticosteroids in the early 1950s has revolutionised dermatology which also has numerous side effects. So monitoring and analysis of the prescription practices of topical steroids can help to achieve rational prescription of these drugs. To analyze prescription patterns of topical corticosteroids in dermatology outpatient department of Father Muller Medical College, Mangalore.

**Methods:** A cross-sectional descriptive study was conducted for a duration of 2 months from 1<sup>st</sup> January 2014 to 31<sup>st</sup> January 2014. About 200 prescriptions from drug dispensing counter was collected which was written by dermatologist.

**Results:** Of the 751 drugs prescribed, 117 (15.4%) of all prescriptions are topical steroids. About 90 (11.8%) of the prescriptions contained very potent steroids, low potent steroids were prescribed in 16 (2.1%). Duration of applications was not mentioned in 41 (35.04%) prescriptions and site of application was mentioned 63 (53.8%) prescriptions.

**Conclusion:** Frequent periodic prescription monitoring is an essential tool for better health care facilities.

**Keywords:** Prescription, Topical corticosteroids, Dermatology.

### INTRODUCTION

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 [1]. Corticosteroids are in use since last 50 years. They are widely accepted by a big and of healthcare professionals for its anti-inflammatory qualities and some profound clinical results. Among the drugs used in dermatology are antibiotics, antifungals, scabicides, vitamins, antiallergics, keratolytics, emollients, and topical corticosteroids. Topical corticosteroids are one of the mainstream treatment modalities in dermatology today [2].

In dermatology, topical corticosteroids are mainly implied in treating psoriasis, vitiligo, eczema, atopic dermatitis, acute radiation dermatitis, and lichen sclerosus. But topical corticosteroids come with their own set of adverse effects. Some of them include skin atrophy, tachyphylaxis, striae, telangiectasia, acneiform dermatitis, and so on, whereas systemic reactions may occur in the form of hypothalamic-pituitary-adrenal suppression, Cushing's disease, and femoral head osteonecrosis [3].

In order to counter these adverse effects and improve the efficacy on the other hand a systematic drug prescription monitoring system should be maintained, regulated and updated when needed.

### METHODS

Permission from the Institutional authorities was taken before initiation of the study. This cross-sectional descriptive study was conducted in Father Muller medical College, Mangalore, India for the duration of 1 month from January 1, 2014 to January 31, 2014.

Two-hundred prescriptions were randomly collected from the drug-dispensing counter and analyzed. The prescriptions were written by dermatologists. The data collected included age, sex, symptoms, number of drugs, and potency of the steroid, and whether the dose, duration, strength, quantity to be applied, and frequency of administration was mentioned.

### RESULTS

The total number of drugs prescribed in the 200 prescriptions were with the average number of drugs per prescription being 3.34. The maximum number of drugs on a single prescription was seven, and the minimum was one. Injections were rarely prescribed to the patients. Majority (65%) of the prescriptions for topical steroids were for males (Fig. 1).

Majority of age group were 31-40 years. The youngest was 14 years, eldest was 65 years (Fig. 2).

Of the 751 drugs, the most commonly prescribed class of drugs was antiallergics, which was 239(31.82%) followed by antifungals 150 (19.97%). Analysis of prescriptions showed that topical steroids were prescribed in 117 (15.4%) of all prescriptions. None of the prescriptions contained more than one topical steroid. Oral corticosteroids were prescribed to only 7 patients. Totally, 90 (11.8%) of the prescriptions contained very potent steroids, low potent steroids were prescribed in 16 (2.1%) (Table 1 and Fig. 3).

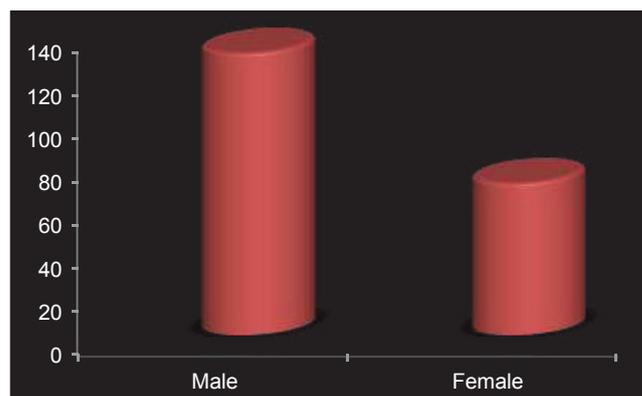


Fig. 1: Sex distribution

All the steroids were prescribed by brand names. In almost all the prescriptions frequency and site of applications were mentioned. Duration of applications was not mentioned in 41 prescriptions.

Site of application was mentioned 63 (53.8%) prescriptions. Quantity to be used was not specified in almost all prescriptions (Table 2 and Fig. 4).

**DISCUSSION**

Number of studies carried out indicated an unregulated and uncontrolled prescription pattern of topical corticosteroids. In a study carried out in India, the prescription of topical corticosteroids was studied in 200 patients attending a dermatology outpatient clinic. Potent topical corticosteroids were commonly used in 86 (43%) patients. The quantity of topical steroid was mentioned in only 4%, frequency of

administration was mentioned in 77%, the site of administration in 69%, and duration of treatment in 55% of the total prescriptions [4].

The other study showed that the 500 prescriptions contained 2,050 drugs with the average number of drugs per prescription being 4.1. About 66% of the prescriptions contained four to five drugs. This reflects a trend toward polypharmacy. The complications of polypharmacy are multiple such as increased problems with side effects of medications, adverse drug reactions, drug-drug interactions, noncompliance with the medical regimen, and direct cost of drugs as well as indirect costs resulting from hospitalization for iatrogenic illnesses [5].

Another study conducted on the prescription of topical steroids in north Palestine showed that topical corticosteroids are commonly prescribed for outpatients attending dermatology clinics there (51.6%). The quantity of the corticosteroid to be applied was not mentioned in 87.7% of the prescriptions and duration of use not mentioned in 71.6% [6].

In the present study 751 drugs, the most commonly prescribed class of drugs was antiallergics, which was 239 (31.82%) followed by antifungals 150 (19.97%). Analysis of prescriptions showed that topical steroids were prescribed in 117 (15.4%) of all prescriptions. None of the prescriptions contained more than one topical steroid. Oral corticosteroids were prescribed to only 7 patients. Totally, 90 (11.8%) of the prescriptions contained very potent steroids, low potent steroids were prescribed in 16 (2.1%).

The diagnosis and chief complaints were traceable back in their files depending on their OPD registration numbers.

Patient's expectation for a quick relief resulted in a poly pharmacy prescription pattern and the influence of the lucrative promotional programs of the drug companies [7].

Appreciable points of the prescription were frequency of application was mentioned in all prescriptions. Site of application was mentioned in 65% of the prescriptions. Duration of treatment was mentioned in 41 (35.04%) prescriptions, quantity to be used was not mentioned in any of the prescriptions. It would be better if fingertip unit (FTU) of topical steroids were explained to patients. Use of the FTU method can be a simple tool to help doctors and patients obtain a better understanding of the amount of topical steroid to be used [3,8].

The medical community should prescribe with a social perspective in mind and should stay away from practices that will be detrimental to the society at large.

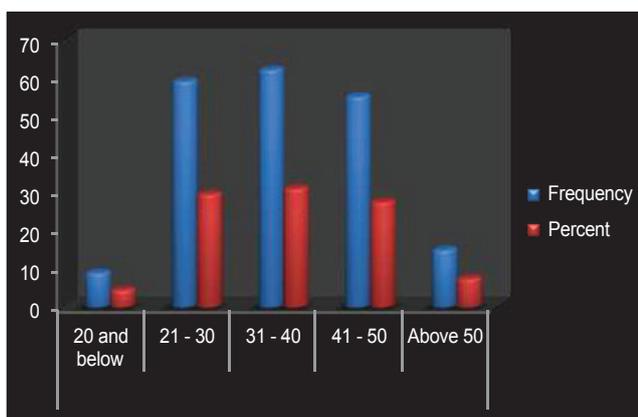


Fig. 2: Age distribution

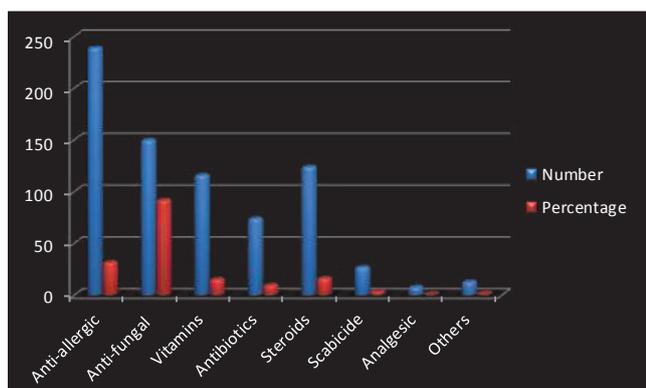


Fig. 3: Main therapeutic categories of drugs

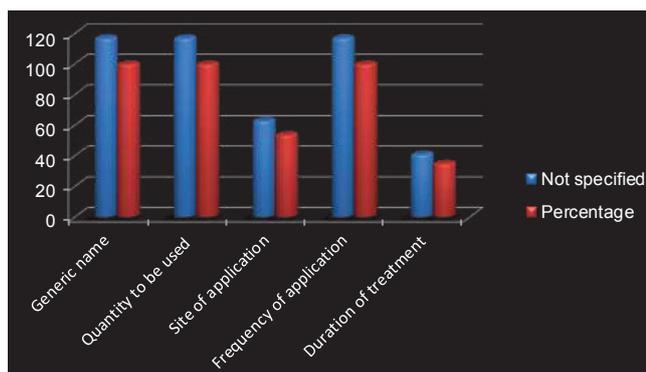


Fig. 4: Details of information not included on prescriptions for topical corticosteroids

Table 1: Main therapeutic categories of drugs

Category of the drug	Number	Percentage
Anti-allergic	239	31.82
Anti-fungal	150	19.97
Vitamins	116	15.44
Antibiotics	74	9.85
Steroids	124	16.5
Scabicide	27	3.59
Analgesic	8	1.06
Others	13	1.73

Table 2: Details of information included on prescriptions for topical corticosteroids

Parameters	Not specified	Percentage
Generic name	117	100
Quantity to be used	117	100
Site of application	63	53.8
Frequency of application	0	0
Duration of treatment	41	35.04

## CONCLUSION

Frequent periodic prescription monitoring is an essential tool for better health care facilities. Hence, it is required for a healthcare professional to keep an organized account on prescription pattern and update it as and when needed especially in the case of topical corticosteroids.

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