

TOPICAL CORTICOSTEROID USAGE IN DERMATOLOGY OPD IN A MEDICAL TEACHING HOSPITAL

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ABSTRACT

Topical corticosteroids constitute the most commonly prescribed drugs in the treatment of dermatological conditions. Self medication and erratic use of these agents by patients can increase the risk of developing local and systemic side effects. To find out the trend and outcome of topical corticosteroid usage in a Tertiary Care Hospital a retrospective analysis of the prescriptions in the Department of Dermatology was done for a period of six months. Data on age, sex, diagnosis, steroids and their combinations used, delivery vehicle, potency, frequency of application, duration of treatment and adverse effects were recorded on a pre- designed proforma and analyzed. Mid potency topical steroids were commonly used followed by high, low and very high potency preparations. Age range varied from 5–65 years. Mid and high potency steroids were used in combination with antimicrobials and salicylic acid. Cream based preparations were commonly used and duration of treatment was appropriate and rational. Adverse effects were seen only in four cases and no irrational prescriptions were noted.

Keywords: *Prescribing pattern; Topical steroids; Rational use; Outcome.*

INTRODUCTION

Topical corticosteroids are one of the most commonly prescribed drugs in dermatological conditions¹. They are used primarily as monotherapy or in combination with other agents for enhanced efficacy. Despite their undisputed efficacy an ideal topical corticosteroid should provide adequate benefit and produce fewer side effects. The ultimate goal in dermatological practice is to use the safest and least number of drugs in order to obtain the best possible effect in the shortest period at a reasonable cost. For a successful treatment with topical corticosteroids factors to be considered include accurate diagnosis, delivery vehicle used, potency, frequency of administration, duration of treatment and adverse effects². In addition children are more vulnerable than adults to the systemic effects of topical corticosteroids due to percutaneous absorption³. To achieve this, it is necessary to monitor, evaluate, and therapeutically analyze the prescribing pattern of topical steroids in dermatological practice. The present study was done to assess the prescribing pattern of topical steroids and such an analysis will help to identify adverse drug reactions, improve efficacy and achieve rational cost effective medical care. Some commonly used topical steroids are hydrocortisone acetate, fluocinolone acetonide, mometasone, fluticasone propionate, triamcinalone acetonide, fluocortolone, beclomethasone dipropionate, betamethasone benzoate and valerate, clobetasol butyrate, dexamethasone sodium phosphate and trimethyl – acetate and clobetasol propionate⁴. The adverse effects

of topical corticosteroids related to potency of preparations are thinning of epidermis, dermal changes atrophy telangiectesia, striae, easy bruising, hypopigmentation, delayed wound healing, fungal and bacterial infections⁴.

OBJECTIVES

- To study the prescribing pattern of topical corticosteroids.
- To assess their rational use in dermatological practice.

MATERIALS & METHODS

A retrospective study of six months duration was undertaken in the Department of Dermatology of M.S.Ramaiah Medical College & Hospital, Bangalore. Data from all prescriptions of patients who attended the out patient Department and were prescribed topical steroids were collected using a proforma in which details and information regarding general patient record, age factor, classification of diagnosis, therapeutic indications, duration & frequency of administration, combinations and vehicle used, side effects if any were recorded and analyzed by descriptive analysis. Potency wise the topical steroids are low potency hydrocortisone acetate, mid potency like, fluocinolone acetonide, mometasone, fluticasone propionate, triamcinalone acetonide, fluocortolone and high potency like beclomethasone dipropionate, betamethasone benzoate and valerate, clobetasol butyrate, dexamethasone sodium phosphate and trimethyl-acetate and very high potent like clobetasol propionate⁴.

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RESULTS

In all 350 prescriptions were analyzed for the topical steroids prescribed for various dermatological conditions. The most common indication was eczema (175 cases) followed by localized psoriasis and vitiligo being the most common among them (Table 1).The percentage of patients treated by age with respect to different potencies of topical steroids was in the range of 26 – 60 years (33.71%) and 06-25 years (23.43%) where mid potency topical steroids were used. The low potency agents were indicated in the age group of less than 06 years as shown in Table-2. The most commonly prescribed topical preparation was the mid potency steroids 227 (65%) followed by high potency 55 (16%), low potency 42 (12%) and very high potency 26 (7%) (Fig.1). Out of the 350 prescriptions audited 94 were as combination therapy of which 56 contained high potency topical steroid in combination with salicylic acid and 38 mid potency with antimicrobials (Fig.2). The type of preparation commonly used were mainly cream based 219 (62%) followed by ointment 115 (33%) and gel/lotion 16 (5%) (Fig.3). The treatment schedule with different potencies of topical corticosteroids was for a duration of one week twice daily followed by one week of once daily application with respect to low and mid potency agents, whereas the high and very high potency topical steroids were used twice daily for two weeks followed by once daily for next two weeks (Table 3). The least used topical steroids were the very high potency ones in rare conditions. Though there was no mention of the amount of steroid to be applied the frequency and duration of treatment was appropriate. Only 04 cases (1.1%) of adverse reaction such as skin atrophy in three cases and perioral dermatitis in one case were reported. All drugs were prescribed by their brand names and are contained in the essential drug list.

Table 1: Indication for use of topical corticosteroids

Indications	No. of cases (350)
Eczema	175
Psoriasis	36
Vitiligo	34
Polymorphic light eruption	27
Lichen planus	25
Insect bite eruptions	25
Alopecia areata	16
Macular amyloidosis	12

Table 2 : Percentage of patients treated by age

Potency	<6 Years	6-25 Years	26-60 Years	>60 Years
Low	4.8	3.4	4	-
Mid	1.7	23.43	33.71	5.71
High	-	4.85	10.3	0.5
Very high	-	2.85	4.57	-

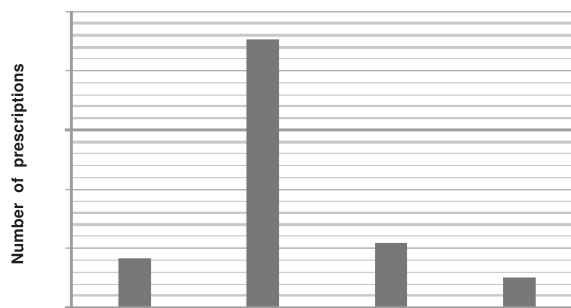


Fig. 1 : Topical corticosteroids prescribed potency wise

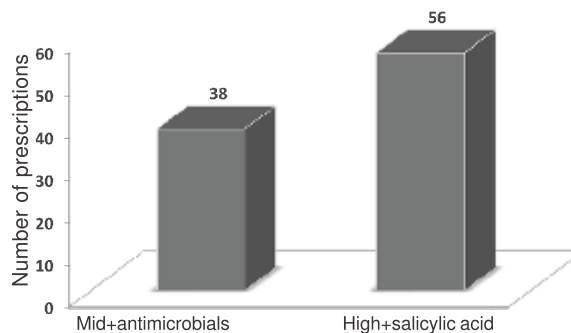


Fig. 2 : Topical corticosteroids as combinations

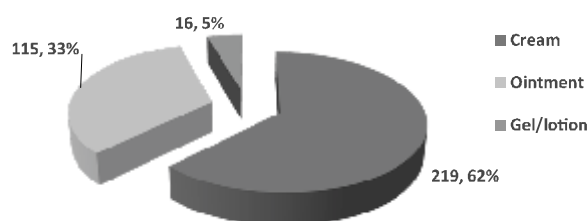


Fig. 3 : Type of topical corticosteroid preparation

Table 3 : Treatment schedule potency wise of topical corticosteroids

Potency	Duration of treatment (Cases)
Low	1 week BD - 1 week OD (42)
Mid	1 week BD - 1 week OD (138) 2 week BD - 2 week OD (89)
High	2 week BD - 2 week OD (55)
Very high	2 week BD - 2 week OD (26)

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DISCUSSION

In the present study majority of the patients were from the age group of 26-60 years and very few from the pediatric and geriatric age group which is similar to a study conducted by Vijay Motghare *et al*⁵. In this study the indications for use of topical corticosteroids was in majority for eczema and the most common topical steroid used belonged to the mid potency group followed by high and low potency agents and the same was observed in a study conducted by Sweileh *et al*³ and Padma *et al*⁶. Very high potency topical steroids were the least used ones. In the age range of 06 – 60 years the mid potency topical steroids were used and below the age of 06 years low potency agents were used. Ninety four prescriptions contained the topical steroids as combination therapy in which more than fifty percent of prescriptions contained high potency steroids in combination with salicylic acid and the rest contained a combination of mid potency steroids with antimicrobials which was also observed in a study by Roy *et al*⁷.

Majority of the topical steroid preparations were cream based and the treatment schedule potency wise was majority with mid potency agents followed by high, low and very high potency topical steroids. The frequency and duration of treatment with these agents were appropriate and rational.

CONCLUSION

Self medication and erratic use of topical corticosteroids by patients can increase the risk of developing unwanted effects⁷. Their rational use can minimize their cutaneous and systemic side effects. Excessive and prolonged use of steroids topically may cause secondary infections and non healing ulcers⁸. For successful treatment with topical corticosteroids factors to be considered include accurate diagnosis, delivery vehicle used, potency, amount of drug to be applied, frequency of application, duration of treatment and adverse effects. Moreover children require a shorter duration of treatment and a low potency steroid. Correct assessment of underlying skin disorder, action of active ingredients, and knowledge of different vehicles, proper application methods, and adequate patient education can contribute effectively to rational usage of topical corticosteroids. Judicious use of topical corticosteroids and reinforced patient education will lower the risk of undesirable effects, and can be of great use in treating dermatological conditions.

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