

Original Research Article

Assessment of Over the Counter Topical Steroid Use among the Nursing Students in Mandya District

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Abstract: Topical corticosteroids (TCs) are the most commonly used therapeutic formulations by dermatologist and also widely misused cream by all in routine medical practice. Many adverse reactions have been described with topical steroid use on the face. Indian studies on prevalence of TCs misuse is lacking. Hence there is a need to know the prevalence of TC misuse among general population and also among various segments of the community before undertaking any regulatory measures. The present study was undertaken on nursing students as they handle various types of medicines which in turn increase the access to medicines and also misuse. It is cross sectional study done in Adichunchangiri Institute of Nursing Sciences, Mandya. The purpose of the study was explained and those who consented to participate in the study were administered a predesigned, pretested, structured questionnaire to elicit the information on use of topical steroid on the face. Demographic data, types of products, duration of such practice, frequency of application, areas of the face applied, quantity used monthly and prescription source were collected. A total of 98 B.Sc. nursing students participated in the present study of which 23 were in 1st year, 25 in 2nd year, 24 in third year and 26 in 4th year respectively. Of the 90 facial creams users, 31% (28) of them using creams containing steroid alone or in combination, of which 64% had potent steroid. Most of them were using these preparations since 1-2years. Most common reason for the application of topical steroid was to improve fairness (45%) followed by melasma and non-specific dermatosis. When asked about source of information, most attributed to friends and relatives (53.6%). Many others were suggested by pharmacy persons. Fairness obsession among Indians has increased abuse of TCs on the face. Proper health education in order to create awareness among public is the need of hour.

Keywords: Topical corticosteroid, face, misuse, nursing students

INTRODUCTION

Topical corticosteroids (TCs) are the most commonly used therapeutic formulations by dermatologist and also widely misused cream by all in routine medical practice. TCs creams offer rapid symptomatic relief in many inflammatory dermatoses. It has potent antipruritic, sex-hormone-like, melanopenic and immunosuppressive effects on the skin and offers symptomatic relief in many skin conditions. This magical effect may be the cause of misuse and abuse, often leading to significant local adverse effects and also to systemic side effects. Yet

another concern of TCs is its misuse as cosmetic cream. TCs are mixed with bleaching creams which are marketed as fairness cream among dark complexioned people and also combinations with hydroquinone or mercury based bleaching creams are used in acne, melasma and freckles. Adding to it, TCs are readily available over the counter without prescriptions.

Many adverse reactions have been described with topical steroid use on the face. This includes steroid induced rosacea, steroid addiction, hypertrichosis, acneiform eruption, and red face

syndrome associated with severe rebound erythema. Many a time patients are reluctant to stop application because of development of burning and scaling on the face on an attempt to stop the application [1].

Misuse of steroid on face is a well known and has been the subject of studies, not only in developed countries like the USA [2] but also mainly in Africa [3] and other Asian countries [4, 5]. Similar studies in India is lacking except for a case report [2]. Hence there is a need to know the prevalence of TC misuse among general population and also among various segments of the community before undertaking any regulatory measures. The present study was undertaken on nursing students as they handle various types of medicines which in turn increase the access to medicines and also misuse.

MATERIAL AND METHODS

It is a cross sectional study done in Adichunchangiri Institute of Nursing Sciences, Mandya. A total of 120 students were pursuing nursing course and 98 students participated in this study. Necessary permission from the concerned authorities was obtained. The purpose of the study was explained and those who consented to participate in the study were administered a predesigned, pretested, structured questionnaire to elicit the information on use of topical steroid on the face. The topical steroid used is ascertained by asking the students to write down all the cream used over the face over past 6 months. Demographic data, types of products, duration of such practice, frequency of application, areas of the face applied, quantity used monthly and prescription source were collected. Documentation of clinical examination findings of face by a dermatologist and any concomitant medical problems were carried out on students who has used topical steroid continuously or intermittently. For the study purpose following criteria is laid down for continuous and intermittent use.

Continuous use

Student using topical steroid daily for more than 15 days continuously over the past 3 months.

Intermittent use

Student using topical steroid atleast 4 days in a week continuously or intermittently for atleast four weeks over the past 3 months.

Steroid abuse

Person using or used one or more steroid based cream without prescription for more than 3 months continuously over past six months.

All the nursing students from 1st year to 4th year who consented for the study were included in the present study. Students not consenting to answering the questionnaire or students with co-morbidities that resembled/could cause changes similar to TC side-effects were excluded from the study. Later collected data was entered into Microsoft excel sheet and analyzed using SPSS software. The statistical tests used were descriptive statistics like frequency and percentages.

RESULTS

A total of 98 B.Sc. nursing students participated in the present study of which 23 were in 1st year, 25 in 2nd year, 24 in third year and 26 in 4th year respectively. The students were aged between 17- 23 years and the mean age was 20.2±2.3 years. Among them 61 belonged to rural areas and the rest 37 were from urban area.

Among the study participants 91.8% (90) were using facial cream and the rest of them were not using any type of facial creams. Of the 90 facial creams users, 31% (28) of them were using creams containing steroid alone or in combination, of which 64% had potent steroid (Table-1).

Of these 28 subjects using steroid containing preparation, 60% were using it continuously and 40% were using intermittently. Most of them were using these preparations since 1-2years (Table-2).

Among the study subjects, 68% of them used the cream once daily, 18% used twice daily and 14% of them applied it on alternative day. Majority of the subjects had not read the information available on the product (96%) and only 7% (2) had referred book or internet for further information about the product. Most common reason for the application of topical steroid was to improve fairness (45%) followed by melasma and non-specific dermatosis (Table-3).

When asked about source of information, most attributed to friends and relatives (53.6%). Many others were suggested by pharmacy persons (Table 4).

Among the 28 subjects who used topical steroids, 21 of them had some skin problems related to steroid use. The most common skin problem (Table 5) being dry skin (18%) and comedones (18%) followed by burning/ itching (14%).

Table 1: Most common steroid containing preparations used by study subjects

Preparations	Frequency	Percentage
Mild steroid	4	14.3
Potent steroid	18	64.3
Triple combination	6	21.4

Table 2: Distribution of study subjects based on duration of steroid use

Duration	Frequency	Percentage
0-6months	2	07.1
6months-1year	5	17.9
1-2years	17	60.7
>2years	4	14.3
Total	28	100

Table 3: Distribution of study subjects based on the reason for application of facial cream

Reasons	Frequency	Percentage
Melasma	09	22.5
Fairness	18	45.0
Acne and its pigmentation	05	12.5
Freckles	02	05.0
Non-specific dermatosis	06	15.0
Total	40	100

Table 4: Source of information about the topical steroid

Source of information	Frequency	Percentage
Beautician	2	7.1
Self	2	7.1
Pharmacy	6	21.4
Doctors	3	10.7
Relatives/friends	15	53.6
Total	28	100

Table 5: Distribution of study subjects based on diagnosis

Conditions	Number	Percentage
Diffuse facial redness with hotness	5	11.4
Dry facial skin	8	18.2
Telangiectasia	5	11.4
Rebound phenomenon	3	06.8
Papulopustular lesions	5	11.4
Papular rash without pustules	3	06.8
Burning /itching	6	13.6
Comedones	8	18.2
Facial oedema	1	02.3
Total	44	100

DISCUSSION

Recently there is increase in number of reported cases of topical steroid abuse over the face. These cases just represent the tip of the iceberg and the large submerged portion is still gone unnoticed. It is important to identify these cases and thereby provide health education regarding the side effect of chronic use of topical steroid. Hence, community based studies need to be carried out to identify the hidden cases.

In the present study, 31% of nursing students were using creams containing steroid alone or in combination. However, we did not find any community

based study to compare the results as there are very few studies on use of topical steroid and all are hospital based studies.

Majority of them used preparations containing potent steroid which was similar to other studies [3]. 60% were using it continuously and 40% were using intermittently. Most of them were using these preparations since 1-2 years. However in a study conducted by saraswath *et al* most of them were using the preparation for not more than 6months [1]. Most common reason for the application of topical steroid was to improve fairness (45%), in various other studies

also this was the common reason which ranged between 23%-29% [1, 7, 8].

When asked about source of information, most attributed to friends and relatives (53.6%) which was similar to findings in other studies [1, 6]. However in a study conducted by Hameed *et al.*, most common source was beautician [8].

In the present study majority of students had skin problems following steroid use. The most common skin problem being dry skin (18%) and comedones (18%) followed by burning/ itching (14%). However, most common reason in many others studies were acne, [1, 7] and erythema [6, 8] in other studies.

CONCLUSION

Fairness obsession among Indians has increased abuse of TCs on the face. Proper health education in order to create awareness among public is the need of hour.

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