

Awareness on Usage of Topical Corticosteroids Abuse on Face

Kokkalgave Supriya¹, K. V. N. R. Pratap², T. Madhavi Padma³, V. Shiva Kalyan⁴, P. Srikanth⁵

¹Student (BDS), Department of Public Health Dentistry, Mamata Dental College, Khammam, India

²Professor & HoD, Department of Public Health Dentistry, Mamata Dental College, Khammam, India

³Professor, Department of Public Health Dentistry, Mamata Dental College, Khammam, India

⁴Reader, Department of Public Health Dentistry, Mamata Dental College, Khammam, India

⁵Lecturer, Department of Public Health Dentistry, Mamata Dental College, Khammam, India

Abstract: Topical corticosteroids are perhaps the most widely used therapeutic agents in modern dermatological therapy. They provide symptomatic relief in almost all inflammatory dermatoses, especially in short term. As a result, many of the people are using it even for simple rash / acne without any medical prescription. They are also available as over the counter drugs. The aim of this study is to know about the use of Topical Corticosteroids in younger age group people. The objective is to increase awareness about the dermatological consequences of practice of purchasing the over the counter drugs in younger age group and also to assess the frequency of misuse of Topical Corticosteroids. This is a questionnaire based study conducted on 250 students in the Mamata dental college. This study revealed that easy availability of Topical Steroids and poor access to dermatologists are the reasons for misuse of Topical Corticosteroids.

Keywords: Topical corticosteroid, abuse, over the counter drugs

1. Introduction

Topical corticosteroids are introduced into the dermatological therapy in 1952. It was successfully done by Sulzberger and Witten by the introduction of Hydrocortisone for the treatment of selected dermatoses [3]. The first reports about adverse effects of Topical Corticosteroids became available in 1955, after the use of fludrocortisone

Topical Steroids are the topical forms of the corticosteroids. These are the most commonly prescribed topical medications for treatment of rash, eczema and dermatitis. They provide rapid symptomatic relief in almost all inflammatory dermatoses. Long Term usage of topical steroids on face has many side effects.

Acneiform eruptions, Hypertrichosis and steroid rosacea are the common side effects of long term usage of topical corticosteroids. Many steroidal drugs are available as an over the counter drugs. Long Term usage may also lead to absorption of steroids into the blood and may alter the steroidal hormone level in blood. It may also cause cushing syndrome, glaucoma, hyperglycemia etc.

Every medical store has at least a few formulations of these topical steroid drugs. It is so, because of the inadequate policing

of the medical shops by the higher medical authorities, which is resulting in the selling of these drugs without the prescription. Hydrocortisone, Mometasone have recently become very popular in our country and are being marketed aggressively by numerous pharmaceutical companies to not just dermatologists but all physicians [1].

Availability of these drugs as the over the counter drugs and poor access to dermatologist may increase the abuse of these drugs. Consultation of dermatologist is necessary prior to usage of these drugs.

As these drugs provide rapid, symptomatic relief in all inflammatory dermatoses such as acne, rashes, sunburn and also these are available as over the counter drugs, these are mostly used by the younger age group people (16 to 30years). Most of the people are using these drugs as the self-medicated drugs. As a result of the long term usage of Topical Corticosteroids on face, it has many side effects.

2. Methodology

A cross sectional study was conducted among students of Mamata Dental College, Telangana. Study was limited to 250 students of Mamata college. Study was conducted in April 2019 and permission was taken from the Head of the Department of Public health dentistry. Questionnaire was explained and informed consent was taken prior to the study from study groups.

The students were briefed about the purpose and significance of the study and that their responses would be confidential. The questionnaire includes 18 questions that allowed to choose one option and contains questions on the knowledge of the use of topical steroids among students and also their side effects on prolonged use.

Inclusion criteria includes all the third year, fourth year and interns, who are present on the day of survey.

First year, second year, postgraduates and students who were absent during the day of the survey were excluded.

3. Statistical analysis

Chi square test was used to find the association among the categorized values. The level of significance was set at $p < 0.05$.

4. Results

The study was conducted among 250 students. The mean age of the study group is 21.62 and the standard deviation is 1.297.

Out of the total students, 191 students are female and 59 students are male.

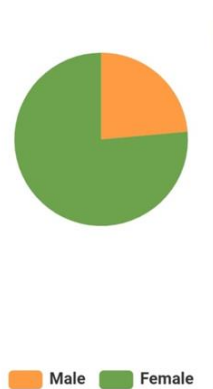


Fig. 1.

Table 1

Variable	Frequency	Percentage
Year of study		
III Year	75	30%
IV Year	100	40%
Interns	75	30%
Total	250	100%

Table 2

Acne experience on their face

Variables	Frequency	Percentage
Always	50	20%
Sometimes	185	74%
Never	15	6%

When the students were asked about the acne experience on their face, 74% of the students have experienced acne on their face, where as 20% of students have always have acne on their face and 6% of students had never experienced acne on their face. The difference between the parameters is statistically significant ($P=0.01$).

Students were asked about the usage of creams /ointments for acne.

Table 3

Variable	Frequency	Percentage
Yes	170	68%
No	80	32%

When the students were asked about the usage of creams/ointments for acne, 68% of students have used creams/ointments for acne where as 32% of students haven't used any medication for acne. The difference between the parameters were statistically significant ($P = 0.10$).

Students were asked about checking of steroidal composition in their ointments/creams.

Table 4

Variable	Frequency	Percentage
Always	75	30%
Sometimes	100	40%
Never	75	30%

40% of the students had checked for the steroidal composition in their ointments that have been used for the acne/ rash /sunburn, where as 30% of the students had never seen the composition of their creams.

Consultation of dermatologist to get rid of erythema, burning sensation, that are caused due to prolonged use of topical steroids.

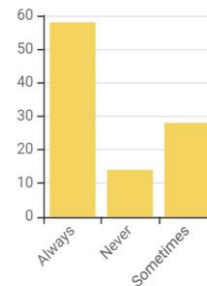


Fig. 2.

58% of the students have consulted the dermatologist to get rid of the erythema and burning sensation that are caused due to the prolonged usage of topical steroids on face .on the other hand, 14% of students have never consulted the dermatologist for the above conditions.

Table 5

Reasons responsible for misuse of topical steroids

Variable	Frequency	Percentage
Easy availability of Topical Steroids	25	10%
Poor access to dermatologist	40	16%
Both	125	50%
Don't know	60	24%

50% of the students have responded that the easy availability of Topical Steroids and poor access to dermatologist are the reasons for the misuse of Topical Steroids, where as 24% students don't even know about the reasons responsible for that.

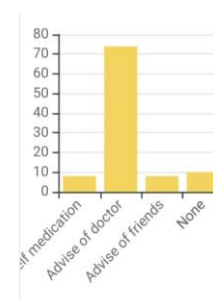


Fig. 3. Best way to use topical steroids

Majority of the students (74%) have awareness that the doctor consultation is the best way to use Topical Steroids, whereas minor population (8%) of students answered that self-medication and advice of friends are the ways to deal with Topical steroids.

5. Discussion

Topical Steroids have emerged in recent years. These drugs show the rapid anti-inflammatory activity. These drugs also have the skin lightening property owing to their potent bleaching power.

The findings of my study shows that the majority (74%) of the students have experienced the acne. Majority (68%) of students have used ointments/creams for acne unlike others who had mostly used it for the purpose of skin lightening in other studies [2]. The demographic and climatic conditions probably account for the very high prevalence of acne seen in my study group.

Most of the students have always checked for the steroidal composition and also are aware (56%) of the side effects of prolonged usage of the Topical Steroids. Only 44% of students don't know the side effects of the steroids in the cream.

Majority of students know that the Topical steroids are absorbed into the blood circulation after prolonged usage.

This study had revealed that the easy availability of Topical Steroids and poor access to dermatologists are the reasons for misuse of Topical Steroids unlike the Iraq study in which the reason for misuse of Topical Steroids was put on the paramedical personnel and the family advice.

Majority of the study population has responded that the best way to use the Topical Steroids is to consult a dermatologist at the right time.

6. Conclusion

In general, for many patients, the intermittent use of Topical Steroids is highly effective, bears little risk and is relatively inexpensive [3]. Patients are unaware of the risks posed by these products and continue to use for prolonged periods before seeking help from a dermatologist [1]. This study revealed that the easy availability of Topical Steroids as the over the counter drugs and poor access to dermatologist are the reasons for the misuse of Topical Steroids.

It was determined that the majority of the study group had used Topical steroids for acne and also they are aware of steroidal composition in the medication used for acne. This is so, because the study population is from the medicine stream.

Education of the general public through special media programmes and the introduction of continuing medical and paramedical personnel are the steps to be taken to reduce the misuse of such drugs. Consultation of the dermatologist is the best way to get rid of the ill effects of misuse of Topical Steroids.

References

- [1] Saraswat A, Lahiri K, Chatterjee M, Barua S, Coondoo A, Mittal A, Panda S, Rajagopalan M, Sharma R, Abraham A, Verma SB, and Srinivas C R. Topical corticosteroid abuse on the face: A prospective, multicenter study of dermatology outpatients. *Indian J Dermatol Venereol Leprol* 2011; 77:160-6.
- [2] Al-Dhalimi M. A, and Aljawahiri N, "Misuse of topical corticosteroids. A clinical study from an Iraqi hospital," *East Mediterr. Health J* 2006; 12:847-52.
- [3] Hengge U. R, Ruzicka T, Schwartz R. A, Cork M. J., "Adverse effects of topical glucocorticosteroids," *J Am Acad Dermatol*, 2006;54:11-15.
- [4] Kligman A. M, and Frosch P. J., "Steroid addiction," *Int J Dermatol*, 1979;18:23-31.
- [5] Rathi S., "Abuse of Topical Steroids as cosmetic cream. A social background of steroid dermatitis," *Indian J Dermatol*, 2006; 51:1154-5.
- [6] Solomon B. A, and Glass A. T, and Rabbin P. E., "Tinea incognito and "over the counter" potent topical steroids." *Cutis*, 1996; 58:295-6.