



## ABUSE OF TOPICAL STEROID: A DESCRIPTIVE STUDY

### Dermatology

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### ABSTRACT

**BACKGROUND :** Topical steroids are one of the most commonly abused drugs. There are only a few studies available which have highlighted the severity of this problem in India. However, these studies have concentrated mainly on the topical steroid abuse and its side effects over the face.

**AIMS & OBJECTIVE :** The aim of this study is to know the awareness among people about various commonly available topical steroids and their combinations irrespective of usage and to know the extent of misuse of these drugs. Along with this, we have also tried to find the source of recommendation of these medicines which will help to sensitize people about this menace.

**MATERIAL AND METHODS :** This was a prospective, questionnaire based study done at a tertiary care hospital. A total of 500 adult patients attending the Dermatology Outpatient Department were administered a questionnaire about awareness and usage of topical steroid and its combinations.

**RESULT :** A total of 500 adult patients were included in the study, out of which 440 (88%) patients had heard about at least one of the topical steroids or its combinations mentioned in the questionnaire. 320 (64%) patients had used these creams. Acne and pigmentation were the most common indications for which topical steroid was used. These medicines were recommended by general practitioners in 200 (62.50%) patients and pharmacists in 19 (05.93%) patients. Total, 280 (87.50%) patients complained of some form of side effect after using these creams. Aggravation of the symptoms and increased pigmentation were the most common adverse effects.

**CONCLUSION :** Misuse of topical steroids not just over the face but also as a cream for any skin problem is quite common. Most of the times, it is recommended by general practitioners or pharmacists. It is very important to sensitize these people about the possible complications of these drugs and the extent of problem the society is facing because of irrational and unregulated use of these drugs.

### KEYWORDS

Abuse , Topical steroid

### INTRODUCTION

Topical steroids are one of the most commonly used drugs in dermatology. The common indications are conditions such as psoriasis, lichen planus, eczema, lichen simplex chronicus and other steroid responsive dermatoses. However, because of their property of producing bleaching and anti inflammatory effect, they have been misused frequently. They are misused for varied indications such as acne, pigmentation, fungal infection, pruritus and many a times as a cosmetic or a skin cream for any type of rash. The main reason for such misuse in our country is its free availability as an over the counter (OTC) medication. Furthermore, topical steroids are available in various irrational combinations which cause more damage to the skin. There are studies which have tried to highlight the various side effects and harm caused by misuse of topical steroids and its combinations. These studies have tried to bring notice to the regulatory authorities about the damage caused by the free availability of these creams. In this study, we have tried to find out the awareness among patients about these drugs and also as to how many of them have used these medicines. We also have tried to know the source of prescription for these creams.

### MATERIAL AND METHODS

This was a prospective, questionnaire based study conducted at the Dermatology Outpatient Department (OPD) of Nalanda Medical College & Hospital , Patna over a period of 1 year from November 2017 to October 2018 . A total of 500 adult patients attending the Dermatology OPD were included in the study. Each patient attending the Dermatology OPD irrespective of their complaints was asked to fill up a questionnaire. The questions mainly tried to find out if the patients had ever heard about the commonly abused topical steroids and its combinations (betnovate<sup>®</sup>, skinlite, melacare, panderm, fourderm, lobate GM, quadriderm) in our area and if they had used any of those creams. They were also asked about usage of any other creams other than the ones mentioned in the list. Furthermore, they were asked regarding who suggested those creams to them, the duration of usage and if they noticed any side effect. Patients <18 years and those not willing to answer the questionnaire were excluded from the study.

### RESULTS

A total of 500 adult patients (male:220, female:280) were included in this study. 440 patients out of the 500 patients had heard about at least one of the topical steroids mentioned in the questionnaire. Betnovate

was the most commonly known product (387 patients).320 patients (180 female and 140 male) had used the topical steroid or its combination for various indications (Table 1).

**TABLE 1 : BRAND NAMES OF THE TOPICAL STEROID CONTAINING PRODUCTS**

Brands	Heard of (%)	Used (%)
Betnovate	387 (87.95%)	187 (58.40%)
Skinlite	205 (46.59%)	80 (25.00%)
Melalite	106 (24.09%)	60 (18.75%)
Panderm	185 (42.04%)	50 (15.62%)
Fourderm	139 (31.60%)	28 (08.75%)
Lobate GM	20 (04.54%)	38 (11.87%)
Quadriderm	150 (34.09%)	31 (09.68%)
Others (cosvate GM, cosmelite etc.)	164 (37.27%)	78 (24.37%)

The indication for which these medicines were used included acne (30.2%), allergy (14.8%), pigmentation (11.4%), boils (0.3%), eczema (0.98%), fairness (as cosmetic 10.8%), fungal infections (3.4%), injury (3.5%), itching (11.7%), oily skin (0.65%), skin rashes (7.1%), white patches (1.9%) and burns (0.32%). Acne was the most common indication for which topical steroid was used, followed by allergy and rashes. Around 66 patients were using these medicines as a cosmetic for fairness and 70 patients were using it to remove pigmentation due to various reasons. Overall 52.40% of patients were using these creams mainly over the face and rest of them were using it over other parts of the body as a general skin cream for any rashes.

These medicines were prescribed by general practitioners in 200 (62.50%) patients. Friends had suggested these medicines in 98 (30.62%) patients, followed by pharmacists in 19 (05.93%) patients. Others like family members had given the creams in 3 (0.09%) patients.

The duration of the usage of these creams varied from 1 day to 10 years. Around 187 (58.43%) patients had used these creams for a duration varying from 1 week to 3 months. 97 (30.31%) patients had used these creams from 3 months to 2 years.

280 (87.50%) patients complained of some form of side effect after using these creams. Aggravation of the symptoms was also considered as a side effect for the study. 88 patients complained of aggravation of

symptoms, 56 patients complained of increased pigmentation, 20 patients developed pimples / redness and irritation was seen in 48 patients. 13 patients complained of other minor side effects included white patches, burning sensation and no improvement of the skin problem (Table 2).

**TABLE 2 : ADVERSE EFFECTS AS COMPLAINED BY THE PATIENTS USING TOPICAL STEROIDS**

Adverse effects	N (%)
Aggravation of symptoms	88 (31.42%)
Pigmentation	56 (20.00%)
Pimples	20 (07.10%)
Redness and irritation	48 (17.14%)
Striae	55 (19.64%)
Others (white patches , burning )	13 (04.64%)

## DISCUSSION

Topical steroids were first used in dermatology by Sulzberger and Witten in 1952 when they published an article on the effect of topically applied compound F in selected dermatoses.<sup>1</sup> Subsequently, various other topical steroids were introduced with varying potencies and formulations. The availability of these drugs revolutionized the treatment of various steroid responsive dermatoses. Topical steroids have greatly contributed to the dermatologist's ability to effectively treat several difficult dermatoses.<sup>2</sup> They were hailed as a panacea for all ills by physicians and patients and gained rapid popularity.<sup>3</sup> Topical steroids are one of the most commonly used drugs by dermatologists worldwide.<sup>4,5</sup>

However, the dramatic symptomatic relief from these medications led to misuse and abuse of these drugs by both non dermatologists and patients. Topical steroids were used by many patients as fairness or cosmetic creams.<sup>6,7</sup> The rampant misuse and abuse of these medicines led to the development of various side effects, both cutaneous and systemic.<sup>7,8,9</sup>

Various studies have tried to highlight the menace caused by the use of topical steroids.<sup>10,11</sup> A multicentric study by Saraswat *et al.* has also been done to highlight the topical steroid abuse on the face.<sup>10</sup> Around 2296 patients with facial dermatoses were screened, of which 433 patients were using topical steroids. In our study, we have included 500 adult patients attending Dermatology OPD irrespective of their skin complaints. We have tried to find out how many patients have heard about any of the common topical steroids available OTC in our area and also how many of them have used these creams.

Around 440 patients (88%) had heard of at least one of the topical steroids or its combinations. 320 (64%) patients had used one of the steroids or steroid combinations for a duration varying from 1 day to 10 years. The common indications for which steroid was used were acne, fairness (as cosmetic), pigmentation and allergy. The findings are similar to the study conducted by Saraswat *et al.* and Dey.<sup>10,11</sup> An Iraqi study showed 7.9% of patients using topical steroid for similar indications.<sup>12</sup>

In our study, 200 (62.50%) patients who had used the steroid had received the prescription from a doctor. In the study by Saraswat *et al.*, 41% of the patients had received the recommendation from a doctor. In the present study, 120 patients were advised to use these medicines by pharmacists, friends and relatives. However, most of the time, general practitioners and doctors from alternative medicine had prescribed these medicines. General practitioners and pharmacists are often the first point of contact for most of the patients. Training and sensitizing them regarding steroid abuse would help in reducing the incidence of topical steroid related side effects.

The common side effects found in our study were acne, pigmentation, redness, itching, burning sensation, striae and aggravation of existing skin problem. These are similar to the findings by Saraswat *et al.* and Dey. The nature of side effect correlated with the duration of the usage of topical steroid. However, many of our patients were not aware of the fact that the problems they were facing were due to the long term use of steroids.

## CONCLUSION

From the findings of our study and other studies, we would like to conclude that topical steroid abuse is rampant in our population. The reason for this varies from wrong prescription, dubious marketing by

pharmaceutical companies, free availability of these medicines as OTC drugs and lack of regulations regarding the manufacturing of irrational combinations. As general practitioners and pharmacists are recommending these products in majority of the cases, it is very important to sensitize these people about the possible complications of these drugs and the extent of problem the society is facing because of irrational and unregulated use of these drugs. Our study aimed to highlight the misuse of steroids and its combination anywhere on the body. Our study was an Outpatient based study and further larger studies will give a clearer picture about the magnitude of the steroid abuse.

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