

Misuse of Topical Steroid Applications among Outpatients in Maharashtra

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Abstract

Topical corticosteroids have become available as over the counter drugs and are widely misused for various conditions. The aim of this study is to assess the clinical and epidemiological aspects of the unjustified use of topical corticosteroids. A total of 200 patients with facial dermatoses and topical corticosteroid misapplication daily over face for not less than 30 days were included in the study. Total Subjects included in the study were 200 adults. Adverse effects among them included acneiform lesions, telangiectasias, dyspigmentation, hypertrichosis, perioral dermatitis and tinea incognito. A total of 89 (44.5%) patients fulfilled the criteria of "topical steroid dependent face". These patients reported erythema, burning and itching on stopping the application of topical corticosteroids.

In most cases the use prolonged use of topical corticosteroids on facial skin was recommended by non-professional persons. The adverse events ranged from transient to permanent. The results of this study underline the indispensable role of dermatology specialists in diagnosing and treating cutaneous disorders

Keywords: Corticosteroids, Steroids, Maharashtra, Topical

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Introduction

Since the introduction of the first topical steroid in 1952, multiple agents have come up ranging low potency to high potency topical corticosteroids. [1] Topical steroids hold a high place and are an important tool for the dermatologist due to there are highly efficacious actions and have become the main therapeutic tool among dermatologists. Their clinical effects are due to their anti-inflammatory, anti-proliferative, and immunosuppressive effects. [2] Meanwhile the misuse of topical steroids has also increased indiscriminately

especially over the face which further has increased various adverse effects. [3] Various side effects encountered in day to day practice by dermatologists due to inadvertent use of topical steroids are acne, rosacea, or hypertrichosis. A new entity known as "*topical steroid dependent face (TSDf)*" has recently been coined to encompass the various symptoms aggravated such as erythema or burning sensation on attempted cessation of topical steroid application. [4]

The present study was undertaken at a tertiary centre of Maharashtra region to assess the magnitude of the problem, the demography of the abuse of steroids and various clinical adverse effects related to their misuse.

Materials and Methods:

A total of 200 patients were taken up for study attending the dermatology outpatient department of AACPM Medical College of Dhule region for a period of six months from January 2021 to June 2021 after taking written informed consent. Ethical clearance was taken up for the study prior to starting the study.

Inclusion criteria included all patients with history of application of topical corticosteroids over face for a period of \geq 1 month.

Exclusion criteria included: 1) patients not giving consent, 2) patients with pre-existing morbidity like polycystic ovary syndrome, Cushing syndrome, thyroid disorders, 3) patients with dermatitis papulosis nigra, melanocytic nevi, xanthelasma, 4) past history of pre-existing atopic dermatitis, seborrheic dermatitis and contact dermatitis prior to the initiation of steroids. Details regarding use of steroids, duration and indication, source of steroid, type and potency were recorded if available. Also, a detailed examination regarding signs and symptoms after steroid application were analysed. Reason of continued use was also noted, and patients were educated about the adverse effects.

Observations:

Out of total 200 patients, 166 were females and 34 were males. Maximum patients were in the age group of 31-40 years (65 patients) followed by 53 patients in 41-50 years and 52 patients in 21-30 years. A total of 170 patients (85%) were in the age group of 21-50 years.

Duration of application was >1 month in all the patients with maximum duration was up to 3 years in one patient. Topical corticosteroids of various potencies, either alone or in combination with other agents, were used in all the patients.

Betamethasone and clobetasol ointments were used in 75 patients (37.5%) and mometasone was used in 15 patients (7.5%).

66 patients (33%) had used Kligman's formula and 54 patients (27%) used steroids as a part of combination therapy. Indication for using steroids ranged from acne, pigmentation, as a general-purpose cream to various undiagnosed dermatosis.

Various indications are listed in Table 1. A total of 72 patients (36%) used topical TC's as a fairness or general-purpose cream. 59 patients (29.5%) used TC's for acne and TC's were used for melasma or pigmentation in 41 patients (20.5%); 6 patients (3%) used it for tinea. Some patients used corticosteroids for more than one indication.

Table 1: Reasons for use of Steroids as Mentioned by Patients

Etiology / Reason	Frequency
General purpose cream/Fairness cream	72
Acne	59
Melasma/Pigmentation	41
Tinea	6
Undiagnosed Dermatoses	28

A total of 69 patients attributed use of TC's on the advice of chemists and pharmacists

whereas 61 patients used TC's on the advice of friends and relatives. Beauticians

recommended the use in 22 patients and physicians other than dermatologists recommended the use in 30 patients. Only in 18 patients was the use of TC's

recommended by dermatologists. Multiple adverse effects were seen and are listed in Table 2.

Table 2: Adverse Reactions by use of Steroids

Adverse Reaction	Frequency
Photosensitivity and burning sensation	13
Acneiform lesions	46
Erythema	40
Telangiectasias	34
Dyspigmentation	28
Hypertrichosis	42
Perioral dermatitis	17
Tinea incognito	11

They ranged from acne including papulopustular and comedonal lesions to hypertrichosis, erythema etc. Few patients had more than one side effects.

There were 24 patients who were initially using mid potent steroids but gradually there was decrease in response and they had to switch to higher potent steroids. 111 patients did not attribute the adverse effects to TC's whereas 89 patients reported increase in symptoms like erythema, burning sensation, itching on stopping thus representing the newly coined term of "topical steroid dependent face (TSDF)".

Discussion:

The discovery of corticosteroids has opened new doors for discovery of similar molecules and revolutionised the treatment of various dermatosis. Since then, their misuse and abuse has been rampant adding to the burden of steroid related adverse effects. [3,4]

Recently more emphasis has been focussed on the misuse of TC's and their side effects with illegal sale by pharmacists and creating awareness among public. In present study we also reported widespread abuse of corticosteroids over face which was similar to two other studies from India and China. [5,6] Number of patients in our study who used potent to mid potency steroids and compared to various other

studies are in accordance with these results. Another study showed that fairness and skin lightening was the main indication of steroid abuse which was also the most common reason in our study. [1,7]

Common of adverse effects seen in our study after applying topical corticosteroids and acne or acneiform eruptions was the most common side effects, similar to other authors' data. [8,9,10]

Conclusion:

Based on the observations and its analysis it is evident from our study that the misuse of TC's is showing and explosive upsurge in our society and increased awareness needs to be spread among people. Stringent policies are required regarding their distribution and prescription.

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