

Original Research Article

Misuse of topical corticosteroids and attitude towards self-medication: a rising alarm

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ABSTRACT

Background: Topical corticosteroids (TC) are among the most commonly used medications for treatment of skin disorders. They give immediate relief from symptoms in many inflammatory dermatoses. Even inappropriate use in infectious dermatoses relieves the symptoms. This study was done to analyze the misuse of topical corticosteroids in Indian population and to analyze the attitude of patients towards self-medication.

Methods: All patients presenting with various dermatoses to the investigator were asked about history of usage of any topical medication on the lesion. In case of a positive answer, the investigator ascertained whether the topical medication in question contained a corticosteroid. The total number of patients seen during the recruitment period (January 2012 – December 2012) was noted on a separate list. Full questionnaires were only filled for patients with history of using topical corticosteroids.

Results: 5256 patients were screened out of which 4100 (78%) were already using topical medications. 3154 (60%) patients were using topical steroid in various forms. About 80% of the patients using topical steroids confessed that they have not consulted qualified medical practitioner. They were advised these medications by chemists, friends or quacks, neighbours, barbers, beauticians etc.

Conclusions: Misuse of topical corticosteroids is common in Indian population and results in various complications. Educating public, chemists, general practitioners along with strict vigil by law enforcing agencies is needed for optimal and safe use of corticosteroids.

Keywords: Topical corticosteroids, Topical steroid damaged face, Over the counter, Outpatient department, Self-medication

INTRODUCTION

Topical corticosteroids (TC) are among the most commonly used medications for treatment of skin disorders. They give immediate relief from symptoms in many inflammatory dermatoses. Even inappropriate use in infectious dermatoses relieves the symptoms. TC also have potent anti-pruritic, atrophogenic, melanopenic, sex-hormone-like and immunosuppressive effects on the skin along with anti-inflammatory effect. Indiscriminate use

of TCs can lead to significant local adverse effects.¹ Side effects like steroid rosacea, acneiform eruption, hypertrichosis, demodicosis, etc. have been described with misuse of TCs over face. Another adverse effect seen predominantly on the face has been variously called steroid addiction, dermatitis rosacea form issteroidea, red face syndrome, etc. by different authors.²⁻⁴ In this syndrome, cessation of the application after prolonged TC use on the face leads to severe rebound erythema, burning and scaling on the face. This study was done to

analyze the misuse of topical corticosteroids in Indian population and to analyze the attitude of patients towards self-medication.

METHODS

This study was conducted in outpatient department of Era's Lucknow Medical College, Uttar Pradesh, which caters to both rural as well as urban population of Lucknow district. All patients presenting with various dermatoses to the investigator were asked about history of usage of any topical medication on the lesion. In case of a positive answer, the investigator ascertained whether the topical medication in question contained a corticosteroid. The total number of patients seen during the recruitment period (January 2012 – December 2012) was noted on a separate list. Full questionnaires were only filled for patients using topical corticosteroids.

Preformed questionnaires included details like age, sex, educational status, indication of topical steroid usage, details of medication, frequency of usage, recommendation or prescription details, source of acquiring the medication, history of using similar medication by any other family member, awareness about the possible side effects of medications, clinical examination findings including side effects e.g., acne, hypo/hyperpigmentation, hypertrichosis, stretch marks, extensive dermatophytosis, telangiectasias, skin atrophy, diffuse erythema etc.

RESULTS

5256 patients were screened, out of which 4100 (78%) were already using topical medications. 3154(60%) patients were using topical steroid in various forms. Most of the patients using topical steroids were using cream which contained other group like anti-bacterial, anti-fungal, antiviral, depigmenting agents along with steroid. About 80% of the patients using topical steroids confessed that they have not consulted qualified medical practitioner. They were advised these medications by chemists, friends or quacks, neighbours, barbers, beauticians etc. Few were using these topical steroids impressed by advertisement in various forms.

Among the patients using topical steroids, majority were females (65%) (Table 1a). Most common age group was 3rd decade (Table 1b), though no age group was spared from misuse of topical steroids. The age group of patients using steroid ranged from infancy to 9th decade of life. Surprisingly, even neonates were not spared from misuse of topical steroids. Topical steroids were being used for all types of disorders and it was noticed that few people considered topical steroids as multipurpose cream. Exact diagnosis was rarely known by the patient and usage was mainly for immediate relief of symptoms. The common indications for which patients were using topical steroids included: pigmentation disorders, acne and itching from various causes. Patients were using topical steroids for indications like tinea, Hansen's disease, acne, candidiasis,

scabies etc. which masked the diagnosis of disease and delayed correct treatment and even resulted in complications. Many young patients (males and females) were using topical steroids as skin whitening cream. The most common body area where steroid was applied topically was face.

Table 1a: Gender wise distribution of topical steroid users (n=3154)

Gender	Number	Percentage (%)
Female	2050	65
Male	1104	35

Table 1b: Age group wise distribution of topical steroid users (n=3154).

Age	Number	Percentage (%)
0-12 months	4	0.13
1-20 years	457	14.49
20-40 years	1408	44.64
40-60 years	1139	36.11
60-90 years	146	4.63

Table 2: Indications for using topical steroids.

Indications for using topical steroids	Number	Percentage (%)
Pigmentation/skin lightening	585	18.55
Acne	673	21.34
Itching (Tinea, scabies, pediculosis etc)	974	30.88
Pyoderma	339	10.75
As OTC multipurpose cream	583	18.48

Table 3: Prescription/recommendation details.

Recommended/prescribed by	Number	Percentage (%)
Family/friends	546	17.31
Beautician/barber	157	4.98
Local medical practitioner	615	19.50
Previously prescribed creams by dermatologist	318	10.08
Advertisement	778	24.67
Chemist	740	23.46

Topical steroids were commonly applied over groin area, axilla and other body parts. Patients using topical steroids were asked about the duration of illness. They were broadly asked if the illness was of less than 15 days duration or more than 15 days. About 85% patients gave history of illness beyond 15 days. Interestingly, duration of application also varied from few days to few years.

Most of the people were using steroids for more than 15 days. They were using topical steroids irregularly for relief of immediate symptoms (Table 2). Many patients agreed that they always maintained stock of various medications containing topical steroid for use in various indications.

Table 4: Side effects (few patients had more than one side effects).

Side effects	Number
Hypertrichosis (facial)	65
Telangiectasia	45
Pyoderma	267
Stretch marks	118
Erythema and itching	989
Acneiform eruptions	921
Atrophy	12
Tinea incognito	821
Perioral dermatitis.	73



Figure 1: Showing multiple telangiectasias.



Figure 2: Showing widespread tinea in 3-year-old boy, post steroid use.

Many patients revealed that other family members, colleagues and friends were also using these medications for various indications (Table 3). Qualification was no barrier for self-medication and many well-educated people with post graduate and doctorate degrees were using topical steroids without any prescription. Many educated patients were not aware of the contents of the

medication they were using. They were not concerned about side effects of self-medication or misuse of topical steroids. Many patients were using steroid irregularly based on old prescription and have not visited their doctor since long period. The most common side effects noticed with use of topical steroids were steroid induced folliculitis, acneiform eruptions, telangiectasia, atrophy, striae, hypertrichosis, hypopigmentation, hyperpigmentation, perioral dermatitis, milia, erythema, rosacea, worsening of tinea, candidiasis, scabies etc (Table 4). In few patients, multiple side effects were noticed like erythema, hypertrichosis and acneiform eruptions at same site. Most of the patients were not aware that these side effects are due to their medications.



Figure 3: Showing erythema post steroid in triple combination.



Figure 4: Stretch marks post steroid use.



Figure 5: Tinea capitis post steroid use.

DISCUSSION

Different corticosteroid molecules, with varied potency, are available for topical use in our country. These molecules are easily available with variety of brand names by different pharmaceutical companies. These formulations are dispensed at every medical store with or without a prescription. The situation is worsened by the inadequate regulation of medical shops by the authorities as a result of which medicines are often dispensed without prescription. India has very limited number of Dermatologists to cater a large population. Thus, easy availability of TC and poor access to Dermatologists makes the situation worse in India and results in misuse of TCs.

TC misuse has been reported from Africa and other Asian countries as well.⁵⁻⁷ Well developed countries like USA are also not exempt from the problem.⁸ In spite of the widely acknowledged enormity of the problem, few studies have been published in India.⁹ The charm of TC lies in the rapidity of symptomatic relief in most of the inflammatory dermatoses. The problem worsens as patient continues to use TCs for prolonged period, leading to adverse effects and sometimes, dependence or addiction to TCs. This situation is faced by dermatologists in many countries, which was described more than 30 years ago as "serious" by Kligman and Frosch.^{2,5-8} Since that publication, TCs have become even more popular all over the world. In India, the problem is even worse, where anyone can easily get TCs without prescription. Moreover, TCs are considered as antiacne, ant blemish and fairness creams in the general population, especially in countries with darker-pigmented races.⁵

A large study conducted from 12 dermatology centers in seven different states of India highlights the misuse of TCs on the face. According to the study, almost 15% of the dermatology outpatients with facial dermatoses give history of TCs usage when they contact a specialist.¹⁰ In more than 93% of these cases, the TC is either not indicated, used for much longer duration than needed, of the wrong potency or is used without diagnosis of the underlying condition. This data suggests picture of a young female who uses a potent corticosteroid-containing preparation suggested by a friend or relative for beauty, fairness or general skin care purpose without any indication for months at a stretch.¹⁰

TC abuse appears to be very widespread in China and Iraq.^{6,7,10} The Iraqi study reported that 7.9% of the dermatology clinic attendees had misused TCs compared with almost 60% in our study. Most TC abusers in that study were in the 10-19 years age group. In the study on facial TC misuse from China, no prevalence data was given, but the proportion of patients applying TCs on the face without any underlying dermatosis in their study was 28.5%.⁶

Saraswat et al, studied adverse effects of TCs on the face.¹⁰ However, there are few studies regarding use of topical steroid on areas other than face. Our study focuses on use of TCs on various parts of the body including the face.

CONCLUSION

Misuse of topical corticosteroids is very common and results in various complications. Educating public, chemists, general practitioners along with strict vigil by concerned agencies is needed for optimal and safe use of corticosteroids. Chemists also play an important role in this, dispensing medications without prescription should be avoided and medications on old prescription should not be given.

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