

Dermatology OPD Patients' Misuse of Topical Steroid

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Conflict of interest: Nil

Abstract:

Background: Today, topical corticosteroids are the most often prescribed medications in dermatology offices. The therapeutic effects are mediated by their anti-inflammatory, vasoconstrictive, anti-proliferative, and immunosuppressive properties. They are powerful drugs used to manage a range of inflammatory and autoimmune dermatological conditions. According to information on acknowledged dermatological indications of TC provided on the Central Drugs Standard Control Organization (CDSCO) website (although indications are not specified for all the TC molecules), off-label usage of TC appears to be a common clinical practice in India.

Material and method: A cross-sectional observational questionnaire-based study was conducted at the Department of Dermatology outpatient clinic of a tertiary care hospital. A total of 110 people of all ages and genders who had taken topical corticosteroids improperly (i.e., for conditions for which they are not advised) for particular skin problems and had shown at least one side effect from these drugs were enlisted sequentially. These included at least one of the following symptoms: infantile gluteal granuloma, pyoderma, stretch marks, hyper/hypopigmentation, tinea incognito, facial acne, facial hypertrichosis, and cutaneous atrophy. They also included plethoric face and telangiectasia.

Results: Out of 110 patients, 64 subjects received a combination cream containing steroids (58%), while other major steroids prescribed as single ingredient were betamethasone valerate (12%), clobetasol propionate (10%), halobetasol propionate (6%) and fluticasone propionate (8%).

Conclusion: The problem is exacerbated by how simple it is for a patient to acquire these medications, even without a valid prescription. In our study, it was shown that females and younger age groups abused steroids more frequently. Due to the ease with which topical steroids may be bought, the difficulty patients have in seeing dermatologists, and a lack of knowledge about non-adverse physicians, steroid misuse is consequently a major problem in India. The findings of our study indicate that this problem is already serious, and that it requires prompt attention by making steroids a prescription-only medication rather than an over-the-counter one.

Keywords: Topical Steroid, Corticosteroid, Acne, CDSCO and Adverse effect

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Introduction

Topical corticosteroids have considerably enhanced dermatology since the discovery of "compound F" or hydrocortisone in 1952 and are currently the standard treatment for a variety of inflammatory and non-infectious conditions.[1]

Today, topical corticosteroids are the most often prescribed medications in dermatology offices. The therapeutic effects are mediated by their anti-inflammatory, vasoconstrictive, anti-proliferative, and immunosuppressive properties. They are powerful drugs used to manage a range of inflammatory and autoimmune dermatological conditions.[2]

TCs made up about 82% of all dermatological products sold in India in 2013, with total annual sales of 14 billion rupees. Dermatologists increasingly frequently prescribe TC, and worries

about misuse for purposes other than those specified on the label have been raised.[3]

According to information on acknowledged dermatological indications of TC provided on the Central Drugs Standard Control Organization (CDSCO) website (although indications are not specified for all the TC molecules), off-label usage of TC appears to be a common clinical practice in India.[4] The more serious problem is its inappropriate use as a fairness cream and symptomatic treatment for a variety of dermatological issues like acne, primary bacterial and fungal infections, misdiagnosed skin rash, and fairness lotion by unregistered practitioners or on the advice of pharmacists at chemist shops.[5]

The bulk of these medications can be purchased without a prescription, or patients can easily get

these steroid medications from a nearby pharmacist using a single prescription again. As a result, unpleasant side effects happen more frequently, which leads to medication dependence. The problem is made worse by the scarcity of dermatologists in India who are qualified to properly administer these drugs.

Both developed nations like the United States and developing nations like India and Africa are impacted by this issue. To stop this issue at its root, quick action is advised. The current study's objective was to assess the prevalence and unfavorable consequences of topical steroid use among patients who were seen in the dermatology outpatient clinic of a tertiary care hospital.

Material and Methods

A cross-sectional observational questionnaire-based study was conducted in an outpatient clinic in the Department of Dermatology in a tertiary care hospital. A total of 110 patients of any age and of both sexes are recruited consecutively who had used

topical corticosteroids incorrectly (i.e. for conditions for which steroids are not indicated) for certain skin problems and presented with ≥ 1 of the side-effects of these drugs. These comprised at least one of the following symptoms: plethoric face and telangiectasia, infantile gluteal granuloma, pyoderma, stretch marks, hyper/hypopigmentation, tinea incognito, facial acne, facial hypertrichosis, and cutaneous atrophy. Additionally, patients may visit for various dermatological issues but exhibit clear symptoms of topical steroid abuse. All eligible patients are given a questionnaire asking about their history of topical steroid use, how long they applied it for, and any negative side effects.

Statistical Analysis

The quantitative data was represented as their mean \pm SD. Categorical and nominal data was expressed in percentage. All analysis was carried out by using SPSS software version 21.

Results:

Table 1: Gender wise distribution of the patients

Gender	Number	Percentage
Male	31	28
Female	79	72
Total	110	100

Out of a total of 110 patients, 79 (72%) were females and 31 (28%) were males.

Table 2: Distribution of Study subjects as per steroid used

Steroid Used	Number	Percentage
Combination cream	64	58
Betamethasone Valerate	13	12
Clobetasol Propionate	11	10
Fluticasone Propionate	9	8
Halobetasol Propionate	7	6
Hydrocortisone Acetate	6	6
Total	110	100

Out of 110 patients, 64 subjects received a combination cream containing steroids (58%), while other major steroids prescribed as single ingredient were betamethasone valerate (12%), clobetasol propionate (10%), halobetasol propionate (6%) and fluticasone propionate (8%).

Table 3: Distribution of subjects as per duration of steroid used

Duration (Months)	Number	Percentage
<3	65	50
3-6	19	17.27
6-9	12	10.91
9-12	9	8.18
>12	5	4.54
Total	110	100

Duration of steroid use was less than 3 months in 50% cases while it was 3-6 months, 6-9 months and 9-12 months in 17.27%, 10.91% and 8.18% respectively. Duration of use of over one year was given by 4.54% cases.

Discussion

Dermatologists now employ topical corticosteroids more frequently than any other type of medication after they were first made available for usage in 1951. They serve as an essential treatment tool because of their ability to control inflammatory dermatoses. However, they are regarded as a double-edged sword drug, meaning that for safe and effective use, both the giver and the recipient must handle them carefully.[6] Since their creation, the unchecked use (misuse) of steroid drugs has resulted in a wide range of negative side effects. Rebound vasodilatation and the release of pro-inflammatory cytokines are just two of the many hypothesized mechanisms as the cause of these negative effects.[7]

Our findings unequivocally demonstrate that topical corticosteroids are often misused in our nation. The number of patients who contacted our department with these medications' negative effects is proof of this. Even so, the medical literature ignores the side effects and safety of topical corticosteroids. The patients' simple access to these topical steroid drugs from a neighborhood pharmacy on a single prescription, and that too regularly, is the source of the issue. This causes adverse effects to appear and frequently results in reliance on these medications. Because individuals can purchase drugs in our nation without a legal prescription from a doctor, this poses a serious dilemma. The problem is worsened when these steroid containing creams are freely advertised on television, thus it is not only a medical but also a social problem.

Kakroo NS et al.[8] in their study observed that source of steroids were mostly from pharmacist, friends and family members. Manzoor S et al.[9] in a similar study also observed that chemists were the most common source of prescribing steroids. Chauhan A et al.[10] in their study aimed to find out the most common steroid being used and the reason for its use. Study concluded that main responsibility for the misuse of topical corticosteroids could be attributed to chemists, the patient himself/herself, friends and family members. Mahar S et al.[11] in their study observed that friends and family (33.2%) were found to be the most influencing factors for misuse of topical steroids. A study done on topical steroid abuse on face by Saraswat et al.[12] showed that a total of 59.3% of the patients had used topical corticosteroids simply on recommendation by friends or family and without a valid medical prescription.

Meena S et al.[13] in their study reported that main reason for using topical steroids was fungal infection (52.43%). Kakroo NS et al.[8] in a similar study reported that common indications for steroid misuse were facial pigmentation, dermatophytosis and acne. Manchanda K et al.[14] in their study observed that 85% of the patients were applying topical steroids for medical conditions, with acne being the most

common indication, and the rest were applying as a general face cream. Mahar S et al.[11] found that fungal infection (38%) was the most common reason of abuse followed by facial acne (29%) and lightening of skin colour (8.4%).

Conclusion:

The results of our analysis showed that topical steroid abuse is common in this country. However, there is a significant lack of information on this subject. The drug's fast symptom relief is one of the key reasons for its overuse. The problem is exacerbated by how simple it is for a patient to acquire these medications, even without a valid prescription. In our study, it was shown that females and younger age groups abused steroids more frequently. Due to the ease with which topical steroids may be bought, the difficulty patients have in finding dermatologists, and the ignorance of non-dermatologists, steroid abuse is consequently a major problem in India. The findings of our study indicate that this problem is already serious, and that it requires prompt attention by making steroids a prescription-only medication rather than an over-the-counter one. In addition, it is a multifaceted problem that needs the cooperation of several community sectors to be tackled. The development of continuing medical education programs for medical and paramedical professionals, along with public education through targeted media campaigns, are perhaps the two most important steps that should be taken to minimize this problem.

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