



ORIGINAL RESEARCH PAPER

Dermatology

THE SOCIAL AND PSYCHOLOGICAL FACTORS IN TOPICAL STEROID ABUSE PATIENTS: A PROSPECTIVE STUDY AMONG DERMATOLOGY OUTPATIENTS

KEY WORDS: Topical corticosteroids, steroid abuse, steroid side effects.

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ABSTRACT	<p>Background: Topical corticosteroids have become the mainstay of dermatologic treatment of a wide range of inflammatory and non-infectious conditions. In India, the annual sales figure of TCs was 14 billion rupees in 2013, concerns have also been raised regarding its misuse of non-labeled indications and side effects.</p> <p>Aims: The aim of the study to know the sources of information about steroid use in common public along with to assess the factors encouraging the prolong use, indication of use and to analyze the effect of side effects of steroid on a quality index of life.</p> <p>Materials and methods: This is the prospective questionnaire-based study done at tertiary care hospital. A total of 500 adult patients having the history of steroid use for non-indicated cause coming to seek consultation for the same cause or relative side effects were included in study and questionnaire was given.</p> <p>Statistical test: All the data was collected and entered into Microsoft excel sheet 2013 and statistical analysis was done using SPSS</p> <p>Results: Out of 500 patients the quality index of life affected because of steroid abuse was mildly affected in 167(33.4%), moderately affected in 248(49.6%), and highly affected in 85(17%) patients.</p> <p>Conclusion: The ubiquitous uncontrolled use of steroids are the major concern in dermatology practice as the effects are affecting social and psychological aspects of affected indusial.</p>
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Introduction:

Topical corticosteroids have made a dramatic contribution to dermatology since the introduction of "compound F" or hydrocortisone in 1952 and have become the mainstay of dermatologic treatment of a wide range of inflammatory and non-infectious conditions. [1] Topical corticosteroids are today among the most commonly prescribed medications in dermatology clinics. The clinical effects are mediated by their anti-inflammatory, vasoconstrictive, anti-proliferative and immunosuppressive properties. [2] They are highly efficacious drugs which are used for the treatment of varied autoimmune and inflammatory dermatological conditions. [2]

In India, the annual sales figure of TCs was 14 billion rupees in 2013, which accounts for almost 82% of total dermatological product sale in the country [3] Prescription of TC has become ubiquitous with dermatologists and concerns have also been raised regarding its misuse for non-labeled indications. As per the information available on the Central Drugs Standard Control Organization (CDSCO) website regarding approved dermatological indications of TC (although indications are not mentioned for all the TC molecules), its off-label use seems to be a common clinical practice in India. [4,5]

However, the more serious concern is its inappropriate use in symptomatic treatment for varied dermatological disorders like acne, primary bacterial and fungal infections, and undiagnosed skin rash and as fairness cream by non-registered practitioners or on the advice of pharmacist at chemist shops. [6-8] Most of these medications are sold without any prescription or patients are easily able to procure these steroid medications on a single prescription repeatedly from a local pharmacist.

This leads to increased frequency of adverse effects and often dependence on these medications. To make the problem worse India has very few qualified dermatologists to prescribe these drugs rationally. Not only developing countries like India and Africa but even developed countries like United States of America is facing this problem. Urgent steps are therefore recommended to curb the root of this problem at the earliest. The present study was thus conducted to analyze the magnitude and adverse effects of

topical steroids abuse on the body in dermatology outpatient department of a tertiary hospital and to recognize the offending topical steroids in order of frequency

Materials and methods

This was a prospective study conducted at the Dermatology Outpatient Department (OPD) in a tertiary care hospital. The Institutional Ethics Committee clearance was taken before starting the study. A total of 500 adult patients having history of steroid use for non-indicated cause coming to seek consultation for the same cause or relative side effects were included in study and questionnaire was given.. The questions mainly tried to find out the indication of use, source of information about drug, factors encouraging the use, experts were consulted or not, effect of side effects on quality index of life, the duration of usage. Patients <18 years and those not willing to answer the questionnaire were excluded from the study. To assess effect on quality index of life the questionnaire consisting of five questions with four response categories (0-3) . The questionnaires were as follows: (1) As a result of side effects, during 1 month how much aggressive, frustrated or embarrassed have you been? (2) Do you think this side effects interfered with your daily social life, social events or relationship with members of opposite sex? (3) Do you avoid public changing facilities because of acne? (4) How would you grade your concern for skin appearance due to side effects? (5) Mention how big problem your side effect is now to you? There were 4 answers for each of the question: no problem at all, mild, moderate and severe which were graded as 0, 1, 2 and 3 respectively. Finally the sum of all answers was calculated. The maximum score could be 15 and the minimum 0. Interpretation: If the sum of score lies in the range 0- 4 then we grade it as mild, 5- 9 was moderate and 10- 15 as high. The parameters evaluated through the questionnaire were aggressiveness, frustration, embarrassment, effect on social life, relation with members of opposite sex, concern for skin appearance, avoidance of changing facility and patient's own grading of their problem. The collected data were assessed by using Microsoft excel sheet 2013 and statistical analysis was done using SPSS.

Result:

A total of 500 patients 324 was female and 176 was male. Result

summary of study is as mentioned in table -1

Table-1

Criteria	No of patients
Indication of use	1. Acne -168 (33.6%) 2. Pigmentation-111 (22.2%) 3. Fairness-148 (29.6%) 4. Fungal infection-73 (14.6%)
Source of information	1. Relative & friends-139 (27.8) 2. Chemist-173 (34.6) 3. General practitioner-152 (30.4) 4. Advertisement-36 (7.2)
Experts consulted or not	1. Yes -189 (37.8%) 2. No -311 (62.2%)
Factors encouraging the use	1. Faster result-184 (36.8%) 2. Brighter fair skin-145 (29%) 3. Encourage by others-171(34.2%)
Side effects observed	1. Steroid Acne-154 (30.8%) 2. Erythema-96 (19.2%) 3. Photosensitivity-123 (24.6%) 4. Burn-46 (9.2%) 5. Non-Responding Fungal Infection-39 (7.8%) 6. Secondary Infection -22 (4.4%) 7. Hypertrichosis-20 (4%)

The above data shows that out of 500 patients maximum patients used steroid for acne (33.6%) and fairness (29.6%) followed by pigmentation (22.2%) and fungal infection (14.6%). The chemist and general practitioner play the very important role in steroid abuse as patients follow their suggestions followed by relatives and advertisement. In our studies, only 189 (37.8%) patients consulted experts before using the steroid creams but misuse was noted for self-medication for other conditions. Around 311 (62.2%) don't even bother to consult the experts. Faster expected results 184 (36.8%), Brighter fair skin-145 (29%), Encourage by others-171(34.2%) were the most common encouraging factors observed among the patients. The most common side effects of steroid use was Steroid Acne-154 (30.8%), Erythema-96 (19.2%), Photosensitivity-123 (24.6%), Burn-46 (9.2%), Non Responding Fungal Infection-39 (7.8%), Secondary Infection -22 (4.4%), Hypertrichosis-20 (4%) all these side effects were very much troublesome and affecting social and psychological well-being of patients.

Analysis of effect of side-effects on life quality index is mentioned in Table-2

Table-2

(1) As a result of side effects, during 1 month how much aggressive, frustrated or embarrassed have you been?	No Problem At All-130 Mild-190 Moderate-85 Severe-95
(2) Do you think this side effects interfered with your daily social life, social events or relationship with members of opposite sex?	No Problem At All-89 Mild-145 Moderate-156 Severe-110
(3) Do you avoid public changing facilities because of acne?	No Problem At All-169 Mild-256 Moderate-42 Severe-33
(4) How would you grade your concern for skin appearance due to side effects?	No Problem At All-56 Mild-147 Moderate-274 Severe-23
(5) Mention how big problem your side effect is now to you	No Problem At All-83 Mild-169 Moderate-207 Severe-41

After calculating total score of each indusial patients there were observation as mentioned in Table-3

Table-3

Grade	Range	Total patients
Mild	0-4	167(33.4%)
Moderate	5-9	248(49.6%)
High	10-15	85(17%)

Topical steroid affects patients both socially and psychologically as quality index of life affected shows mild in 167(33.4%), moderately in 248(49.6%), and high in 85(17%).most of young people are affected severely and they are facing problem of low esteem, low confidence, and depression affecting them socially also.

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.^[11] 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.^[9] They were hailed as a panacea for all ills by physicians and patients and gained rapid popularity.^[10] However, the dramatic symptomatic relief from these medications led to misuse and abuse of these drugs by both nondermatologists and patients. Topical steroids were used by many patients as fairness or cosmetic creams.^[11,12] The rampant misuse and abuse of these medicines led to the development of various side effects, both cutaneous and systemic.^[12,13,14]

Various studies have tried to highlight the menace caused by the use of topical steroids.^[6,11] A multicentric study by Saraswat et al. Has also been done to highlight the topical steroid abuse on the face.^[6] 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 having the history of steroid use seeking treatment for side effects or any other cause. We have tried to find out the sources of information of steroid creams and different factors encouraging the use. In our study different indication for steroid use were Acne -168 (33.6%), Pigmentation-111 (22.2%), Fairness-148 (29.6%), Fungal infection-73 (14.6%) and most common sources were Relative & friends-139 (27.8%), Chemist-173 (34.6%), General practitioner-152 (30.4%), Advertisement-36 (7.2%)

The findings are similar to the study conducted by Saraswat et al. And Dey.^[6,15] An Iraqi study showed 7.9% of patients using topical steroid for similar indications.^[16] and also similar findings as the study conducted by T S Nagesh and A Akhilesh.^[17]

In our study, 189 (37.8%) 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 and 302 (49.5%) in study conducted by T S Nagesh and A Akhilesh^[17]

The common side effects found in our study were Steroid Acne-154, Erythema-96, Photosensitivity-123, Burn-46, Non-Responding Fungal Infection-39, Secondary Infection -22, Hypertrichosis-20.these are similar finding to T S Nagesh and A Akhilesh study and 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. In our study topical steroid affects patients both socially and psychologically as quality index of life affected shows mild in 167(33.4%), moderately in 248(49.6%), and high in 85(17%).most of young people are affected severely and they are facing problem of low esteem, low confidence, and depression affecting them socially also.



Image-1 steroid induced acne

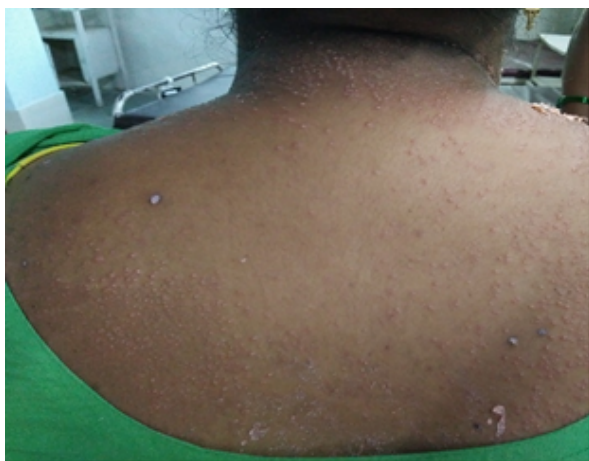


Image 2- miliaria like eruption after steroid use

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Conclusion:

The invention of steroids were known to be the gift to mankind in the past so far they are proven to be help full and very efficient treatment modality when all other options failed, but that doesn't justify the adverse effects of steroids because of its uncontrolled use in our Indian population. In our study it is completely observed that the adverse effects of steroids not only affecting person physically but also affecting the social and psychological aspect very severally.

We recommend some serious action for awareness of steroid use should be taken by everyone and even the general practitioner should be educated for the same

Limitations of study:

No large no of population were included
Further psychological analysis of affected person was done

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