Original Research Paper

Volume - 15 | Issue - 07 | July - 2025 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Dermatology

CLINICOEPIDEMIOLOGICAL PROFILE OF TOPICAL STEROID INDUCED FACIAL DERMATOSES

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ABSTRACT **Introduction:** The constellation of various side effects resulting from the unsupervised application of steroids on the face has been referred to as "Topical Steroid Induced Facial Dermatoses". In the first group, topical corticosteroid are prescribed for right indication but patients continue to apply them unsupervised for prolonged duration. In the second group , patients apply corticosteroids alone or corticosteroids containing fixed drug combination cream for unindicated conditions. **Materials & Methods:** 130 patients who applied various topical corticosteroid formulations over face for various duration were recruited for the study between March 2023 to September 2024 (1.5years) **Results:** In our study , majority of patients were females (88,67.7%). Amongst these females, majority of them were housewives (28,39.4%) residing mostly in rural areas (69,53.1%). Majority of the patients showed cutaneous signs of erythema / telangiectasia (115,88.5%). Most commonly used steroid was super potent class I, clobetasol propionate (50,38.5%) advised majorly by dispensary /physician (64,49.2%) **Conclusion:** Due to easy availability of topical corticosteroids as "Over-The-Counter" drugs and lack of awareness even amongst the literate group. With no implementation of laws on selling of these drugs , urgent measures at all fronts need to be taken to prevent the frequency of the cutaneous side effects seen with the misuse of topical corticosteroids.

KEYWORDS : Topical corticosteroids, Facial Dermatoses

INTRODUCTION

The constellation of various side effects resulting from the unsupervised application of steroids on face has been referred to as "Topical Steroid induced Facial Damaged Face (TSDF)".[1,2]

In the first group, topical corticosteroids are prescribed for right indication but patients continue to apply them unsupervised for prolonged duration. In the second group, patients apply topical corticosteroids or topical corticosteroids containing Fixed Drug Combination cream for wrong indications[3].

Topical corticosteroid is misused for various indications such as fairness/cosmetic cream/skin cream, acne, pigmentation, fungal infection, pruritus and any type of rash[4]. 'Over the Counter' availability of topical corticosteroids, inadequate training and exposure of non-dermatologists including training general practitioners, chemists, relatives, quacks and unimplemented laws and regulation play an important role in their misuse[5,6].

Efficacy of topical corticosteroids depends on its structure as well as the amount of percutaneous absorption which depends on its site application. Stratum corneum is thinner on parts of the face (eyelids), thus rapid penetrability. Topical corticosteroids are available in creams, ointments, lotions, gels, and foam. Permeability also depends on solubility of topical corticosteroids in the vehicle[3].

Following cutaneous adverse effects occur due to prolonged application and site of application and also dependency on the structure and vehicle used:

Atrophic changes, acneiform eruptions, erythema, hypertrichosis, telangiectasia, striae, steroid induced rosacea like dermatitis, exacerbation of infections like tinea incognito and other infections, impaired wound healing, ulceration, perioral dermatitis, hyperpigmentation, photosensitization, contact dermatitis, and rebound flare up (psoriasis)[4].

Chronic abuse of topical corticosteroids leads to physiological and psychological dependence. Patient's inability to tolerate rebound inflammatory edema, redness, burning sensation which makes them restart the topical corticosteroids and discontinuation lead to flare, followed by exfoliation leading to epidermal barrier disturbance and alteration in skin elasticity. Uneducated and irrational fear of topical corticosteroids creams due to lack of awareness, misinformation or anxiety[3]. Judicious counselling regarding use and abuse of topical corticosteroids is important.[7]

MATERIAL AND METHODS

Our study was a hospital based observational study carried out at the outpatient department of Dermatology, Venereology and Leprosy at JNUIMSRC Jaipur. The period of study was 1.5 years from March 2023 to September 2024. A total of 200 patients coming with cutaneous adverse effects known to be applying topical corticosteroids were included in the study . Detailed history of type of ointment used , for prolonged duration , prescribed by what source and for what reason was it applied . All cases were subjected to thorough cutaneous examination and photographs. Pre-designed performa was filled for each patient after taking their informed consent. Privacy and confidentiality of each patient was maintained .

OBSERVATION & RESULT

In our study, majority of the patients were females (88, 67.7%), while remaining were males (42, 32.3%). Amongst these females, majority of them were housewives (28,39.4%). Majority of patients belonged to rural population (69,53.1%) while remaining belonged to urban population (41, 46.9%).

Table 1: Cutaneous Side Effects

Cutaneous side effects	No. of patients
Erythema/Telangiectasia	115
Atrophy	98
Dyschromatic Changes	96
Acneiform Eruption	89
Hypertrichosis	69
Other*	42

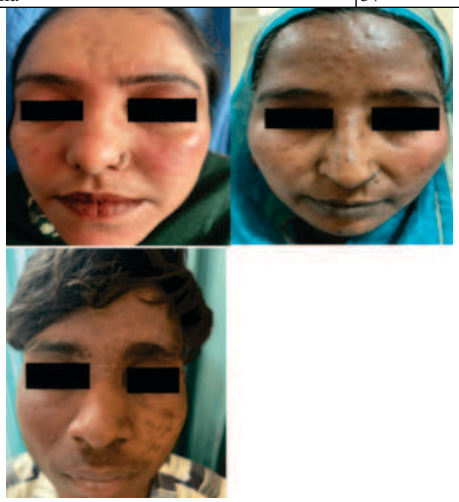
Table 2: Potency Of Steroids Used

Potency	No.of Patients
Super Potent (class I)CP*	50
Medium Potency(classIV)MF*	37
Lower Mid potency (classV) Bet Val.*	37
High potent (class II)BD*	3
Medium High potency(class III) Bec dip	3

Table 3: Disease Observed

Disease observed	No. of Patients
Others(Post Inflammatory Hyperpigmentation/ contact dermatitis / periorbital / steroid induced rosacea like dermatitis)	13
Acneiform eruptions	21
Overlap	26
Tinea Incognito	33

Melasma	37



DISCUSSION

In our study, there was a female preponderance which was similar to another study by Saraswat et al[2]

Our study showed that majority(69;53.1%) patients belonged to rural areas which was seen similarly in a study by Chauhan et al[8].

In our study, irrespective of the literacy or level of education , the most common profession in patient were that of housewives.

104 patients, in this study, presented with multiple complaints due to excessive misuse of topical corticosteroids. Presenting complaints of patients varied from pruritus, burning sensation and photosensitivity, to maximum showing overlap of these complaints.

Non registered physicians and physicians in local government dispensaries were the most common source of prescription (non-documented) and over- the- counter availability of the topical corticosteroids. The maximum patients (64,49.2%) were advised by dispensary/ physicians.

Most common cutaneous side effect of topical corticosteroids abuse in our study was Erythema/Telangiectasia due to rebound phenomenon and vasoconstrictive assay of corticosteroids and repeated use of the molecule over the face.

Majority of the patients in this study (50, 38.5%) were using a super potent steroid clobetasol propionate 0.05% ointment which was similar to another study by Hameed et al[9]. It was combined with the fairness creams and triple combination as seen in a study by Saraswat et al[2]

Our study showed that willing for fairness was the most common indication seen in 45(34.6%) patients in this study, which was similar to a study by Dey et al[10] which showed willing for fairness was the reason in 50%. Similar study by Hameed et al[9] showed fairness cream was used in 41%, while a similar study by Saraswat et al[2] showed 40%.

CONCLUSION:

Due to the easy availability of topical corticosteroids as “Over the Counter” drugs and lack of awareness even amongst the literate group. With no implementation of laws on selling of these drugs , urgent measures at all fronts need to be taken to prevent the frequency of the cutaneous side effects seen with the misuse of topical corticosteroids.

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