

Evaluation of Adverse Drug Reactions caused by Topical Steroids in Patients Presenting in Dermatology Department of Teaching Institute of Tertiary Health Care Centre of Central India

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Topical steroids are most commonly being used today. Mostly these are being misused due to lack of awareness of their adverse effects. Malpractice and easy availability of these agents also responsible for their abuse. To Evaluate Topical Steroid abuse in various parameters according to CDSCO ADR forms. Objectives : This study was conducted to know the extent of abuse of topical steroid ,along with clinical profile and mode of accessibility in dermatology department of a teaching institute of tertiary health care centre of central India. First 200 patients of adverse drug reaction attending dermatology department were screened according to ICSR form of CDSCO in a period of December 2015 to November 2016 and 181 patients of them who gave history of topical steroid application were further analyzed. Most commonly affected people belong to age of 21 to 30 years (41.98%), Tinea incognito (58%) was the commonest manifestation of steroid abuse, Tinea (58%) was the most common indication of steroid application, self medication (46.40%) was most common mode of steroid accessibility, betamethasone (61.87%) was most commonly applied topical steroid. Self medication and over the counter drug use were most common mode of steroid accessibility both can be controlled by making strict health regulatory policies. Simultaneously health education program must be targeted to young population who are more vulnerable to steroid abuse to make them aware regarding harmful effects of unguided or misguided use of topical steroid.

Keywords: OTC Drugs; Steroid abuse; Self Medication; Tinea incognito; TSDF.

Steroids have been in use as topical agents since long time.¹ The topical steroids are being increasingly used since their inception.² Topical corticosteroids are among the most commonly prescribed medications in dermatology practice at present³. Steroid abuse is a common due to easy availability of steroid creams as over-the-

counter drugs.³ Steroids exert - anti-inflammatory, antipruritic, melanopenic, atrophogenic, and immunosuppressive effects on the skin. All these effects can produce adverse effects from their prolonged or unwarranted use.⁴ This study was conducted to assess the extent of steroid abuse and the clinical profile of these patients.

MATERIAL AND METHODS

This is a prospective observational study conducted in dermatology department of M.Y.H . hospital ,Indore.200 patients of Adverse drug reactions (ADRs) were screened according to CDSCO,ICSR form. Diagnosis of ADR made by consultant .Out of 200 patients 181 patients were further evaluated who gave history of steroid application topically. Data analysed and result is interpreted in percentage.

Table 1. Age wise distribution of adverse reactions caused by topical steroids

Age in years	Number of cases	Percentage(%)
<10	0	0
11-20	52	28.72
21-30	76	41.98
31-40	33	18.23
41-50	11	6.07
51-60	8	4.41
61-70	1	0.55
>70	0	0

Table 2. Manifestation of adverse reactions caused by topical steroids

Manifestation	Female	Percentage (%)	Male	Percentage (%)	Total	Percentage (%)
Tinea Incognito	30	16.57	75	41.43	105	58
TSDF (topical steroid damaged face)	54	29.83	22	12.15	76	42



Fig. 1. TSDF –Depigmentation



Fig. 2. TSDF- Hirsutism

RESULT AND OBSERVATIONS

Inference

Majority of cases are from young population. Children & elderly are affected least. **(Table I)**

Inference

There were only two major manifestations out of which Tinea Incognito is more common than TSDF **(Table II)**.

TSDF was more common in females while Tinea Incognito was more common in males.

Inference

Tinea (105 cases) was the commonest indication for which steroids were applied topically this is

Followed by cosmetic reason & acne vulgaris**(Table III)**.

Inference

Self medication is most common mode of topical steroid accessibility, while prescribed mode is least**(Table IV)**.

Inference

Betamethasone was most commonly applied topical steroid while cortisone was least commonly applied (Figure VII).

DISCUSSION

This study was done to know the extent of topical steroid abuse and subsequent adverse effects in terms of age group affected, manifestation of abuse, indication of steroid application, mode

of accessibility and most common steroid abused topically. In this study age group most commonly affected belong to 21 to 30 years (41.98 %) followed by 11 to 20 years (28.72%) this finding is similar to study conducted by Meena S *et al.*⁵ and some other studies^{6,7,8} this is because people in this age group is more likely accessible to self medication compared to elderly people and children.

In this study there were only two manifestation of topical steroid abuse firstly Tinea

Table 3. Indications of offending topical steroid administration

Indication	No. of cases of topical steroid application	Percentage (%)
Tinea Cruris	74	40.88
Tinea Corporis	25	13.81
Tinea facie	5	2.76
Tinea pedis	1	0.55
Cosmetic Reason	36	19.88
Acne Vulgaris	36	19.88
Eczema & Pruritus	4	2.20



Fig. 3. TSDF –Melesma

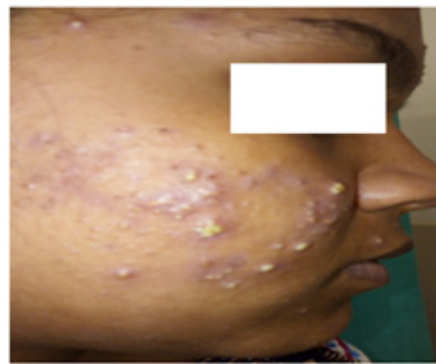


Fig. 4. TSDF–Acnei form eruptions



Fig. 5. Tinea Corporis in female



Fig. 6. Tinea Cruris in male

Table 4. Mode of accessibility to Topical steroids

Mode of accessibility	No. of Cases	Percentage (%)
Self Medication	84	46.40
OTC drug use	62	34.25
Prescribed	35	19.33

incognito (58%) , secondly TSDF (42%) ,Meena S et.al. also found Tinea incognito as the commonest adverse effect in their study⁵. TCs by suppressing the normal cutaneous immune response enhance fungal infections.⁹

TSDF or red face syndrome is a recently described entity characterized by plethora of

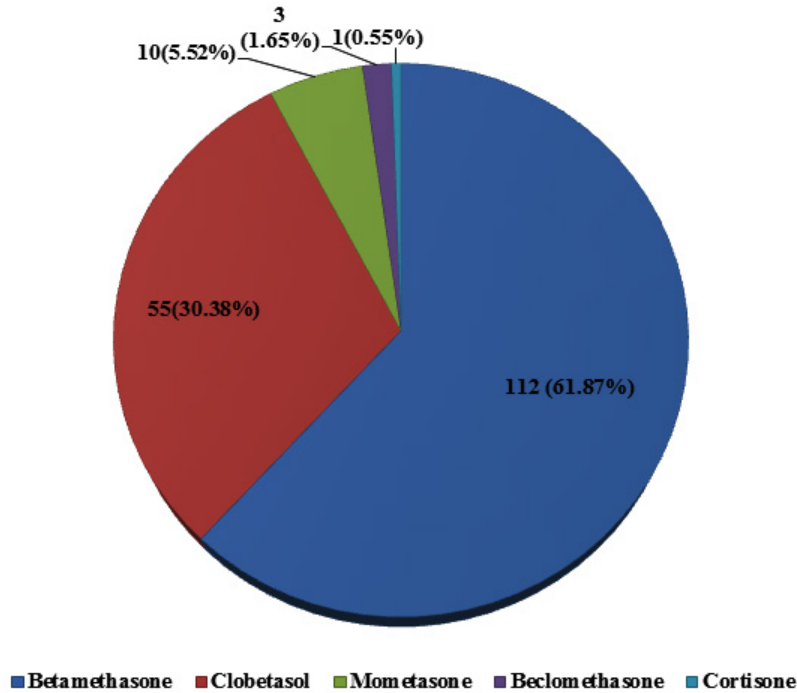


Fig. 7. Topical Steroids causing ADR

symptoms caused by unsupervised misuse /abuse/ overuse of TC of any potency on the face over an unspecified and/or prolonged period.¹⁰

In this study Tinea (58%) was the most common indication for which steroid was abused followed by cosmetic reason (19.88%) and acne vulgaris (19.88%). This finding is similar to study conducted by Meena S et.al.⁵

Self medication (46.40%) was most common mode of steroid accessibility followed by over the counter (OTC) drug use (34.25%) while prescribed mode (19.33%) was least common. This finding is similar to other studies^{6,7,8}.

In this study betamethasone (61.87%) was most commonly abused steroid this finding is

different from study conducted by Meena S et.al.⁵ in which clobetasol was most commonly abused but similar to some other studies^{7,8}.

CONCLUSION

As revealed by this study young people are more vulnerable to topical steroid abuse , so our health education program must be targeted to these people. There is a need to strengthen the health regulatory policies and strict control over the OTC drug sale. People must be aware regarding harmful effects of unguided use of topical steroid, they should use steroid only when prescribed by registered practitioner or dermatologist.

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