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TOPICAL CORTICOSTEROID ABUSE ON THE FACE: A PROSPECTIVE, STUDY ON OUTPATIENTS OF DERMATOLOGY

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Abstract

Introduction: Topical corticosteroids (TCS) are widely misused. Uncontrolled use of steroids can cause undesirable adverse effects especially on face.

Aim: The aim of this study was to assess the skin manifestations of TCS misuse over the face in the patients attending dermatology outpatient and to analyze various factors contributing to such misuse.

Methods and Methods: A total of 200 patients with facial dermatoses using topical steroids over face for minimum period of 1 month, reported between June 2010 and May 2011 were enrolled in the study. Details about the usage of topical corticosteroids and their side effects were recorded. The patients were educated about the misuse.

Results: Majority of the patients were females (71%). The most common reason for misuse was acne (61%) followed by use as a fairness cream (23%). The average duration of usage was 6 months to 1 year, longest being 8 years. The drug most commonly misused was Betamethaone Valerate (71%). The commonest side effect noted was acne form eruptions (52%) followed by steroid dependent face (SDF) (36%). There were no cases of allergic contact dermatitis or perioral dermatitis. The exacerbation of the lesions on stoppage of steroid cream (90%) fairness effect (10%) were the reasons for continued use. (100%) were unaware of side effects of topical steroids.

Conclusions: Steroids have been misused by patients on their own or by doctors for various reasons. Hence the awareness about their correct usage is essential.

Key words: steroid abuse; face; steroid rosacea; acneform erruptions

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Introduction

In spite of the widely prevalent steroid phobia, misuse of topical corticosteroids (TCS) on face continues occur as the benefits of steroids outweigh the risks. The instant subjective and objective relief that steroid give for various dermatosis of face, and the fairness effect are the important reasons for continued use of it even among the literate population. Aim of this study is to make awareness about misuse of steroids on face.

Material and Methods

A total of 200 outpatients with facial dermatosis using TCS on face for minimum period of one month were taken up for study, after obtaining institutional ethical clearance and informed consent from patients. Details about age, sex,reason for steroid application, source of steroid, duration, reason for continued use, and awareness of side effects, were recorded in proforma. Detailed examination for side effects of steroid like acne, erythema scaling, telengectasia dyspigmentation, hypertrichosis or any others noted were recorded (Fig. 1 - 4). Various data were analysed.

Results

Most of patients were between age group of 15 to 30 (55%) (Tabl. I). Females (71%) outnumbered males (29%). Most common reason for use of steroid was acne (41%) as fairness cream (23%) pigmentation including melasma (18%) various other dermatoses of face (18%) (Fig. 5). Duration of application was <6 months in majority, longest being 8 years (Fig. 6). Source of steroid prescription was self medication as advised by friends in 64% and prescribed by dermatologist or general physician in 36% (p value 0.0001 significant). All the 200 (100%) patients were unaware about the side effects of topical steroid.

Steroids of varying potency were used by patients commonest being betamethasone valerate (Tabl. II). Exacerbation on stopping steroid and same was reason for continued use in (90%) of patients. 10% of patients did not experience any exacerbation of lesion but continued using steroid for its fairness effect. Commonest presenting symptom was acne form eruption followed by (SDF) steroid dependent face (eryhema burning and scaling) (Fig. 7). On examination of patient there were overlap of side of side effect. We did not observe any allergic contact dermatitis to steroid or perioral dermatitis. All the patients were educated about side effects of steroid and TCS was tapered off or replaced with mild steroid and stopped completely. Orally doxycycline or azithromycin was given. Topical tacrolimus was used in some cases. All patients showed good response.

Figure 1. Erythema of central face - steroid rosacea.
Figure 2. Acneform eruption following steroid application for pigmentation of face.
Figure 3. Steroid dependent face (SDF) showing diffuse erythema and scaling.
Figure 4. Steroid induced pigmented monomorphic acne.

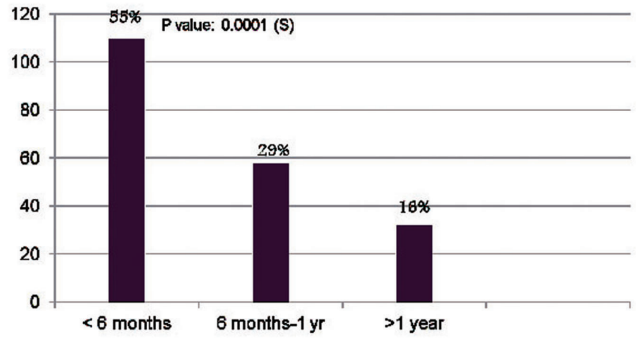

Figure 5. Duration of steroid application.

Age	No of patients
1-15	24
16-30	110
31-45	50
45-60	16

Table I. Age distribution of patients.

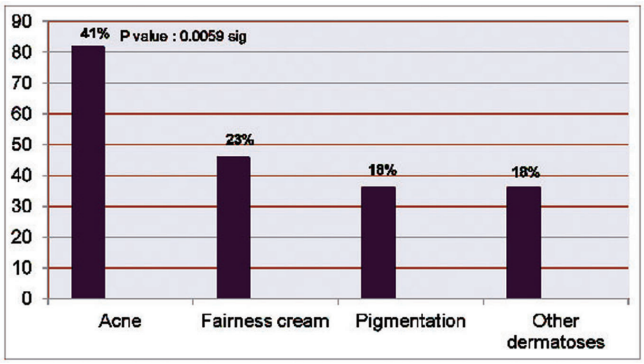

Figure 6. Reason for steroid application.

Potency of steroid	No of patients
Very potent and potent	46
Moderately potent	126
Mild	28

Table II. Potency of steroid applied and number of patients.

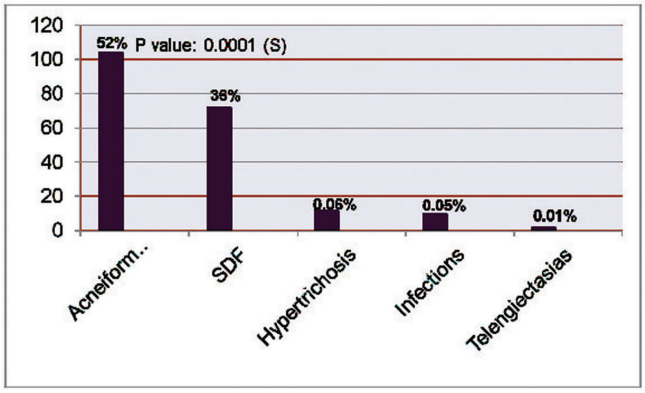

Figure 7. Type of skin lesion.

Discussion

Ever since the invention, topical steroids are misused both by prescribing doctor and patient themselves, as it gives instant relief to signs and symptoms [1].

Face is the commonest site of such misuse as its effect is cosmetically appreciable and it is most often used as fairness cream also [2]. 23% of our patient were using it for fairness effect and 10% continued to use it for the same reason. Different names are given to steroid abuse lesions on face, most often called as steroid rosacea [3]. Red face syndrome [4] and SDF [1] also refers to same effect. Sequence events that lead to steroid abuse is as follows-doctor will prescribe moderately potent steroid to get benefit and avoid side effects of potent steroid, (like in our study and by Rathy SK et al [4] where it was betamethasone valerate) for some dermatosis of face, impressed by response, patient continues to use it and often refer to friends also. Saraswat et all observed use of potent and super potent steroids in majority [1]. Effect of steroid reduces due to tachyphylaxis [5] and patient is forced to use potent steroid and cycle continues. On stopping the medication there is rebound erythema and scaling which occur due to release of cytokines, accumulation of nitric oxide causing vasodilatation and doubtful role of demodex mites [6].

Acne form eruptions are also commonly observed following TCS application. Our study showed acne form lesions as commonest side effect. Bhat YJ et al [3] observed more rosasea than acne. It is interesting to observe that majority of our patients used steroid for treatment of various forms of inflammatory acne. Initially they had relief and on continued use developed monomorphic pigmented papules which was the commonest lesion observed in our study.

Other common side effects like telengectasia, hypertrichosis, infections were less commonly observed in our study as in other studies [7]. Systemic side effects like adrenal axis suppression, diabetes, hypertension etc following topical application are reported only if applied to larger areas as in other diseases [8], are rare with use on face. Allergic dermatitis to TCS are reported [9]. None of our patients had allergic reaction to TCS. Most of time allergic response is to base used and SDF which manifests as erythema and scaling is mistaken as allergy [10]. Perioral dermatitis an entity initially described following use of fluorinated steroid on face [11], and reported in studies [12], was not seen in our study.

Management of patient with SDF include initial careful education about dependency and counselling as to recurrence of lesions on stoppage of steroids. Slow tapering by decreasing frequency or switching to lower potent steroid is to be done. Oral tetracyclines are proved to be effective [13]. Other drugs like low dose doxycycline and azithromycin also have shown to be effective [3]. Recently topical tacrolimus is reported to be effective [14]. Studies show effectives of pimicrolimus also similar to tacrolimus [15,16]. There is always a doubt as to which steroid is safe for face [17], in fact no steroid is safe for face, and to be prescribed only if specifically indicated for shorter duration. And it is very essential to educate patient about side effects and dependency in order to prevent the consequences of abuse. This kind of awareness among doctors and patient is highly essential as magnitude of problem is high.

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