Topical Steroid Misuse on the Face: A Medical and Social Problem in Iraq

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ABSTRACT:

BACKGROUND:
The use of topical steroids on the face should be carefully selected by the dermatologist, however its misuse still occur producing dermatological problem resembling rosacea.

OBJECTIVE:
To highlight the clinical aspects of misusing topical corticosteroid on the face and to search for the causes behind this medical and social problem.

METHODS:
In this prospective study, 110 Iraqi patients with steroid rosacea or perioral dermatitis with history of topical steroid use on their faces for at least 1-3 months were evaluated at Department of Dermatology - Baghdad Teaching Hospital between January 2011 to December 2013.

RESULTS:
Majority of patients were young, poorly-educated women who used a combinations of potent and very potent topical steroid for average period of 0.25-12 years. Facial erythema (92.7%) and hotness (89%), dryness (62.7%), telangiectasia (53.6%) and rebound phenomenon (86.3%) with or without papulopustular eruption were the main clinical complaints. Searching for beauty and facial fairness in 51(46%) of patients, hyperpigmentory problems like melisma in 40(36%) patients were the main indications for steroid misuse on the face mostly accomplished through recommendations from non-medical personnel.

CONCLUSION:
Topical steroid should not be used on the face unless it is under strict dermatological supervision and the easy access to topical steroid preparations must be controlled by the health penalties.

KEYWORDS: steroid rosacea, topical corticosteroid.

INTRODUCTION:

Topical corticosteroids (TCS) are perhaps the most commonly prescribed medications in dermatological practice and since its introduction in 1951, they are increasingly used for a wide range of inflammatory skin diseases [(1)]. Further development of the fluorinated TCS made a variety of options for steroid potency for the dermatologists to be used in the dermatological field. Meanwhile, an increased incidence of TCS adverse effects were reported including striae distance, cutaneous atrophy, hypertrichosis and telengactesia [(2)]. In this context, a prominent adverse effects on the face are especially important where it developed due to the inappropriate use of TCS on the face producing a distinctive clinical condition which has been described by many nomenclature in the medical literature like: light sensitive seborrheid [(3)], perioral dermatitis [(4)], rosacea-like dermatitis [(5)], steroid rosacea [(6)], steroid dermatitis resembling rosacea [(7)] and steroid-induced rosacea-like dermatitis [(8)]. The main clinical presentations of this dermatosis are diffuse facial redness, hot flushes, papulaopustular facial eruption and the development of rebound phenomenon after withdrawal of TCS [(6)].

We think that this problem is common in our daily clinical practice, but it is not well documented in Iraq, hence the aim of the present study is to address this medical condition and to study the possible causes behind its development.

MATERIALS AND METHODS:

This was a prospective case descriptive series study which involved a total of 110 Iraqi patients diagnosed as steroid induced rosacea or perioral dermatitis who consulted the Department of Dermatology -Baghdad Teaching Hospital between January 2011 to December 2013.

Inclusion criteria for patients to be enrolled in this study were:

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Patients with clinical symptoms and signs suggestive of steroid use on the face (steroid induced rosacea or perioral dermatitis) who had history of TCS use on the face continuously (for more than 1 month) or intermittently (for more than 3 months) due to any purpose other than classical rosacea. Patients with classical rosacea or those denying any history of TCS on the face were excluded.

The diagnosis was established on clinical basis. A special questionnaire was designated to include all clinical data like demographics, age of patient at onset of the disease, duration of the disease, symptoms and signs of the disease. Particular attention was given to corticosteroid therapy regarding the type, potency, duration of therapy, purpose and the source of its use. Medical photographic documentation of the patients were done using Nikon COOLPIX 8000 camera. Descriptive statistical analysis was done by using scientific calculator.

RESULTS:

One hundred ten patients with TCS abuse on the face were evaluated. Their ages ranged between 16 to 60 years with a mean age ± SD was 28.3± 6 years. The mean duration of their TCS use was 3.2± 2.1 years with a range of 0.25-12 years. The female to male ratio was 4.1:1 (89 women versus 21 men). The age groups between 21-30 and 31-40 years were the most affected population as seen in (table-1). The most frequently used TCS were the fluorinated preparations in the form of Betamethasone valerate 0.1 in 9(8%) patients and Clobetasole propionate 0.05 in10 (9%) patients or combination of them with or without other cosmocuticals (table-2).

The purposes behind TCS use were melasma in 40(36%) patients and a trial of achieving fairer facial look in 51(46%) patients as outlined in (table-3).

The majority of patients presented with a combination of features suggestive of steroid induced rosacea or perioral dermatitis as shown in (table-4). These clinical features were triggered by factors like sun or heat exposure, emotional stress, exercise and hair epilation by threading. The patients usually tried to relief their symptoms by application of cold water or TCS preparations.

The main sources of TCS prescription were beauticians (30 patients), Pharmacy advice (24patients) and medical plant shops (22 patients) as illustrated in (table-5).

Regarding the level of education, TCS abuse was more prevalent among patients with the lower educational status (table-6).

DISCUSSION:

Corticosteroids are not the panacea for all forms of dermatological problems but it is extremely valuable when their limitations are realized. When it used on the appropriate site and in proper concentration, TCS are the treatment of choice for a variety of chronic inflammatory cutaneous disorders like psoriasis [9]. However TCS should not be used on the face except for acute inflammatory conditions with the caution that it will be used for less than one month duration [10,11].

To our knowledge, this is the first report which presented evidence of improper use of TCS on the face in a cohort of Iraqi patients. Many reports from different parts of the world like India, China and Senegal had confirmed this phenomenon [12,13,14]. Our results agree with saraswat et al that steroid combinations (mostly of potent and very potent TCS) are the most commonly abused preparations on the face and the most common indication behind TCS misuse was to achieve more fairer and beautiful facial appearance [12].

This medical problem was more prevalent among young female, especially the low educated group, who had pigmentory problems like melasma. The social aspect of this problem can be appreciated when we know that most female population search for fairer look and beauty. Motivated by others experiences (friends and relatives) or beautician advices, those females will be so impressed by the dramatic effects of TCS on their faces initially. The easy intake of TCS (from pharmacies or herbal shops) and the magical rapid effects of TCS preparations encourage their victims to be addict on the use of these remedies. After variable period of time, the patient seek medical consultation because of the development of itchy or burning facial rash and reddens with remarkable hot flushes especially after hair epilation or sun exposure. At this point, the patient clearly had developed the adverse effects of the prolonged misuse of TCS on the facial skin like epidermal atrophy, telengectsia, papulopustular eruption and the rebound phenomenon (figure 1,2).In many instances, the examining dermatologist can observe the underlying condition like melasma admixed with the red face (figure-3) .

Unfortunately, patients usually not appreciate this therapeutically challenging condition and they

always ask for achieving again the beauty that they lost rather than to treat the present problem of TCS complications. The most important step in the treatment is to stop the cycle of the wrong continuous misuse of TCS on the face and replace them by prescription of emollients and tacrolimus in addition to the oral administration of doxycycline [15].rosacea including steroid-induced rosacea [180].

CONCLUSION:

TCS misuse on the face represent a medical and social problem commonly encountered in the dermatologist's practice. The uncontrolled use of these preparations must be controlled by the responsible health authorities.

Table 1: Distribution of age in patients using topical steroid on the face.

Age distribution (years)	number of patients (%)
11-20	9 (8%)
21-30	60 (54%)
31-40	35 (31%)
41-50	4 (3%)
51-60	2 (1.8%)

Table 2: Type of topical steroid molecules used by patients

Type of topical steroid used	Number of patients (%)
Clobetasole propionate	10 (9%)
Betamethasone valerate	9 (8%)
Both Clobetasol propionate and Betamethson valerate	21 (19%)
Mixed with cosmotics	59 (53%)
Mometason furoate	6 (5%)
Triamcinolon acetenoid	5 (4%)

Table 3: Underlying conditions for which TCS was used.

Purpose of topical steroid use	Number of patients (%)
Melasma	40(36%)
Fairness	51(46%)
Acne	9 (8%)
Freckles (blemishes)	5 (4%)
Actinic lichen planus	2 (1.8%)
Melasma	40(36%)

Table 4: Source of TCS prescription.

Clinical presentations	Number of patients (%)
Diffuse facial erythema (red face)	102(92.7%)
Intermittent facial hotness and edema	98(89%)
Dry scaly facial skin	69(62.7%)
Telangiectasia	59(53.6%)
Rebound phenomenon	95(86.3%)
Papulopustular lesions	33(30%)
Papular rash without pustules	45(41%)

Table 5: Clinical signs and symptoms caused by prolonged TCS misuse.

Source of prescription	Number of patients (%)
Beauty centers	30 (27%)
Self-prescription	20 (18%)
Pharmacist prescription	22 (20%)
Medical plants (herbal) shops	24 (21%)
Dermatologist	7 (6%)
Relatives	4 (3.6%)
Friends	3 (2.7%)

Table 6: Level of education of patients using prolong courses of TCS.

Level of education	Number of patients (%)
None educated	29 (26.3%)
Primary school level	49 (44.5%)
Secondary school level	25 (23.7%)
University level	7 (6.3%)

Figure 1: Prominent facial erythema with telengactsia in patient presented with hot flushes triggered by exposure to sun or heat after TCS misuse for 6 months.

Figure 2: Rebound phenomenon in form of papulopustular eruption with background of facial erythema after prolonged TCS misuse as a fairness cream.

Figure 3: Young woman has obvious melasma overshadowed by the facial erythema due to improper use of potent TCS on the face for 1 year duration.

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