

Original Article

ACNEIFORM ERUPTIONS: A HAZARD OF BEAUTY CREAMS

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ABSTRACT

Background: Adolescent and post adolescent females visit Dermatologist frequently with white comedones and inflamed papules, situated mainly on cheeks and forehead. Most of these patients admit to development of these lesions after the use of a beauty cream, applied to improve their complexion.

Objective: The objective of this study was to establish the incidence of skin lesions following the use of beauty creams, duration of use, frequency of application, distribution of lesions, types of lesions, and the source/advice about the use of beauty creams.

Materials & Methods: This is a prospective study which lasted four months and was conducted in the Dermatology OPD of Abbasi Shaheed Hospital (Karachi Medical & Dental College). The subjects underwent a thorough clinical history and dermatological examination regarding type and distribution of lesions. They were asked to identify the products (beauty creams and the steroid preparation) used. Those who could not identify the preparations were excluded from the study. All those patients who had any sort of lesions on the face prior to the use of the beauty cream were also excluded.

Results: Fifty patients were enrolled in the study which were divided into two groups group- A which used beauty cream alone (15 patients), and group -B which used beauty cream with an admixture of a steroid (35 patients). Acneiform eruptions were commonly seen in both groups 30% in group A and 70% in group B. The average duration of application was 3.7 months in group A (range 1-6 months) and 2 months in groups B (range 1-4months). Most subjects used single night time application. The predominant lesions were white comedones (100% in both groups) and inflamed papules (100% in group B and 53.3% in group A). Macular erythema and telangiectasia were (34.2% and 28.5% in-group B) and (26.6% and 0% in-group A). The cheeks and forehead were universally involved in all patients (100%) and chin in (17% group B and 26% in-group A). Majorities of the subjects belong to the middle and low-income families.

Conclusions: Acneiform eruption developed in 30% of subjects using beauty creams alone and 70% of subjects who mixed steroids in their beauty cream.

KEY WORDS: Beauty creams, Acneiform eruptions, Steroids.

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INTRODUCTION

Acne is a common problem and about one fifth of all patients visiting a Dermatologist is suffering from various types of acne. Common age is between 15 to 35 years¹. A study on the subject was previously conducted by us and published with random case collection². It is a polymorphic disease with comedones both black and white. Face is most commonly involved although few patients have involvement of chest and back³. Substances applied for beautification also produce acne e.g. beauty creams. In countries like USA, FDA approval is essential to ensure that they are non comedogenic /

non-allergenic prior to its promotion & sales but in Pakistan no such system exists. A number of beauty creams are available over the counter, which do not even describe its ingredients and most of them are not registered with any government agency.

Various substances used for grooming are well known to be comedogenic e.g. mustard oil, pomade etc.³ The objective of this prospective study was to study subjects who develop acne after use of beauty creams especially for the improvement of their complexion. We also wanted to know the incidence of skin lesions following the use of beauty creams, duration of use, frequency of application, distribution of lesions, types of lesions, and the source of advice who guided them about its use.

MATERIALS AND METHODS

This prospective study, was carried out in the Out Patient Department of Dermatology at Abbasi Shaheed Hospital (Karachi Medical & Dental college). Fifty subjects were selected and the study lasted about four months. All subjects underwent a thorough clinical history with special reference to the use of beauty creams, duration of application, gap between application and onset of lesions, types of beauty cream, used (alone or admixed with steroids) and the source who advised the use of a particular beauty cream. All subjects were examined by a single qualified dermatologist. They were asked to identify the beauty creams and steroid preparation they used. Those who failed to do so were excluded. All those patients who had any lesion on the face prior to the use of beauty creams were also excluded.

RESULT

All subjects were females. They belonged to middle or low-income families and had used a beauty cream with or without steroids, to look fairer.

The subjects were divided into two groups. Group A 15 patients (30%) used beauty cream alone while Group B 35 subjects (70%) used

beauty cream admixed with a steroid preparation. In Group A twelve subjects were inspired to use these beauty creams from TV and magazines while three were advised by friends and relatives. In-Group B ten subjects were prescribed these beauty creams by a beauty parlor and twenty-five were advised by friends and relatives. None of the subjects were advised to use these beauty creams by a doctor.

Average duration of application in both the groups was three months (range 1-6 months in-group A and 1-4 months in-group B). Onset of lesions occurred at an average of 3 months in-group A and 1.6 months in group B.

All subjects massaged the cream on the face as single night application. Types of lesion are listed in Table I and sites of lesions in Table II.

Gross oily skin was notable in 8 patients (53.5%) in-group A and 12 patients (34.2%) in-group B. Prominent blackheads characteristic of acne were not seen. All patients took a long time

Table - 1: Type of lesion

Type of Lesion	Group A 15/50 %	Group B 35/50 %
White comedones	100	100
Inflammatory papules	53.3	100
Macular erythema	26.6	34.2
Telangiectasia	0	28.5

Table - 2: Site of lesions

Site of lesion	Group A %	Group B %
Cheeks	100	100
Fore head	100	100
Chin	26	17
Others	-	-

to settle and showed residual mild hyperpigmentation on inflamed sites.

DISCUSSION

White skin complexion has been preferred since ancient times and different herbal and homemade remedies have been frequently used to look fairer. Such beauty conscious persons at times do consult a dermatologist or beautician for advice. Sometimes patients coming to a dermatologist with some other skin problem also seek advice regarding preparations to look fairer.

Beauty preparations at times have adverse effects on skin when applied e.g. acne venenata, pomade acne and acne cosmetica etc are well known entities produced by application of various grooming preparations and mustard oil etc.³

In this study all patients were females in the age range of 20 to 38 years. This is comparable with the study of Stern R S et al.² Comedones were usually present on cheeks, forehead and chin in descending order which is comparable with study reported by Khanna et al.³

In our study eruptions were more common (70%) in those subjects who added steroids to the beauty creams as opposed to those who used beauty creams alone (30%) as steroids are well known for their acneigenic potentials⁵. White comedones, inflammatory papules, erythematous macules and telangiectasia were the lesions found in descending order of frequency in this study as opposed to deep-seated nodules and white comedones reported by Khanna et al.³

Acne cosmetica was reported by Kligman and Mills in women of 20 yrs - 50 yrs age group after application of foundation creams randomly picked from cosmetic stores. Many brands were found to be comedogenic in rabbit ear model. Even expensive cosmetics turned out to be moderately comedogenic.⁶

These patients were performing massage application of this cream routinely at night, and

it's a known fact that rhythmical stroking of skin improves skin circulation, assists in keeping skin supple, prevents premature aging, and delays appearance of wrinkles. The concentration of 17-betamethasone velerate must have increased in skin via the massage technique which could have further disrupted the pilosebaceous unit and led to this eruption.

Majority of patient belong to middle or low-income group so they opted for a home made remedy, which was economical and easily available. All of them revealed that they were advised to use this cream by friends and relatives who were benefited with it without any side effects.

CONCLUSIONS

Beauty creams have a tendency to induce acne. This tendency increases if beauty creams are mixed with steroid preparations. Cheeks, forehead, chin are the common site of involvement. White comedones and inflammatory papules are the predominant lesions. It is recommended that all beauty creams available in the market, must be registered with Ministry of Health and their ingredients should be mentioned on the packs.

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