



Corticosteroids in Cosmetic Formulations in the Beauty Obsession World

Assist. Lect. Eman M. J.Falhy¹ , Lect. Zainab A. Abbood²

Abstract

Background: In recent years, corticosteroids have become popular in cosmetic formulations due to their anti-inflammatory and skin-lightening properties. This trend is driven by the growing beauty obsession in the modern world, where people are willing to try anything to enhance their appearance. The main objective of this study is to assess the use of corticosteroids in cosmetic formulations in the beauty obsession world. **Methods:** A descriptive (questionnaire-based) study involving 315 participants that were carried out from Jan.2023 to Mars 2023. Participants consented to participate after they were given full details of the study and its intended aims. Results: Majority of the females were in age group from 21_30 years old 54%. The doctor was main descriptor for cosmetic formulations 43%. the aim behind the use of cosmetic formulations, treatment of acne scar was in the top use of cosmetic formulations 33% and the least one was black spot 13%. The main side effects after the use of cosmetic formulation product was acne 28% and only 7% of users show no side effect and more than 54% were accepted to use steroid in cosmetic formulations while, 46% refused to use steroid as component in cosmetic preparation. **Conclusions:** As we notice in this study, the misuse of steroid in cosmetic formulations is common in Iraq, because of ignorance of the side effects or the obsession with beauty, and this is considered a health problem that must be studied in the community while providing appropriate solutions by increasing people's awareness about steroid and its negative effects.

Keywords: corticosteroids, cosmetic formulations

استخدام الكورتيكوستيرويدات في مستحضرات التجميل في عالم هاجس الجمال.

م.م. ايمان محمد جاسم¹ ، م.د. زينب علي عبود²

المستخلص

الخلفية والأهداف: في السنوات الأخيرة، الستيرويدات القشرية أصبحت أيضاً شائعة في مستحضرات التجميل بسبب مضادات الالتهاب وخصائص تفتيح البشرة. هذا الاتجاه مدفوع بهوس الجمال المتزايد في العالم الحديث ، حيث يرغب الناس في تجربة أي شيء لتحسين المظهر. كان الهدف الرئيسي من هذه الدراسة هو تقييم استخدام الكورتيكوستيرويدات في مستحضرات التجميل في عالم هاجس الجمال.

الطرق: دراسة وصفية (قائمة على الاستبيان) شملت 315 مشاركاً تم إجراؤها من يناير 2023 إلى مارس 2023. وافق المشاركون على المشاركة بعد إعطائهم التفاصيل الكاملة للدراسة وأهدافها المقصودة.

النتائج: كانت غالبية الإناث في الفئة العمرية من 21_30 سنة (54%). التحصيل الأكاديمي للمشاركين معظمهم طلاب جامعيين (46%) ، وكان الطبيب هو الوصف الرئيسي للتركيبات التجميلية (43%). الهدف

Affiliation of Authors

^{1,2} Al-Kut University College,
Department of Pharmacy, Iraq, Wasit,
52001

¹ pharmacist.eman2018@gmail.com

² Zainabaa87@yahoo.com

¹ Corresponding Author

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انتساب الباحثين

^{1,2} كلية الكوت الجامعة، العراق، واسط،
52001

¹ pharmacist.eman2018@gmail.com

² Zainabaa87@yahoo.com

¹ المؤلف المراسل

معلومات البحث

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من استخدام المستحضرات التجميلية ، كان علاج ندبات حب الشباب في مقدمة التركيبات التجميلية (33%) وأقلها استخدام البقع السوداء (13%). الأعراض الجانبية الرئيسية التي ظهرت بعد استخدام مستحضرات التجميل كانت حب الشباب (28%) و فقط (7%) من المستخدمين لم يظهروا أي آثار جانبية وأكثر من (54%) تم قبول استخدام الستيرويد في مستحضرات التجميل بينما تم قبول أكثر من (54%) من المستحضرات التجميلية. (46%) رفضوا استخدام الستيرويد ككون في مستحضرات التجميل.

الاستنتاجات: كما نلاحظ في هذه الدراسة أن سوء استخدام الستيرويد في مستحضرات التجميل منتشر في العراق ، بسبب الجهل بآثاره الجانبية أو بسبب الهوس بالجمال ، وهذا يعتبر مشكلة صحية يجب دراستها في المجتمع. مع توفير الحلول المناسبة من خلال زيادة وعي الناس بالستيرويد وآثاره السلبية.

الكلمات المفتاحية: الستيرويدات القشرية، مستحضرات التجميل

Introduction

Corticosteroids are a class of steroid hormones that are commonly used in medicine to reduce inflammation and treat various conditions, such as asthma, arthritis, and skin disorders. [1] However, in the recent years, corticosteroids have also become popular in cosmetic formulations due to their anti-inflammatory and skin-lightening properties.[2] This trend is driven by the growing beauty obsession in the modern world, where people are willing to try anything to enhance their appearance[3]. The belief that a fair complexion is a synonym for beauty and the widespread skin-lightening practices that result comes from a complex interweaving of historical, cultural, social, psychological, and economic factors. Greek women painted their faces with white lead (lead carbonate, very toxic), and Roman women adopted this practice using the same compound, which they called 'cerussa', as described by Pliny the Elder. Cleopatra (69–30 BC), queen of the Ptolemaic kingdom of Egypt, regularly bathed in acidic ass's milk [4]

While these formulations may offer short-term benefits, Prolonged use of corticosteroid-containing cosmetic formulations can cause a variety of side effects, including thinning of the skin, stretch marks, acne, and increased hair growth.

However, the use of corticosteroids in cosmetic formulations is not regulated, This lack of oversight has led to the proliferation of dangerous products that can cause serious harm to consumers. And many products contain high concentrations of these hormones, which can lead to serious side effects when used for extended periods.[5]

In some cases, corticosteroids can also be absorbed into the bloodstream, leading to systemic side effects such as weight gain, mood changes, and decreased immune function.

To protect themselves from these risks, consumers should avoid using any cosmetic formulations that contain corticosteroids or other unregulated ingredients and instead for products that have been tested and approved by regulatory agencies.

Fortunately, there are many safe and effective alternatives to corticosteroid-containing cosmetics. For example, products containing natural ingredients such as aloe vera, chamomile, and green tea can help soothe inflamed skin without causing harmful side effects.

Consumers can also consult with a dermatologist to identify the underlying causes of their skin issues and develop a customized treatment plan that addresses their specific needs.

In this study, I will argue that the use of corticosteroids in cosmetic formulations is dangerous and unethical, as it can have serious

side effects and long-term consequences. I will support this argument by examining the evidence from various studies, reports, and regulations.

Methods of Research Design & Data Collection:

A descriptive (questionnaire-based) study involving 315 participants that were carried out from January 2023 to Mars 2023. The Participants were selected from Google Forms and the students of Alkut University College/Pharmacy Department were also involved. Participants consented to participate after they were given full details of the study and its intended aims. All participants were made aware that this study is for research purposes only and their participation was voluntary. They were not asked for their names or contact information, ensuring the privacy of survey respondents. The questionnaire was designed in Arabic and was revised to be suitable for the general population. The questionnaire used in the current study was developed to evaluate the

participant's Knowledge, Attitude, and Practice regarding the acknowledgment of and misuse of topical corticosteroids in cosmetic formulations for the face in Iraqi Women. Inclusion Criteria: We included females aged 12 to 50 Exclusion Criteria: Patients who were excluded from the study for one or all of the following reasons: 1)Individuals who had pre-existing diseases that could cause skin changes similar to the characteristic findings associated with TCS abuse, including endocrine disorders(thyroid disorders, polycystic ovaries, and Cushing's Syndrome) 2)Individuals who had no consent to complete the questionnaire; 3)Women who were pregnant or lactating

Result

In this study 315 female were enrolled after responded to the questionnaire. The majority of the females were in age group from 21_30 years old (54%) followed by age group 12_20 years old (18) than other age groups as shown in Figure (1)

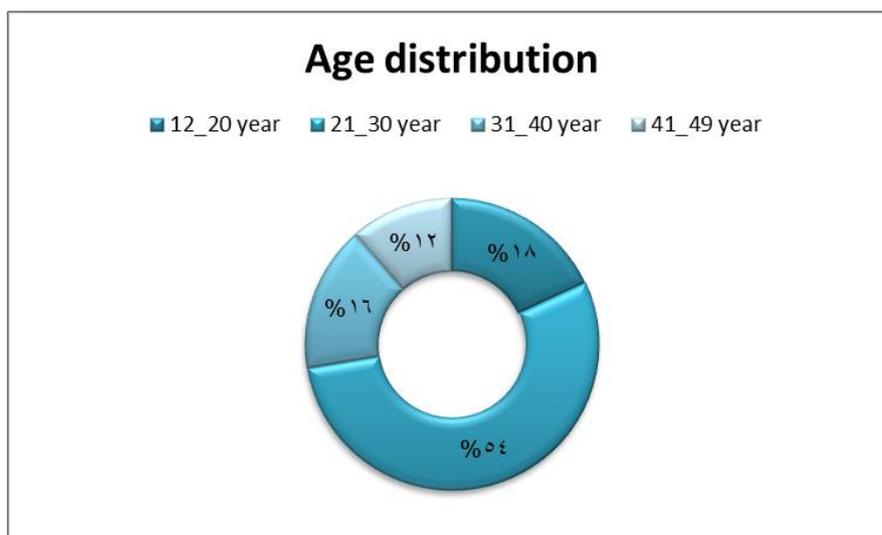


Figure (1): Age Distribution

Academic achievement of the participators, most of them were college students (46%) followed by high school (26%) as shown in Figure (2).

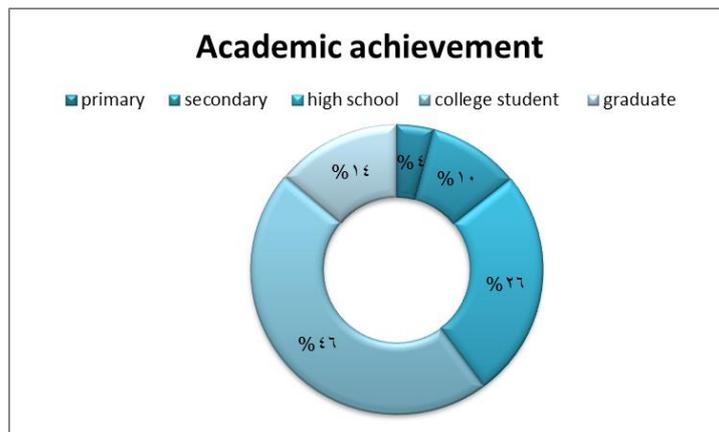


Figure (2) : Academic Achievement

The doctor was main descriptor for cosmetic formulations (43%), the pharmacist has the second rank in cosmetic formulation description (35%) while, self-use of mixture was (22%) as illustrated in Figure (3).

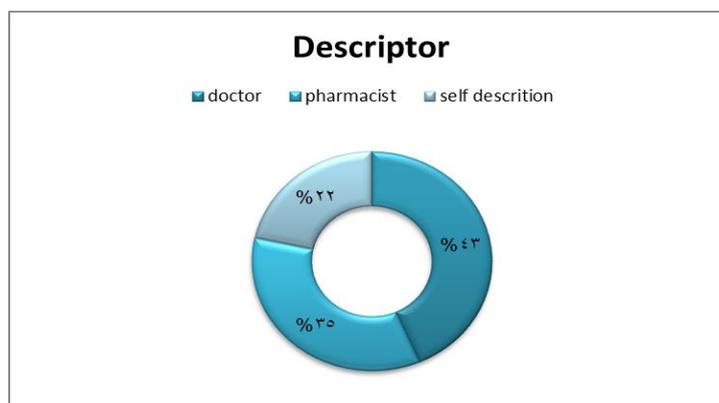


Figure (3) : Description

Figure (4) shows the aim behind the use of cosmetic formulations, treatment of acne scar was in the top use of cosmetic formulations (33%) than pigmentation treatment (31%) where other use was (23%) and the least one was black spot (13%) .

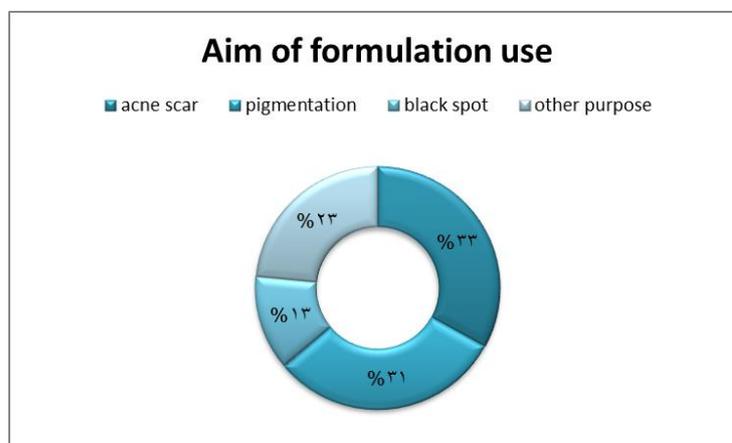


Figure (4): Aim of Formulation Use

The main side effects appear after the use of cosmetic formulation product was acne (28%) and only (7%) of users shows no side effect after cosmetic formulation use Figure (5) illustrated the percentage.

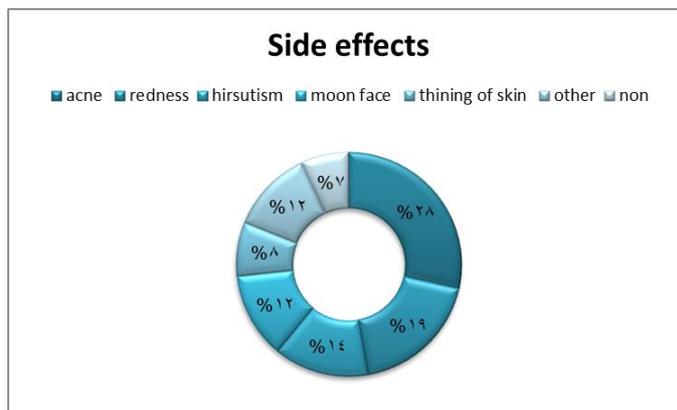


Figure (5): Side Effect of Cosmetic Formulation Products

According to the data in figure (6) more than (54%) were accepted to use steroid in cosmetic formulations while (46%) refused to use steroid as component in cosmetic preparation.

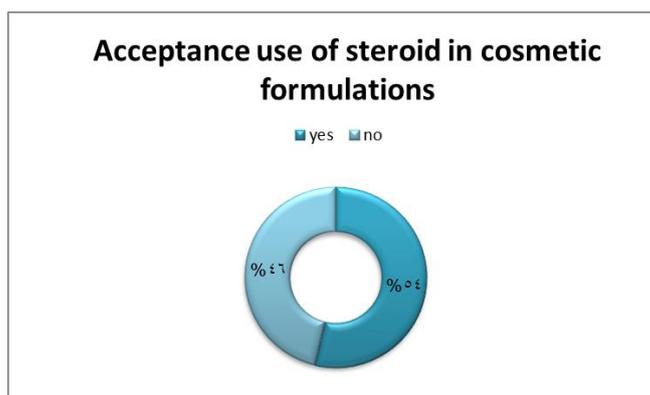


Figure (6): Acceptance Use of Steroid in Cosmetic Formulations

Discussion

In our present time in obsession with search for perfection and beauty, most of women try many cosmetic formulations to improve their skin to become more beautiful, brighter and younger, but most of these formulations have many side effects that are harmful to their skin after period of use or after stopping it because most of these formulations do contain steroid as one of its components.

Through this study, we shed the light on the use of these formulations and their most common side effects also to evaluate women’s knowledge about steroid effects and side effects.

Steroids are important medications in the treatment of the skin conditions, but their abuse can lead to skin addiction or side effects. Their use should be on the advice of a dermatologist, especially in the case of strong preparations. The public use of steroids without medical supervision or for reasons

not medically recommended and result in many unwanted effects.

During this study, we found that most of the users of these cosmetic formulations are the age of groups from 20 years to 30 years, and that most of them are college students and this is identical to what the Saudi Study found in the effect of the cosmetic formulations on face among university students[6], this is also documented by a second study conducted in Pakistan [7] which means that women in their twenties are the vast majority who are looking for beauty and this is probably because of the uproar that has occurred recently about perfection and beauty.

The motivations to use such cosmetic formulation were like reasons described in different society . In Pakistan, patients use steroids on the face were examined. The most widely recognized reason behind the use of cosmetic formulations that contain steroids were as acne scar and pigmentation treatment. Most patients knew nothing about results of effective steroids [8]. In other Saudi Arabia study, which conducted on 720 female use cosmetic formulation to treat their skin condition revealed the same results with this study[9]. Most of women, in this study, used cosmetic formulations relied on doctor's prescription and some of them relied on the pharmacist to take the cosmetic formulations , while other women relied on personal judgements in diagnosing their condition and prescribing treatment by using online sources[10][11].

As for the side effects, it was like the studies that were done in Madagascar, India and Ethiopia [12][13][14] with difference in the incidence these side effects, in this study, the most common side effect was acne followed by redness , hirsutism ,

moon face and thinning of skin while some women did not show any side effect .

More than fifty percent of women answered 'yes' to the question: Do you accept use steroid in cosmetic formulations? While, the rest of them refused steroid use in cosmetic formulation and this is an evidence of women's obsession with their appearance and the search for perfection due to the recent uproar and the propagation of funded advertisements to spread this phenomenon, which made women think of beauty at the expense of their health and the side effects that occur due to the misuse of these ingredients.

Conclusions

As we notice in this study, the misuse of steroid in cosmetic formulations is common in Iraq, because of ignorance of the side effects or because of the obsession with beauty, and this is considered as a health problem that must be studied in the community while, providing appropriate solutions by increasing people's awareness about steroid and its negative effects.

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