Journal of Medical and Health Sciences

[ISSN 2958-1079]
Volume: 01 Issue: 01 | Aug-2022

JMHS

SIDE EFFECTS ASSOCIATED WITH MISUSE OF TOPICAL CORTICOSTEROIDS (TCS) SOLD OVER THE COUNTER IN LITEIN TOWN, KERICHO COUNTY

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Cite this article in APA
Obat, R., & Cheruiyot, G. (2022). Side effects associated with misuse of topical corticosteroids (tcs) sold over the counter in Litein town, Kericho County. *Journal of medical and health sciences,* 1(1), 41-46. https://doi.org/10.51317/jmhs.v2i1.230

OPEN ACCESS
A publication of Editon Consortium Publishing (online)

Article history
Received: 25.06.2022
Accepted: 28.07.2022
Published: 29.08.2022

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Abstract
The aim of the study was to determine the side effects associated with the misuse of topical corticosteroids in Litein Town, Kericho County. A convenient random sample of 57 respondents was selected for the study. Self-developed structured questionnaire was used in data collection. In this study, figures were used to present data. The latest version of the SPSS data analysis tool was used to derive frequencies and percentages from the demographic information provided the use of corticosteroids and side effects associated with the use of corticosteroids. Common side effects related to the misuse of TCS include reduced immunity, change in skin pigmentation, thinning of skin, itching and abnormal drying. TCS are readily bought from community pharmacies for treatment and cosmetic purposes. Various brands are available in the market, with clozole cream as the most commonly known. The majority buy TCS for treatment purposes, while others for cosmetic purposes. Common side effects include drying, itching, change in pigmentation and dryness. This study recommends that necessary measures are to be put in place to improve the outcome of patients undergoing treatment for dermatological conditions using TCS through occasional monitoring of the patient. In addition, formulating scientists should work on formulating TCS with good anti-inflammatory effects and minimal adverse effects. This will ensure good compliance among patients.

Key terms: Topical corticosteroids, over the counter, misuse, side effects, available.

1.0 INTRODUCTION

Topical corticosteroids (TCS) have become extensively bought over the counter (OTC) in the past decades for the management of dermatologic conditions such as atopic dermatitis and inflammatory disorders of the skin due to their availability and lack of proper regulations and control. These drugs are either prescribed as monotherapy or in combination with other drugs. They are commonly used as an anti-inflammatory agent. In most circumstances, when buying OTC, most patients are unaware of the correct indication, dosage, and precaution/instructions to be taken when applying and lack adequate knowledge on TCS. This has resulted in the misuse of topical corticosteroids and their side effects, some being complex to treat, like neoplasm. Common side effects include hyperpigmentation, thinning of the skin, irritation at the application site and predisposition to other skin diseases (Yoshimura et al., 2000). Although TCS play a critical role in the treatment of various skin conditions, the purchase of these medicines, especially OTC without prescription, proper knowledge of indication, dosing and knowledge of side effects have led to their misuse. Misuse of TCS has attributed to side effects and complications such as neoplasm, Hyperpigmentation, hypopigmentation and skin irritation. In addition, lack of legal regulation surrounding the purchase of TCS has led to their misuse in terms of skin lightening, which have long time effect on the destruction of skin melanin. In Litein, the general population have ready access to TCS.

2.0 LITERATURE REVIEW

TCS are dermatological products applied on the skin for the management of skin conditions, including allergic dermatitis, psoriasis, eczema and inflammatory skin lesions. TCS are available as prescription and non-prescription agents and hence available as OTC medication. OTC and TCS bought by patients are mostly self-prescribed and dosed (Andersen et al., 2019). Like any other medication, they have side effects such as itching, change in pigmentation, acne eruptions, steroid rosacea, hypertrichosis, pruritus, telangiectasia, photosensitivity, steroid-dependent face and erythema, weight gain, immunosupression and dryness of the skin. Unfortunately, the majority of the patients are unaware of these side effects. These side effects arise from misuse of TCS as a result of improper dosing, wrong self-prescription (e.g. for scabies and tinea), lack of knowledge on instruction on how to use and lack of proper regulation on TCS by medical boards (Dhar et al., 2014). Therefore, creating awareness for these patients could help prevents some side effects. Dey (2014) argues that India is among those countries where misuse is rampant, especially among young women between the ages of 10-29 years, with skin lightening being the common indication.

3.0 METHODS

The population targeted in this study was strictly the residents of Litein Town, Kericho County, above 18 years old, who visited community pharmacy and have used TCS. Both males and females were included in the study. A convenient random sample of 57 respondents was selected for the study. Eleven-community pharmacy in Litein town was used as the sampling point. The cross-sectional descriptive study was done study's parameters. Self-developed structured questionnaire was used in data collection. The questionnaire contained demographic information, information about the use of corticosteroids and side effects associated with the use of corticosteroids.

4.0 RESULTS AND DISCUSSION

The males and females who took part in this study was 42.1 per cent and 57.9 per cent respectively. The respondents who obtained medicine by prescription were 42.5 per cent of respondents, while 57.5 per cent obtained OTC. The respondents who applied for TCS in less than 10 days were 63.6 per cent while 34.6 per cent of respondents applied more than 10 days. The study found out that 72.7 per cent of respondents applied twice daily, while 27.3 per cent applied once daily. The table below indicates that 93.2 per cent of respondents were given instructions, while 6.8 per cent were not given instructions. The study established that 72.7 per cent of respondents were given directions for the use of TCs, while 27.3 per cent were not.

Table 1: Topical Corticosteroids TCs Usage

INFORMATION	PERCENTAGE
Demographic information	Male 42.1% Female 57.9%
Sources of TCs	Prescription 42. 5% OTC 57.5%
Duration of TCs application	More than 10days 34.6% Less than 10 days 63.6%
Frequency of applying TCs	Twice daily 72.7% Once daily 27.3%
Instruction on use of TCs	Given 93.2% Not given 6.8%

The results from the figure below indicates that 80 per cent of the patients purchased TCS for treatment reasons, 17.5 per cent purchased it for cosmetic purposes, while 3.50 per cent uses it for other purposes.

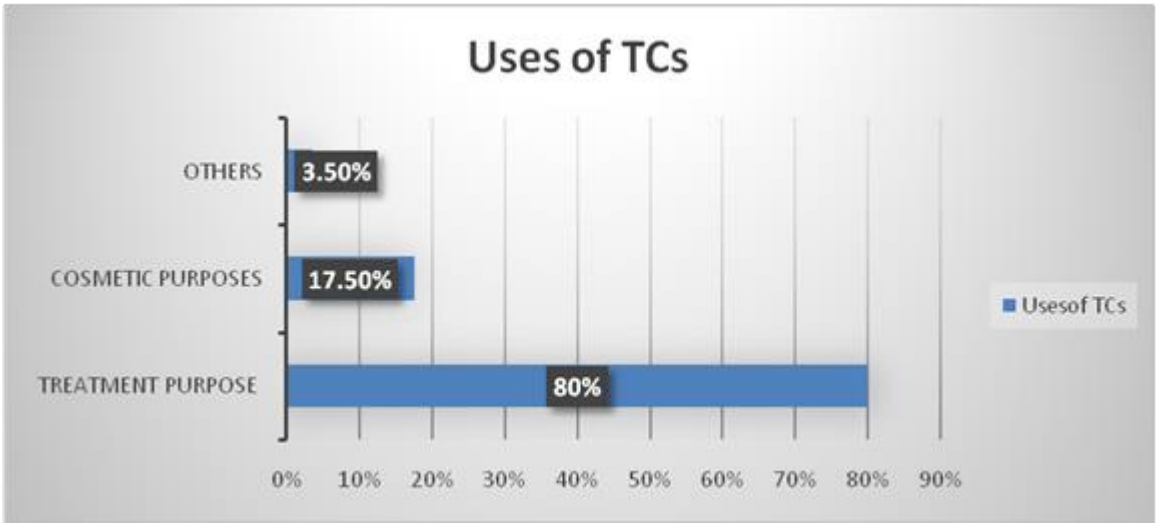

Figure 1: TCs Usage

Clozole cream was the most commonly misused TCS (18.32%), then mediven (17%), elyvate cream (15%), betason cream (13.09%), clotrine-B cream (12.4%), clob-B cream and bulkot-B cream at (11.0%), dermovate cream and betamed cream at (1%), hydrocortisone cream, betnovate cream, leaovate cream, becoming cream and diprosone cream were at 0.5 per cent.

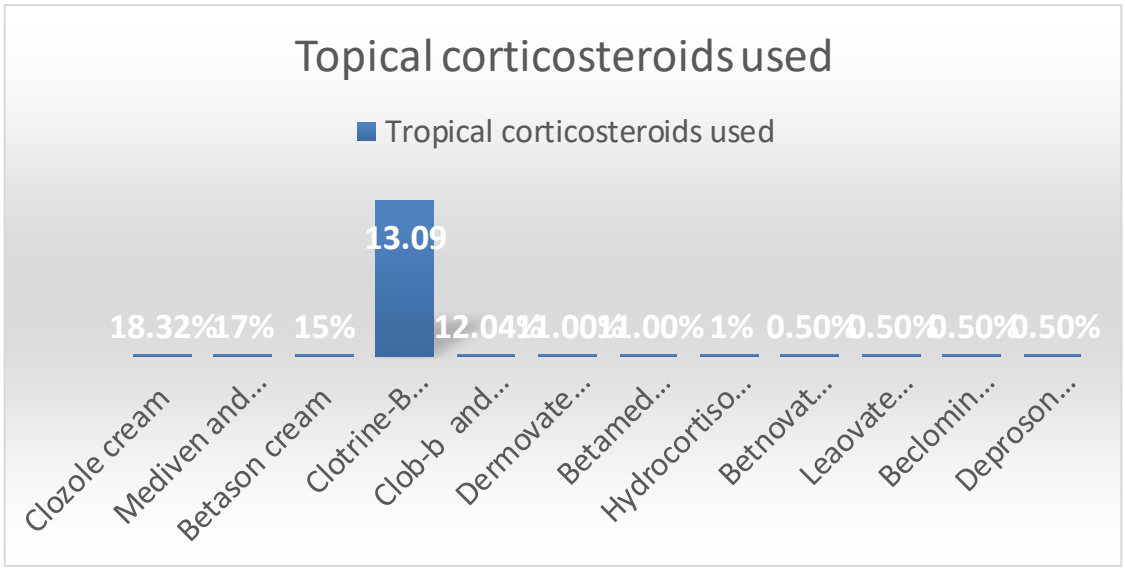

Figure 2: Topical Corticosteroids

According to figure 3 below 72.5 per cent of the respondents suffered side effects of TCs and they were unaware, while 27.5 per cent of the respondents suffered no side effects.

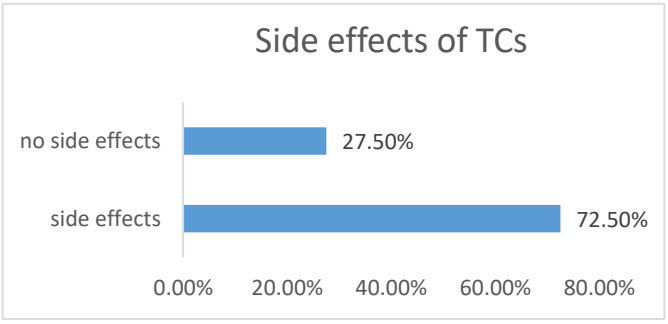

Figure 3: Side Effects of TCs

In addition, 60 per cent suffered skin lightening, 20 per cent suffered skin thinning, 7.5 per cent suffered hyperpigmentation, and 2.5 per cent suffered rash, itching and skin dryness and irritation. Moreover, 72.7 per cent of respondents sought treatment or advice for the side effects suffered. 56.8 per cent of those who suffered the side effects affected them negatively, 27.3 per cent took the side effects positively, while 15.9 per cent had no change in perception for TCs. The study found out that 36.4 per cent of those who suffered the side effects blamed the pharmacist, 14 per cent blamed their friends, and 39 per cent blamed no one, while the rest and 11.4 per cent blamed family, dermatologists and pathologists.

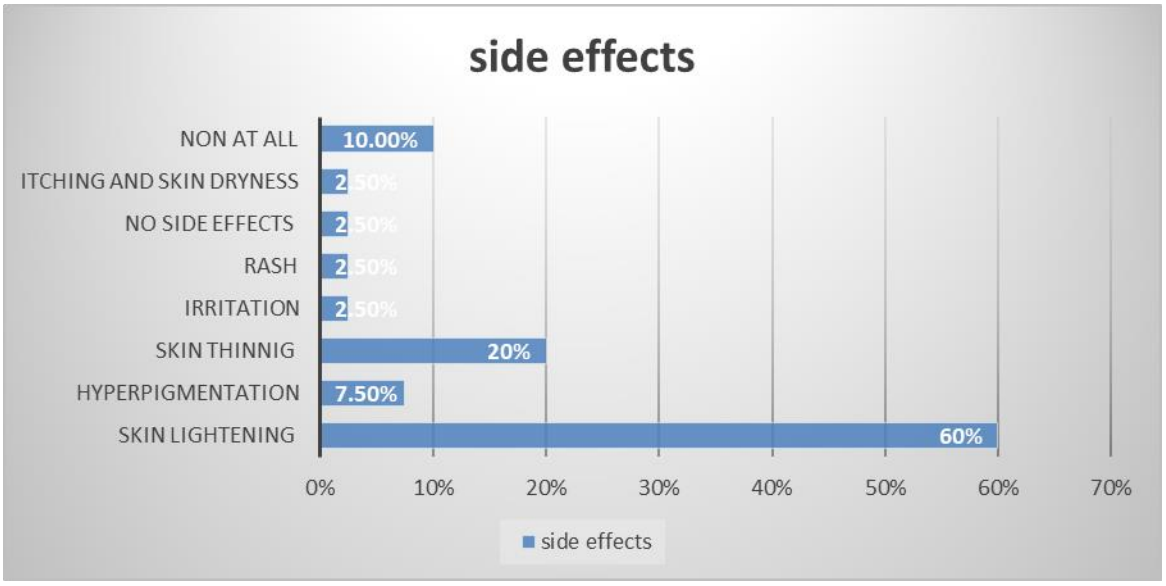

Figure 4: Side Effects

5.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions: TCS are readily bought from community pharmacies for treatment and cosmetic purposes. Due to their availability, residents of Litein easily get asses to them and misuse them. Some are aware, and others are unaware of the side effects associated with the use of TCS. Various brands are available in the market, with clozole cream as the most commonly known. The majority buy TCS for treatment purposes, while others for cosmetic purposes. Common side effects include drying, itching, change in pigmentation and dryness. Therefore, patient TCS monitoring, community education on TCS use and side effects and

legal regulation on the use of TCS are vital in order to minimise misuse that may bring about side effects to improve quality of life.

Recommendations: This study recommends that necessary measures are to be put in place to improve the outcome of patients undergoing treatment for dermatological conditions using TCS through occasional monitoring of the patient. Also, health care providers, especially community pharmacists, should not dispense TCS with proper prescriptions from physicians. In doing so, they will minimise the use of TCS since it will be purchased for valid reasons and in the proper manner and used in the correct manner. Since the purchase of TCS over the counter is supported by the non-existence of clear guidelines and legal issues regarding their prescription, patients resorts to subjective use. This study points out this phenomenon and brings it to the attention of various organisations concerned with putting these laws in place. In addition, formulating scientists should work on formulating TCS with good anti-inflammatory effects and minimal adverse effects. This will ensure good compliance among patients.

6.0 REFERENCES

1. Andersen, Y., Egeberg, A., Ban, L., Gran, S., Williams, H., & Francis, N. (2019). Association between Topical Corticosteroid Use and Type 2 Diabetes in Two European Population-Based Adult Cohorts. *Diabetes Care*, 42(6), 1095-1103. https://doi.org/10.2337/dc18-2158.
2. Dey, V. (2014). Misuse of topical corticosteroids: A clinical study of adverse effects. *Indian Dermatology Online Journal*, *5*(4), 436. https://doi.org/10.4103/2229-5178.142486.
3. Dhar, S., Seth, J., & Parikh, D. (2014). Systemic side effects of topical corticosteroids. *Indian Journal of Dermatology*, 59(5), 460. https://doi.org/10.4103/0019-5154.139874.
4. Yoshimura, K., Harii, K., Aoyama, T., & Iga, T. (2000). Experience with a Strong Bleaching Treatment for Skin Hyperpigmentation in Orientals. *Plastic & Reconstructive Surgery*, *105*(3), 1097-1108. https://doi.org/10.1097/00006534-200003000-00040.