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A COMPARATIVE STUDY ON THE SAFETY RISKS AND FINANCIAL IMPACT OF TOPICAL STEROID MISUSE AMONG PATIENTS WHO SELF-MEDICATE VERSUS THOSE USING DOCTOR-PRESCRIBED TREATMENTS

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Introduction Topical corticosteroids are presently the main medications used to address various dermatological conditions. However, they are often misapplied for a range of issues including acne, pigmentation, fungal infections, and itching, frequently being utilized as cosmetic products or skin creams for any form of rash. This research aims to evaluate the extent of adverse effects between groups of patients who have been prescribed these medications by practitioners and those who have self-prescribed. Furthermore, this study also examines the demographic and educational backgrounds of patients in whom topical steroids are most commonly misused.
Materials and Methods: This cross-sectional study was conducted in the GMC Ratlam. A total of 100 patients were enrolled after getting the informed consent for the study, and assessed based on their topical steroid misuse and their adverse effects. Results: The present study showed that steroid misuse was most common between 20 and 30 years of age group patients with low educational status. The most commonly applied steroid was clobetasol followed by mometasone and steroid abuse was more common in self-prescribed patients than physician-prescribed patients. The economic burden was more in the case of people using steroid cream because they have to be applied over a large body surface area. Incidence of adverse effects was observed more in self-prescribed patients and with low educational status.
Conclusion: This study highlights the fact that self-medication increases the incidence of adverse reactions and economic burden on the patients. Continuous education of patients and strict regulations regarding over-the-counter sales of steroids may help decrease the incidence of steroid misuse.

Keywords: Topical corticosteroids, misuse, dermatoses, self-medication

Introduction

Topical corticosteroids [TCS] have greatly contributed to the dermatologist's ability to effectively treat several difficult dermatoses**[1].** These are available in the form of creams, ointments, gels, solution **[2].** The common indications are conditions such as psoriasis, lichen planus, eczema, lichen simplex **[3].** Apart from their anti-inflammatory action they also have other clinically valuable properties like antipruritic, immunosuppresive properties **[4].** Therefore, they are misused for various indications such as acne, pigmentation, fungal infection. The problem of adverse effects has, however, become a huge concern due to the rigorous misuse of topical corticosteriods .There is a tendency to reuse old prescriptions for a recurrent or new rash. Prescription sharing with relatives and friends on the presumption that similar looking skin problems can be self-treated by simple prescription copying is increasing. Apart from producing undesirable adverse effects, inappropriate TCS use can mask clinical signs of underlying diseases causing diagnostic dilemmas and delays in treatment. TCS abuse becoming a great cause of concern for their dramatic clinical effects, for cosmetic purposes, easy availability of drug, inadequate information of adverse effects. Many studies are published in literature focusing on a similar problem but to our knowledge, none of them have compared the adverse events occurring in patients who are using topical steroids on their own or have been prescribed by practitioners The present study aims to compare the magnitude of adverse events between practitioner-prescribed and self prescribed groups of patients and to focus on the demographic and educational status of patients where topical steroids are most widely misused.

Methodology

This cross-sectional study was conducted in the OPD OF GMC Ratlam in collaboration with the Department of Community Medicine the study duration was of 4 months starting from April 2025 to August 2025. A total of 100 patients were enrolled who had satisfied the inclusion and exclusion criteria after getting the informed consent. They were assessed based on their topical steroid misuse and their adverse effects.

Inclusion Criteria

- Patients of the age group between 10 and 65 years.
- Patients of both sexes (males and females).
- Patients using topical steroids for a minimum of four weeks period, either continuously or intermittently.

Exclusion Criteria

Patients with comorbidities that can cause changes similar to adverse effects of topical steroids, e.g., polycystic ovarian syndromechronic alcoholics

Patients who have consumed oral steroids in the last one month or continuing.

A pre designed semi structured questionnaire was given to all the patients and details regarding their demographic profile, complaints, adverse event description, educational profile, economic burden due to steroid misuse, and other important details were obtained . The data collected was further analyzed using required statistical methods. All statistical analysis was performed by using JAMOVI . Categorical variables were described by frequency and percentage, whereas continuous variables were presented by median and interquartile range (IQR). The association among all the categorical variables was accessed by the chi-square test. Statistical significance was defined by $p < .05$

RESULT

A total of 100 patients including 56 females (56%) and 44 males (44%) were recruited in the study. The patient's baseline characteristics are summarized in Table 1. The median age was 28 years (IQR: 26–37) and the median average duration of steroid use was four months (IQR: 2–6.35). It was observed that clobetasol was applied by 52 patients (52%), mometasone by 27 patients (27%), beclomethasone by 21 patients (21%). It was seen that 38% of patients had tinea corporis. Atrophy

was seen in 10% of patients while 8 of patients had acne from eruptions and hypopigmentation as adverse effects.

A total of 76 patients (76%) were taking medicine without any formal prescription while 24 patients (24%) were taking medicine on advice of the registered medical practitioner. Out of self-prescribed patients, 38 patinets (50%) were taking the drug on the local chemist's advice, 30 patients (39.4%) took the drug on advice from their friends or family and the rest 8 patients (10.6%) had taken the drug on their own. Most of the patients who are taking steroids without the advice of the physician belong to higher educational status and suffer from a greater incidence of adverse drug reactions (ADR) as compared to the physician prescribed group, which is statistically significant ($p < 0.05$). Economic burden was more in patients using steroid only and steroid plus antifungal ointment.

DISCUSSION

Topical steroids drugs Used for autoimmune and dermatological conditions because they have immunosuppressive and anti inflammatory actions. However, reports suggest that these drugs are often misused. Patients reported various adverse effects such as atrophy. These adverse effects are commonly seen in off-label use or self-medication of topical steroids. Sometimes, the adverse effects could be more serious and cause systemic effects due to hypothalamo-pituitary axis suppression. Most of the patients get guided by their relatives, pharmacy store sellers, or the advertisements coming on television and start using topical steroids without proper knowledge about the indications and adverse reactions.

The present study was conducted in GMC Ratlam . 100 patients were enrolled in the study, out of which 56 were female and 44 were male. The median age was 28 years and the median average duration of steroid use was four months. Most topical steroid abusers in our study were between 20 and 30 years of age which is similar to some studies done in Africa [. It was observed that clobetasol was applied by 52 patients (52%), mometasone by 27 patients (27%), beclomethasone by 21 patients (21%). in the present study findings clobetasol was the most common steroid that was abused by the patients for various indications similar findings were noted bye Meena et al **[6].**The most common indication of steroid use was tinea corporis similar findings were noted by Inakanti et al **[7].** The rampant use of steroid and steroid plus formulations has also increased the economic burden amongst the patients. This financial burden also poses a psychosocial impact on the patients. In this study it was observed that economic burden was more in the case of people using steroid cream only because they have to be applied over a large body surface area, and on the other hand, it reoccurs more frequently than the treatment used for pigmentation. More multicenter studies with greater sample sizes are required to derive correct data regarding the financial impact of the use of these topical steroids.

Conclusion

The present study showed that steroid abuse was more common in self-prescribed patients than in physician-prescribed patients. Self-medication increases the incidence of adverse effects and economic burden on the patients. Continuous education of patients by clinicians and strict regulations regarding the OTC sale of these topical formulations may help decrease the incidence of steroid abuse.

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Informed Consent

Patients included in the study have given their consent to participate in the study.

Conflict of Intrest -Nil

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