Journal of Rare Cardiovascular Diseases
ISSN: 2299-3711 (Print) | e-ISSN: 2300-5505 (Online)
www.jrcd.eu
RESEARCH ARTICLE

CLINICAL PATTERN OF TOPICAL CORTICOSTEROID MODIFIED DERMATOPHYTOSIS: A CROSS-SECTIONAL STUDY FROM A TERTIARY CARE HOSPITAL

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Article History
Received: 10.09.2025
Revised: 30.10.2025
Accepted: 22.10.2025
Published: 29.11.2025

Abstract: ***Background***: Topical corticosteroid-modified dermatophytosis has emerged as a significant public health concern in India, with widespread misuse of irrational combination steroid preparations leading to altered clinical presentations and treatment challenges. This study aims to analyse the demographic characteristics, medication usage patterns, and adverse effects associated with topical corticosteroid-modified dermatophytosis in a tertiary care setting. ***Methods:*** A cross-sectional study was conducted among 175 patients who had been clinically diagnosed with dermatophytosis and had used topical corticosteroids. Data on demographic characteristics, distribution of the lesions, steroid usage patterns, sources of medication, and associated adverse effects were collected and analysed. ***Results:*** Most of the study population was between 20 - 40 years of age (46.3%), with female preponderance (54.3%). Multiple site involvement was more common (64.5%), with Tinea corporis + cruris being the most frequent (26.8%). Super-high potency steroids were used by 46.9% of participants, primarily in combination formulations (59.8%).Alarmingly 87.4% obtained steroids over-the-counter without a prescription, primarily from healthcare workers (35.3%) and pharmacists (32%). The most frequently used combination was ICSP 8 (Clobetasol + Neomycin + Ketoconazole) in 19.0% of patients. Hypopigmentation was the most commonly reported adverse effect (24%) followed by acneiform eruptions (20.6%) and striae (18.9%). ***Conclusion:*** This study demonstrates concerning patterns of steroid misuse in dermatophytosis, with high-potency combination preparations readily accessible without prescription oversight. The epidemic of topical corticosteroid-modified dermatophytosis requires immediate regulatory intervention and comprehensive educational initiatives to address this growing clinical challenge.

Keywords: Dermatophytosis, Topical corticosteroids, Tinea incognito, Adverse effects, Irrational combination.

INTRODUCTION

Dermatophytosis is one of the most prevalent superficial fungal infections in developing countries like India. The emergence of chronic, recurrent, treatment-resistant dermatophytosis has been attributed to rampant misuse of topical corticosteroids [1,2].

The inappropriate utilization of these pharmaceutical preparations has led to altered clinical presentations, enhanced chronicity, and numerous adverse effects, thereby complicating both diagnosis and therapeutic interventions [3].Contributing factors encompass self-medication behaviours, inadequate prescribing practices, aggressive marketing of combination preparations, and insufficient regulatory oversight [4-6].

Despite increasing recognition, comprehensive studies examining corticosteroid-modified dermatophytosis patterns remain limited. Understanding these patterns is crucial for developing effective intervention strategies and improving patient outcomes.

This study aims to provide detailed insights into the demographic characteristics, medication usage patterns, and adverse effects associated with topical corticosteroid-modified dermatophytosis in a tertiary care setting.

MATERIAL AND METHODS

Study Design and Setting - A cross-sectional observational study including 175 patients, was conducted at the Department of Dermatology in a tertiary care hospital. Ethics Committee approval was taken for the study protocol. Informed consent was obtained from all participants. Patients were recruited over a period of 6 months.

Inclusion criteria:

- Patients of age >18 presenting with dermatophytosis who have used or are using topical corticosteroids for the same, at the time of presentation.
- Patients providing voluntary and informed consent

Exclusion criteria :

- Patient unwilling to give consent to participate in the study. Patient unwilling or lacks cooperation.
- Patient using topical or systemic corticosteroids already for any other pre-existing conditions within 6 months duration.

Data Collection

- Demographic characteristics (age, gender, socioeconomic status)

- Clinical presentation (site of involvement, number of lesions)
- Details of topical corticosteroid use (type, potency, duration, frequency)
- Source of medication procurement
- Associated adverse effects

Socioeconomic status was classified according to the modified B.G. Prasad's classification. Steroid potency was categorized as low, medium, high, and super-high potency according to US standard classification.

Statistical Analysis

Data were analysed using SPSS version 25.0. Descriptive statistics were used to summarize demographic characteristics and clinical patterns. Categorical variables were expressed as frequencies and percentages.

RESULTS AND OBSERVATIONS:

The study included 175 patients with topical corticosteroid-modified dermatophytosis. The most common age group was 20-40 years, comprising 81 patients (46.3%), followed closely by the 40-60 year group with 70 patients (40%). The representation of other age groups (18-20 years) and elderly (>60 years) was comparatively low at 9 (5.1%) and 15 (8.6%) respectively. Females comprised a slightly higher proportion of 95 patients (54.3%) compared to males at 80 (45.7%). Regarding socioeconomic status, the majority of participants belonged to B.G Prasad's classification, Class III (n=61, 34.9%), followed by Class II (n=44, 25.1%), Class IV (n=36, 20.6%) and Class I (n=34, 19.4%) indicating that the condition predominantly affected middle and lower socioeconomic groups. The details were shown in table 1.

Table 2 presents the distribution of lesion sites and lesion counts among the 175 study participants. The most commonly observed combination was Tinea corporis with Tinea cruris, affecting 47 patients , 26.8% of the participants, and this group also showed a higher frequency of extensive lesions, with 43.8% of cases having 10–20 lesions and 46.1% having more than 20 lesions. In contrast, isolated forms such as Tinea faciei (10.9%) and Tinea cruris (12.6%) were more prevalent among participants with fewer lesions (0–5), comprising 19.1% and 21.3% of that subgroup, respectively, and were absent in those with lesion counts exceeding 10. A similar trend was noted for Tinea corporis, which was present in 12% of participants and predominantly associated with fewer lesions. Multiple-site involvement (tinea corporis + faciei + cruris) was observed in 34 patients (19.4%), while the combination of tinea corporis + faciei affected 32 patients (18.3%). Isolated forms were less common, with tinea corporis, tinea cruris, and tinea faciei affecting 21 (12%), 22 (12.6%), and 19 (10.9%) patients respectively.

Isolated forms such as tinea faciei and tinea cruris were predominantly associated with fewer lesions (0-5), while mixed infections, particularly tinea corporis + cruris, were associated with more extensive disease.

Table 3 summarizes the patterns of steroid medication use among the 175 study participants, categorized by potency and formulation. Super-high potency steroids were used by 82 patients (46.9%), with the majority (n=73, 59.8%) using them as combination formulations. High-potency steroids were used by 44 patients (25.1%), again predominantly in combination form (n=33, 27%). Medium-potency steroids accounted for 22 patients (12.6%), with combination formulations being more common (n= 16, 13.1%) than plain preparations (6 patients, 11.3%). All low-potency steroid use (15.4%) was exclusively in plain formulations, comprising 50.9% of the plain steroid group, with no representation in combination products.
Table 4 states the Source and Mode of Access to Steroid Medications Among Study Participants . A significant majority of patients (n=153,87.4%) obtained steroid medications over the counter without prescription, highlighting widespread unsupervised access. Among these, other healthcare workers were the primary source (n=54,35.3%), followed by pharmacists (n=49, 32%), friends/neighbours (n=29,19%), and family members (n=21,13.7%).Only 22 patients (12.6%) obtained steroids through formal prescription, with most prescriptions (90.9%) coming from non-dermatologists. Only 2 patients (9.1%) received prescriptions from qualified dermatologists, highlighting the lack of specialist involvement in steroid prescribing for dermatological conditions.
The predominance of combination formulations over plain steroids (122 vs. 53 patients) shown in table 3, highlights the widespread use of irrational combination steroid preparations (ICSP).

The analysis of specific ICSP formulations used by 105 patients out of 122 patients using combination revealed diverse usage patterns with varying durations and frequencies represented in table 5. 17 patients used other formulations of combination. ICSP 8 emerges as the most common category (19.0%) and shows a striking association with weekly frequency patterns (44.4%), suggesting it represents episodic or cyclical conditions, while ICSP 2 (16.2%, n=17) demonstrates a spike in the 3-6 month duration group (31.3). ICSP 4 (17.1% n=18) shows its highest prevalence in alternative day frequency patterns (30.8).

The spectrum of adverse effects associated with topical corticosteroid use was extensive and varied by anatomical location depicted in table 6. Hypopigmentation [figure 1]

emerged as the most common adverse effect, affecting 42 patients (24%), with predominant involvement of the groin/gluteal region (30.1%) and extremities (28.6%). This distribution suggests regional vulnerability in areas prone to friction and occlusion.

Acneiform eruptions [figure 2] were observed in 36 patients (20.6%), most commonly on the face/neck (28.8%). Striae [figure 3] developed in 33 patients (18.9%), particularly in the groin/gluteal region (35.6%) and trunk (24.1%). Skin atrophy was noted in 26 patients (14.9%), most frequently affecting the extremities (28.6%) and trunk (17.2%) consistent with typical sites of skin stretching and mechanical stress.
Skin atrophy[figure 4] was noted in 26 patients (14.9%) and was most frequently observed on the extremities (28.6%) and trunk (17.2%), indicating dermal thinning in areas of frequent steroid application.

Secondary infections [figure 5] complicated the clinical picture in 16 patients (9.1%), while erythema [figure 6] was observed in 15 patients (8.6%). Less common adverse effects included telangiectasia [figure 7] (8 patients, 4.6%), contact dermatitis[figure 8] (5 patients, 2.9%), perioral dermatitis (3 patients, 1.7%), and purpura (2 patients, 1.1%).

Facial-specific adverse effects were exclusively limited to the face/neck region and included facial hypertrichosis (6.9%), rosacea (6.3%), topical steroid damaged face (TSDF) (4.6%), and perioral dermatitis (1.7%). Secondary infections occurred in 16 patients (9.1%), predominantly in the groin/gluteal region.

Table 1: Demographic characteristics of study participants

Characteristics	Category	N (%)
Age	18-20	9 (5.1)
	20-40	81 (46.3)
	40-60	70 (40)
	>60	15 (8.6)
Gender	Female	95 (54.3)
	Male	80 (45.7)
Socioeconomic Status (Modified B.G Prasad)	Class I	34 (19.4)
	Class II	44 (25.1)
	Class III	61 (34.9)
	Class IV	36 (20.6)

Table 2: Distribution of Lesion Sites and Lesion Counts Among Study Participants

Site of involvement	Total	No. of sites or lesion			
	N=175	0-5	5-10	10-20	>20
	N (%)	N=48	N=50	N=36	N=41
		N (%)	N (%)	N (%)	N (%)
Tinea corporis	21(12)	11(12.4)	5(12.2)	3(9.4)	2(15.4)
Tinea cruris	22(12.6)	19(21.3)	3(7.3)	0(0)	0(0)
Tinea faciei	19(10.9)	17(19.1)	2(4.9)	0(0)	0(0)
Tinea corporis+Tinea faciei+Tinea cruris	34(19.4)	13(14.6)	10(24.3)	8(25)	3(23.1)
Tinea corporis+Tinea faciei	32(18.3)	14(15.7)	9(22)	7(21.8)	2(15.4)
Tinea corporis+Tinea cruris	47(26.8)	15(16.9)	12(29.3)	14(43.8)	6(46.1)

Table 3: Distribution of Patterns of Steroid Medication Use Among Study Participants

Potency of steroid	Total	Component of medication	
	N=175	Plain	Combination
	N (%)	N=53 N(%)	N=122 N(%)
Super-high potent	82(46.9)	9(17)	73(59.8)
High potent	44(25.1)	11(20.8)	33(27)
Medium potent	22(12.6)	6(11.3)	16(13.1)
Low potent	27(15.4)	27(50.9)	0(0)

Table 4: Source and Mode of Access to Steroid Medications Among Study Participants

Characteristics	Category	N (%)
Medication bought over counter		**153 (87.4)**
Source	Family	21 (13.7)
	Friends	29 (19)
	Other healthcare workers	54 (35.3)
	Pharmacist	49 (32)
Medication bought with prescription		**22 (12.6)**
Source	Dermatologist	2 (9.1)
	Non-Dermatologist	20 (90.9)

Table 5: Distribution of ICSP Types and Their Duration of Use Among Study Participants

ICSP	Total N=105 n(%)	Duration					Frequency				
		0-1 month	1-2 months	3-6 months	7-12 months	>12 months	Once daily	Twice daily	Intermittent	Alternative days	Weekly once
		N=39 n(%)	N=31 n(%)	N=16 n(%)	N=13 n(%)	N=6 n(%)	N=41 n(%)	N=27n (%)	N=15 n(%)	N=13 n(%)	N=9 n(%)
ICSP 1	14(13.3)	6(15.4)	4(12.9)	2(12.5)	2(15.4)	0(0)	6(14.6)	4(14.8)	2(13.3)	1(7.7)	1(11.1)
ICSP 2	17(16.2)	5(12.8)	5(16.1)	5(31.3)	1(7.7)	1(16.7)	7(17.1)	4(14.8)	4(26.7)	2(15.4)	0(0)
ICSP 3	0(9.5)	3(7.7)	2(6.5)	2(12.5)	2(15.4)	1(16.7)	5(12.2)	1(3.7)	2(13.3)	1(7.7)	1(11.1)
ICSP 4	18(17.1)	7(17.9)	5(16.1)	2(12.5)	3(23.1)	1(16.7)	5(12.2)	6(22.2)	2(13.3)	4(30.8)	1(11.1
ICSP 5	7(6.7)	4(10.3)	2(6.5)	1(6.3)	0(0)	0(0)	4(9.8)	2(7.4)	1(6.7)	0(0)	0(0)
ICSP 6	4(3.8)	1(2.6)	2(6.5)	1(6.3)	0(0)	0(0)	1(2.4)	2(7.4)	0(0)	1(7.7)	0(0)
ICSP 7	12(11.4)	4(10.3)	5(16.1)	1(6.3)	2(15.4)	0(0)	5(12.2)	3(11.1)	1(6.7)	2(15.4)	1(11.1)
ICSP	20(19.0)	8(20.5)	5(16.1)	2(12.5)	3(23.1)	2(33.3)	6(14.6)	5(18.5)	3(20.0)	2(15.4)	4(44.4)

8											
ICSP 9	2(1.9)	1(2.6)	1(3.2)	0(0)	0(0)	0(0)	2(4.9)	0(0)	0(0)	0(0)	0(0)
ICSP 10	1(1.0)	0(0)	0(0)	0(0)	0(0)	1(16.7)	0(0)	0(0)	0(0)	0(0)	1(11.1)

*ICSP = Irrational Combination of Topical Corticosteroid containing Preparation**

ICSP Compositions:

- ICSP 1: Clobetasol Propionate (0.05%), Neomycin Sulphate (0.5%), Miconazole Nitrate (2.0%), Chlorhexidine Gluconate (0.2%)
- ICSP 2: Clobetasol Propionate (0.05%), Etibendazole (1.0%), Terbinafine (1.0%), Ciprofloxacin (1.0%)
- ICSP 3: Beclomethasone dipropionate (0.025%), Gentamicin (0.1%)
- ICSP 4: Clobetasol Propionate (0.05%), Ofloxacin (0.75%), Miconazole (2.0%), Terbinafine (1.0%), Dex panthenol (0.5%)
- ICSP 5: Mometasone Furoate (0.1%), Nadifloxacin (1%), Miconazole Nitrate (2%)
- ICSP 6: Beclomethasone dipropionate (0.025%), Clotrimazole (1.0%)
- ICSP 7: Clobetasol Propionate (0.05%), Neomycin Sulphate (0.5%), Clotrimazole (1.0%)
- ICSP 8: Clobetasol Propionate (0.05%), Neomycin Sulphate (0.1%), Ketoconazole (2%)
- ICSP 9: Fluocinolone acetonide (0.01%), Miconazole nitrate (2%)
- ICSP 10: Clobetasol Propionate (0.05%), Salicylic acid

Table 6: Distribution of Sites and Types of Adverse Effects Due to Topical Steroid Use

Adverse effects	Total	Groin/ Gluteal Axilla	Face/Neck	Trunk (Chest/Abdomen)	Extremities (upper limb/lower limb)
	N=175	**N=73**	**N=80**	**N=29**	N=35
	N (%)	**N (%)**	**N (%)**	**N (%)**	**N (%)**
Hypopigmentation	42(24)	22(30.1)	8(10)	2(6.9)	10(28.6)
Acneiform eruption	36(20.6)	0(0)	23(28.8)	5(17.2)	8(22.9)
Striae	33(18.9)	26(35.6)	0(0)	7(24.1)	0(0)
Atrophy	26(14.9)	8(11)	3(3.8)	5(17.2)	10(28.6)
Secondary infection	16(9.1)	11(15.1)	0(0)	3(10.3)	2(5.7)
Erythema	15(8.6)	3(4.1)	7(8.8)	4(13.8)	1(2.9)
Facial hypertrichosis	12(6.9)	0(0)	12(15)	0(0)	0(0)
Rosacea	11(6.3)	0(0)	11(13.8)	0(0)	0(0)
TSDF (Topical Steroid Damaged Face)	8(4.6)	0(0)	8(10)	0(0)	0(0)
Telangiectasia	8(4.6)	0(0)	4(5)	2(6.9)	2(5.7)
Contact dermatitis	5(2.9)	3(4.1)	1(1.3)	1(3.4)	0(0)
Perioral dermatitis	3(1.7)	0(0)	3(3.8)	0(0)	0(0)
Purpura	2(1.1)	0(0)	0(0)	0(0)	2(5.7)

TABLE LEGENDS

Table 1: Demographic characteristics of study participants
Table 2: Distribution of Lesion Sites and Lesion Counts Among Study Participants
Table 3: Distribution of Patterns of Steroid Medication Use Among Study Participants
Table 4: Source and Mode of Access to Steroid Medications Among Study Participants
Table 5: Distribution of ICSP Types and Their Duration of Use Among Study Participants
Table 6: Distribution of Sites and Types of Adverse Effects Due to Topical Steroid Use

FIQURE LEGENDS

Figure 1 - Hypopigmentation
Figure 2 - Acneiform eruption
Figure 3 - Striae

FIGURES

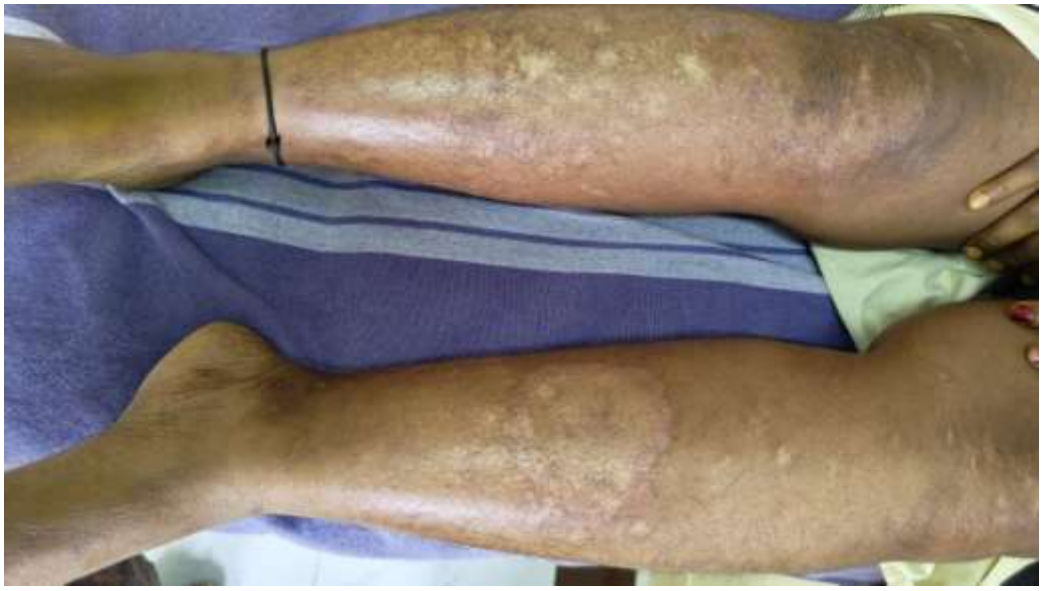

Figure 1 – Hypopigmentation

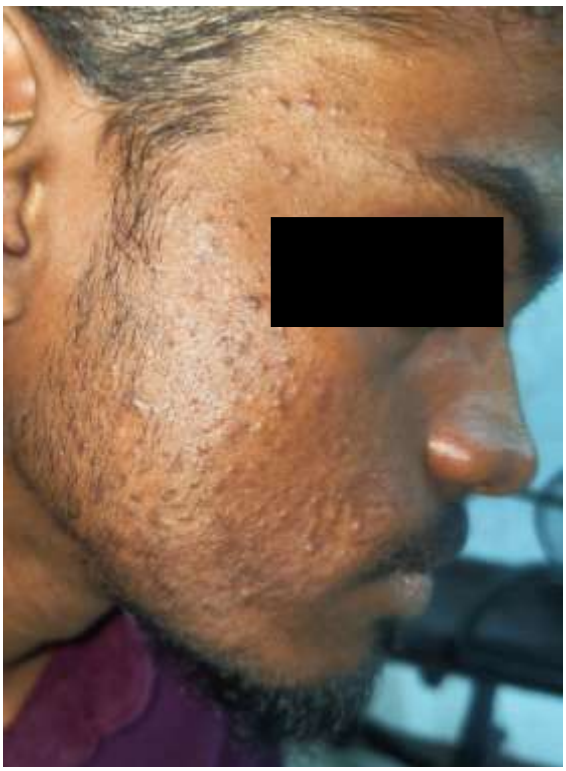

Figure 2 - Acneiform eruption

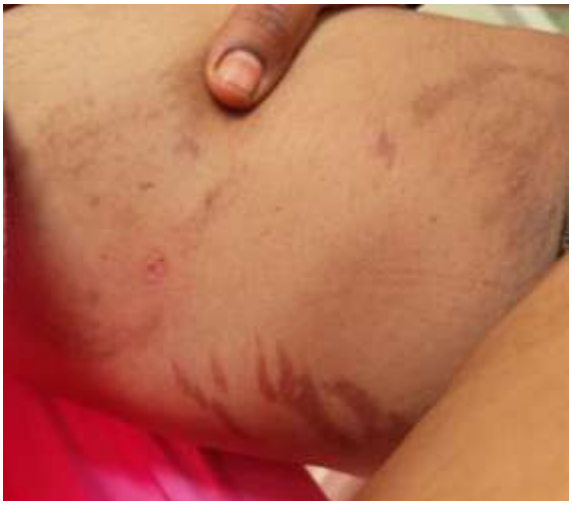

Figure 3 – Straie

Figure 4 Atrophy

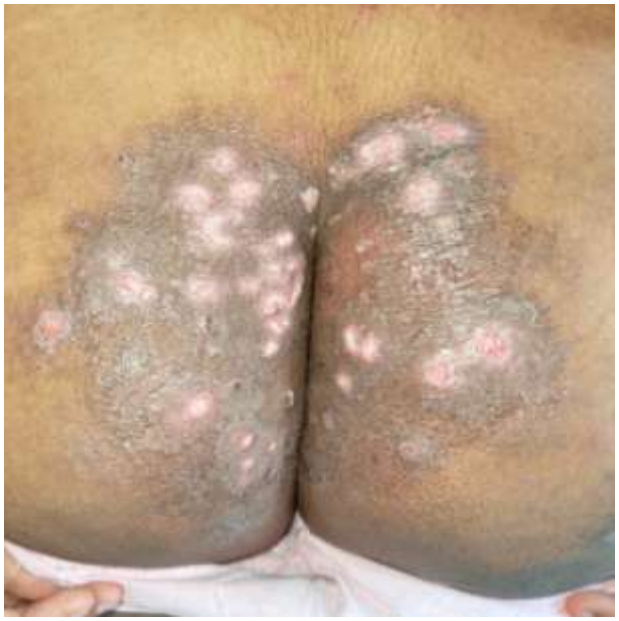

Figure 5 – Secondary infection

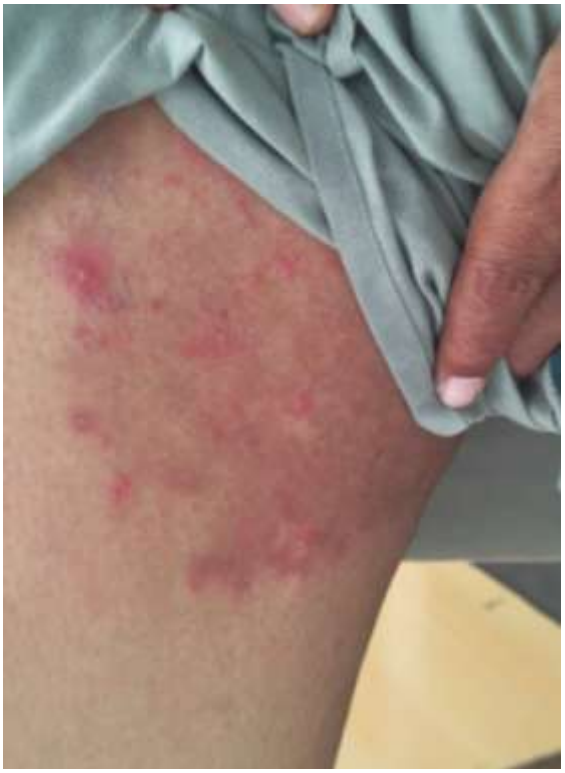

Figure 6 – Erythema

Figure 7– Telengectasia

Figure 8 Contact dermatitis

DISCUSSION

The findings of this study provide comprehensive insights into the clinical patterns and consequences of topical corticosteroid misuse in dermatophytosis, revealing several concerning trends that align with and extend previous research in this field.

The demographic profile in our study, with 46.3% of patients in the 20-40 age group is consistent with findings reported by Priyanka et al.[10] , in their study of steroid-modified dermatophytosis. Our study showed slight female preponderance (54.3%), that aligns with findings from Shenoy et al., who reported similar age and gender distributions in their multicentric study[16] , but contrasts with Dabas et al[1].The predominance of middle-aged adults reflects the active lifestyle and occupational exposures common in this demographic, while the female preponderance may be attributed to cultural practices and household responsibilities.

The socioeconomic distribution, with 34.9% belonging to Class III, differs from Jha et al.'s findings, which showed a more diverse socioeconomic representation[4]. This pattern suggests that steroid misuse transcends socioeconomic boundaries, though accessibility and awareness may vary.

Our study reveals a striking predominance of multiple site involvement (73.1%) over isolated forms. The most common combination of tinea corporis and cruris (26.8%) with extensive lesion counts mirrors the findings of Priyanka et al., who reported similar

patterns in their study of steroid-modified dermatophytosis [10].

The association between multiple site infection and higher lesion counts (43.8% having 10-20 lesions and 46.1% having >20 lesions in the corporis + cruris group) suggests that steroid use not only modifies morphology but also promotes disease spread and persistence. This finding is consistent with Dogra and Narang's observations of emerging atypical presentations in India [18].

The finding that 46.9% of patients used super-high potency steroids, predominantly in combination formulations (59.8%), represents a significant escalation from earlier reports. . Dabas et al. found lower rates of high-potency steroid use in their pilot study, though their focus was broader, including various dermatoses[1]. Sharma et al. reported lower rates of high-potency steroid misuse in their facial dermatosis study[8], suggesting that the problem has intensified over time.

The preference for combination preparations over plain steroids (69.7% vs. 30.3%) indicates the market dominance of ICSP formulations. Studies by Verma which showed earlier concerns about the regulatory status of topical steroids in India appear validated by our findings[15].

The easy availability of super-high potency steroids in combination forms, which promise comprehensive treatment while potentially causing more harm than benefit without adequate prescription

The finding that 87.4% of patients obtained steroids without a prescription represents a severe regulatory failure. This finding is consistent with reports by Nagaraj et al[7], who documented similar patterns of unsupervised steroid access in coastal Karnataka but substantially higher than reported by Kar et al. (64%) in their Northeast Indian study[9], suggesting either regional variations or a worsening trend over time.

The involvement of healthcare workers (35.3%) and pharmacists (32%) as primary sources of over-the-counter medications is particularly troubling, as it suggests inadequate awareness among healthcare providers about the risks of steroid misuse. Coondoo[20] has extensively discussed the regulatory challenges surrounding topical steroid availability in India, emphasizing the need for stricter prescription requirements and enhanced pharmacovigilance.

The predominance of non-dermatologist prescribing (90.9% of prescribed cases) among the limited number of patients who obtained formal prescriptions highlights a critical gap in specialist involvement. Jha et al.[4] reported similar patterns of inappropriate steroid prescribing by non-specialists, particularly for facial dermatoses.

This trend underscores the need for enhanced dermatological education among primary care physicians and stricter referral protocols for complex skin conditions, resonating with concerns raised by Rajagopalan et al. in their expert consensus, emphasizing the need for improved dermatological care accessibility [17].

The inclusion of multiple antifungals, antibiotics, and potent steroids in single formulations represents pharmaceutical irrationality that compromises treatment outcomes. The extensive use of ICSP formulations with ICSP 8 (Clobetasol + Neomycin + Ketoconazole) being the most prevalent (19.0%). The diversity of these combinations and their widespread use exemplify what Coondoo termed as the Indian scenario of topical corticosteroid misuse [20].

The long-term use patterns (33.3% using ICSP 8 for >12 months) indicate habituation and dependence, consistent with reports of addictive tendency and withdrawal symptoms described by Sharma et al[8] documented similar patterns of prolonged facial steroid use, noting the development of steroid addiction and withdrawal symptoms. The intermittent use patterns in our study may reflect attempts to manage withdrawal symptoms or ongoing inflammation.

The adverse effect profile in our study, led by hypopigmentation (24%), acneiform eruptions (20.6%), and striae (18.9%), reflects the cumulative impact of prolonged high-potency steroid use. These figures are considerably higher than those reported by Coondoo et al in the comprehensive review of topical steroid side effects[19], suggesting that the ICSP-associated adverse effects may be several than those from plain steroid preparations. Kar et al[9] reported lower rates of hypopigmentation in their Northeast Indian population, suggesting possible regional variations in adverse effect patterns or adverse effects being underreported.

The site-specific distribution of adverse effects with a predominance of striae in intertriginous areas like groin, axilla and gluteal region comprising 35.6% and facial complications exclusively on the face involved hypertrichosis in 6.9%, rosacea in 6.3% and TSDF in 4.6%.

The widespread availability and misuse of potent topical steroids contribute to the development of treatment-resistant dermatophytosis, as documented by Das et al[12] in their analysis of the current Indian dermatophytosis epidemic. The expert consensus guidelines developed by Rajagopalan et al[17] and the IADVL task force, Rengasamy M et al[15] have emphasized the need for rational antifungal therapy and judicious steroid use, yet implementation of these

recommendations remains challenging in the face of widespread over-the-counter availability. The IADVL task force recommendations for recalcitrant tinea management (ITART consensus) emphasize the need for systematic approaches [15].

Limitations

As a single-center study, the generalizability of findings may be limited. The cross-sectional design precludes assessment of long-term outcomes and treatment responses. Additionally, microbiological correlation and antifungal sensitivity patterns were not analysed, which could provide additional insights into treatment resistance.

CONCLUSION

This study demonstrates that topical corticosteroid-modified dermatophytosis represents a critical public health crisis that demands immediate intervention. The widespread availability of high-potency steroids through non-prescription channels has created a complex clinical scenario characterized by modified disease presentations, treatment resistance, and significant adverse effects.

The predominant use of irrational combination steroid preparations obtained through informal healthcare networks reflects fundamental failures in drug regulation and healthcare delivery systems. The high prevalence of adverse effects, including hypopigmentation, acneiform eruptions, and striae, demonstrates the substantial morbidity burden associated with inappropriate steroid use in dermatophytosis management.

The lack of specialist involvement in prescribing decisions, combined with inadequate healthcare provider awareness and patient education, has perpetuated cycles of inappropriate treatment that compromise patient outcomes and contribute to antifungal resistance.

The demographic profile indicates that this crisis disproportionately affects economically productive populations, amplifying its broader societal impact.

Coordinated interventions are required across multiple healthcare domains. Regulatory authorities must implement strict controls over topical corticosteroid distribution, particularly high-potency formulations and combination preparations. Comprehensive healthcare provider education programs and evidence-based treatment guidelines are essential for appropriate disease management. Public awareness initiatives must emphasize the risks of self-medication and promote appropriate healthcare-seeking behaviours.

The integration of dermatological expertise into primary healthcare systems is crucial for managing dermatophytosis and preventing complications. Without immediate action from policymakers, regulatory bodies, and healthcare professionals, this public health crisis will continue to escalate, causing further harm to vulnerable populations and straining healthcare resources.

The evidence presented establishes a clear mandate for comprehensive reform of current practices governing topical corticosteroid use in dermatophytosis management. Only through coordinated, multi-level interventions can this epidemic be effectively controlled and future occurrences prevented.

Recommendation

Future research should focus on long-term outcome studies, the development of standardized treatment protocols for steroid-modified dermatophytosis, and the evaluation of intervention strategies to reduce inappropriate steroid use.

Only through coordinated efforts can we hope to address this unprecedented challenge effectively.

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