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# Tinea Incognito and Topical Steroid Misuse in Skin of Color: A Hidden Epidemic

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## Abstract

**Background:** Tinea incognito (TI) is a steroid-modified dermatophyte infection in which topical corticosteroid misuse alters the typical clinical presentation, often mimicking eczema, psoriasis, and other dermatoses. This misrepresentation delays accurate diagnosis and treatment, particularly in skin-of-color populations where inappropriate steroid access and use are common, fueling unrecognized outbreaks.

**Methods:** This narrative review examined English-language studies published between 2010 and 2025, including randomized trials, cohort analyses, case series, and case reports, to evaluate TI in adults and children with skin of color. Literature was sourced from PubMed, Google Scholar, and dermatology conference proceedings, with emphasis on clinical relevance.

**Results:** A total of 86 studies met inclusion criteria. Data indicate that steroid-modified dermatophytosis accounts for up to 40% of all dermatophyte infections, with inappropriate corticosteroid use reported in 42–81% of affected patients. Key findings include diagnostic challenges related to suppressed inflammation, increased chronicity, higher rates of antifungal resistance, and rising pediatric cases-many of which are initially misdiagnosed. Extended disease duration was associated with moderate-to-severe quality-of-life impairment and significant economic burden.

**Discussion:** Clinicians should maintain a high index of suspicion for TI in patients presenting with persistent or atypical rashes, particularly those with darker skin tones or histories of steroid use. Characteristic dermoscopic features and sites such as eyelid involvement may aid early recognition. Management requires appropriate antifungal therapy, patient education, stricter regulation of topical steroid distribution, and improved mycologic diagnostic training.

**Conclusion**: Early detection and targeted interventions are critical to mitigating the clinical, psychosocial, and public health impact of this underrecognized but increasingly prevalent condition.

Keywords: Dermatophytosis; Tinea Incognito; Steroid-Modified Tinea; Topical Corticosteroid Misuse; Skin of Color; Dermatology; Diagnosis; Dermatophyte Resistance; Dermoscopy; Public Health

Abbreviations: TI: Tinea Incognito; KOH: Potassium Hydroxide; DLQI: Dermatology Life Quality Index; TSDF: Topical Steroid Damaged Face; PCR: Polymerase Chain Reaction; ITS: Internal Transcribed Spacer

## Introduction

Tinea incognito (TI) is a dermatophyte infection that presents with atypical morphology due to the inappropriate use of topical or systemic corticosteroids [1]. First described by Ive and Marks in 1968, TI was noted in patients who initially had classic tinea but developed eczematous or psoriasiform plaques after applying potent steroids [2,3]. The term "incognito" refers to how the infection becomes concealed, as corticosteroids suppress inflammation and obscure hallmark signs like ring-shaped erythema and active border scaling [4]. TI is thus an iatrogenic condition, representing an immunosuppressed variant of infections like tinea corporis or tinea faciei, most often caused by species such as Trichophyton rubrum or T. mentagrophytes [5].

TI prevalence has increased, particularly in South Asia where steroids are often sold over the counter [6]. Indian dermatologists

observe epidemic levels of chronic and resistant tinea infections that frequently receive treatment through irrational combination creams with corticosteroids, antifungals, and antibacterials [7]. These creams provide short-term symptom relief, misleading patients and delaying correct diagnosis, while allowing the fungus to spread unchecked [8]. Clinically, these steroid-altered infections often lack classic features such as annular borders, making them easily mistaken for eczema, seborrheic dermatitis, or psoriasis [9,10].

TI poses specific diagnostic challenges in skin of color populations. The reduced contrast of erythema in darker Fitzpatrick phototypes (IV–VI) and frequent post-inflammatory hyperpigmentation can make fungal lesions less recognizable [11]. In Black, Latinx, or South Asian individuals, TI can mimic pigmentary disorders or inflammatory dermatoses, leading to misdiagnoses and further corticosteroid use [12]. Cultural practices, including the use of skin-lightening or anti-itch creams obtained without medical guidance, also contribute to the cycle of steroid misuse and diagnostic delay [13]. Though dermatophytosis classically affects post-pubertal males, tinea incognito has been increasingly reported across all ages, including children misdiagnosed with eczema and treated with potent steroids [14,15].

A Spanish retrospective study of pediatric TI cases revealed that most were initially diagnosed as dermatitis, and nearly 70% had been treated with topical steroids [16]. In many of these cases, facial involvement was prominent, with T. mentagrophytes emerging as the most isolated species [17]. Figure 1 provides visual guidance for clinicians to distinguish tinea incognito from similar conditions, including eczema and rosacea. TI lacks sharp borders while presenting irregular or hypopigmented patches. It may show pustules or perifollicular scaling, which helps to identify it when classical ringworm morphology is absent.

This pictographic comparison illustrates tinea incognito as it often appears following steroid use-ill-defined, variably pigmented, and lacking annular morphology-alongside typical appearances of conditions like eczema and rosacea [9,10]. Tinea incognito has emerged as both a diagnostic chameleon and a growing public health concern. Its variable clinical presentation, particularly in patients with skin of color-often leads to misdiagnosis and inappropriate corticosteroid use, which delays effective antifungal treatment [18,19]. Accurate recognition of these atypical features is essential for timely intervention. As shown in Figure 1, the condition can mimic other dermatologic disorders, complicating diagnosis. The following sections explore the global epidemiology of tinea incognito, diagnostic patterns, clinical variation across skin types, and current management recommendations based on studies published from 2015 to 2025.

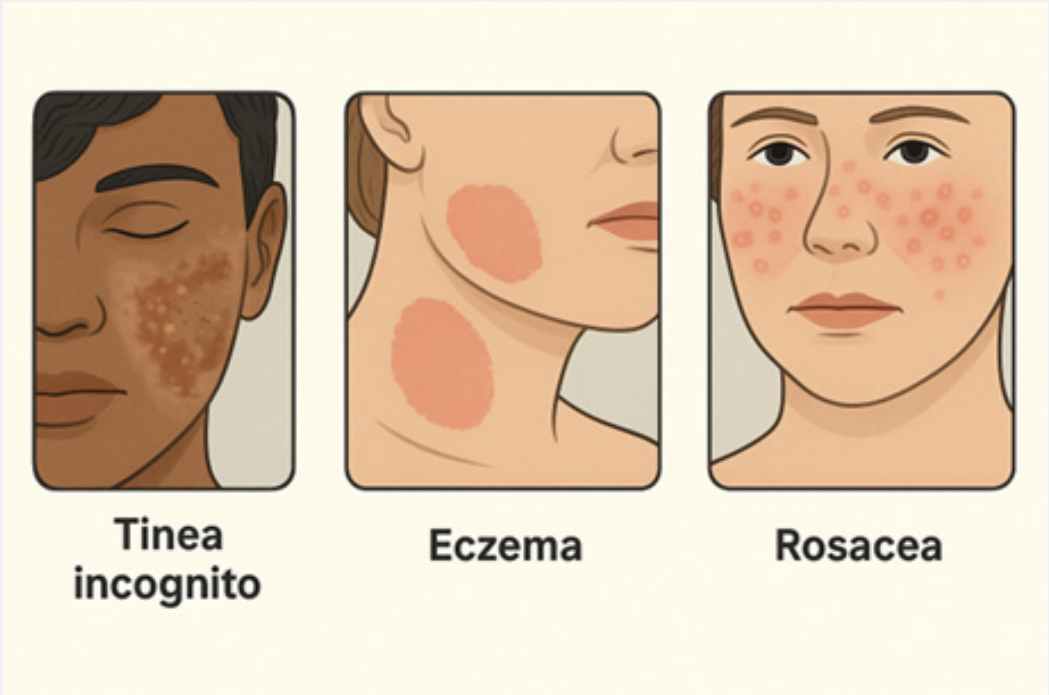


**Figure 1:** Clinical Presentation of Tinea Incognito Compared to Common Mimics.

This pictographic comparison illustrates tinea incognito as it often appears following steroid use-ill-defined, variably pigmented, and lacking annular morphology-alongside typical appearances of conditions like eczema and rosacea [9,10].


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## Methods

Our research involved an extensive review of literature to find studies related to tinea incognito and topical steroid misuse that focused on populations with skin of color, including all non-Caucasian types in both adults and children. The search for publications included all research from January 2010 to April 2025 and multiple study designs to obtain comprehensive evidence. Our search of PubMed, Scopus, Web of Science, and Google Scholar databases used keywords such as "tinea incognito," "steroid-modified tinea," "dermatophytosis AND corticosteroids," "topical steroid misuse dermatology," and "skin of color tinea" to find relevant studies. This was followed by a review of reference lists from major articles and dermatology journals to uncover additional research.

Inclusion criteria were clinical trials, randomized controlled trials, cohort studies, case-control studies, cross-sectional studies, case series, case reports, and narrative or systematic reviews that examined tinea incognito steroid-modified fungal infections. Both adult and pediatric data were included. We excluded articles published in languages other than English unless they contained English abstracts with relevant information. We evaluated the study design and sample size for quality assessment but performed no formal risk-of-bias scoring because this review followed a narrative approach. This approach prioritizes breadth and clinical relevance over quantitative synthesis.

It's important to recognize that narrative reviews can be more susceptible to bias due to their subjective nature in selecting and interpreting studies. The influence of individual researchers' perspectives may shape the conclusions drawn and the emphasis placed on certain findings over others. As such, while our review aimed for comprehensive coverage, potential bias was acknowledged in the limitations of selecting studies and synthesizing qualitative data.

The review focused on clinical findings while examining diagnostic methods and practice-related outcomes. Our search process yielded more than 100 potential references, which we evaluated for their relevance to our study. This review included 86 sources that made meaningful contributions to at least one key topic area, including epidemiology, diagnosis, steroid misuse patterns, clinical impacts, or management of TI. Data were synthesized qualitatively. The variety of study designs rendered a meta-analysis impossible. We provide a descriptive summary of findings incorporating references from multiple sources to maintain a balanced view of current knowledge. The research method follows narrative review guidelines while gathering existing evidence to support clinical practice in the treatment of tinea incognito on skin of color.

## Results

### Epidemiology and Steroid Misuse Patterns

Tinea incognito represents an ever-growing portion of dermatophyte infections across the globe. New research data indicates that as much as 40% of dermatophyte infections now exhibit this unusual steroid-altered presentation [1]. Despite the absence of complete incidence data from underreporting, multiple reports reveal that chronic difficult-to-treat tinea cases have risen sharply since the mid-2010s in tropical and subtropical regions [3,19]. Thomas et al. (2020) [6] and Dutta et al. (2017) [5] have identified India as the central region of an epidemic-like outbreak of treatment-resistant dermatophytosis mainly because of improper corticosteroid usage [5,6]. More than 50% of tinea patients visiting some Indian dermatology clinics present with steroid-modified infections or have previously used inappropriate steroid/combination creams [7].

A North Indian observational study revealed that 70.6% of superficial tinea patients had used steroid-containing creams, which typically comprised fixed combinations with antifungal and antibacterial agents, before consulting a dermatologist [6]. Studies show that between 42% and 81% of tinea patients used over-the-counter steroid products, which indicates extensive misuse [13,20]. The widespread misuse of steroids derives from pharmacists' recommendations for potent steroid treatments for rashes and patients' preferences for quick itch relief solutions along with marketing strategies that advertise combination creams as comprehensive "all-in-one" solutions [8,21].

Steroid misuse extends beyond adult patients because children and adolescents can also be affected. Young patients face adverse effects when family members or general practitioners mistakenly treat fungal conditions, such as fungal-derived eczema or diaper rash, by prescribing high-potency steroids [14,15]. According to a 2011 Spanish study, 54 tinea incognito cases in children were reported, with 85% of the cases before 2006, demonstrating a rising trend [17]. Most affected children were above nine years old and had tinea corporis or faciei that received partial treatment with steroids. In these cases, topical steroids alone were used 68.5% of the time [16]. The occurrence of tinea incognito among young individuals extends beyond teens and young adults to younger children in India because potent steroids are available without prescription [12,13].

Geographic differences influence the patterns of steroid misuse. The combination of clobetasol propionate and clotrimazole in over-the-counter creams has been identified as a leading problem in South Asia [6,21]. The availability of these products for free sale leads to temporary symptom relief through their anti-inflammatory effects yet creates a clinical challenge of repeated dermatophytosis cases [19]. For skin complaints, pharmacies and informal healthcare providers frequently distribute these creams to rural populations and underserved communities [7]. In Western nations, tinea incognito frequently occurs when doctors prescribe steroids for incorrect diagnoses of skin conditions such as eczema or psoriasis, which are caused by tinea [1,2].

Rare cases of TI have been reported when calcineurin inhibitor creams, such as tacrolimus, were applied to an undetected fungal


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infection [1]. Regardless of setting, the misuse of steroids in fungal infections creates a similar cascade of effects: The use of steroids in fungal infections causes a partial suppression of the immune response while altering the fungal lesion without completely eradicating it before allowing the pathogen to thrive in an environment with reduced inflammation levels [3].

Table 1 presents an etiological comparison between standard tinea infections and those altered by steroid treatment. It is important to highlight how the distribution patterns of dermatophyte species appear. The Trichophyton rubrum species has long been the dominant causative organism for classic tinea corporis infections worldwide [5]. Recent research during the growing epidemic of chronic dermatophytosis in India has revealed that Tinea mentagrophytes, along with its aggressive terbinafine-resistant Type VIII strain, has reestablished its dominance [12,19].

**Table 1:** Comparison of Classic Tinea Versus Steroid-Modified Tinea (Tinea Incognito).

| Feature | Classic Tinea (e.g., Tinea corporis) | Steroid-Modified Tinea (Tinea Incognito) |
|---|---|---|
| Etiology [4,5,19] | Dermatophyte infection (commonly T. rubrum) | Same fungi, often T. mentagrophytes Type VIII or mixed infections, sometimes with resistant strains |
| Lesion Morphology [1,4] | Annular, scaly plaques with raised red borders and central clearing | Ill-defined, eczematous or psoriasiform plaques; annularity often lost; pustules or follicular accentuation may appear |
| Color [11,22] | Bright red or pink borders, scaling more prominent | Color may be hypopigmented or hyperpigmented; "two-tone" appearance in darker skin |
| Symptoms [5,13] | Pruritus, with burning in some cases | Initial relief with steroid use, followed by rebound worsening; itching and discomfort return or worsen |
| Distribution [16,23] | Predilection for trunk, groin, feet, and scalp (in children) | Atypical locations including face, eyelids, and widespread areas; can involve sites where steroid was applied, sometimes with satellite lesions |
| Diagnostic Yield (KOH/Culture) [4,5] | High KOH positivity; fungal elements typically visible | Still positive in most cases (e.g., 85% KOH positivity), though culture may be suppressed by prior treatment |
| Response to Antifungal Therapy [3,19] | Usually resolves with standard topical or systemic antifungal therapy | Often requires prolonged systemic therapy (e.g., terbinafine or itraconazole); relapses common if treatment incomplete |
| Treatment History [6,7] | Often no prior treatment or over-the-counter antifungal use | Strong history of topical steroid or combination cream use, sometimes repeatedly or over months |
| Complications [1,18] | Minimal if treated early | Risk of striae, atrophy, telangiectasias, pigmentary changes, Majocchi's granuloma, and fungal resistance |
| Clues to Diagnosis [3,23] | Classic ringworm appearance with centrifugal expansion | Eyelid involvement, atypical site, history of strong cream use, dermoscopy showing "comma hairs," perifollicular scaling |

While steroid misuse does not determine which fungus causes infection, it leads to broader infections, which can reveal stronger fungal strains. According to literature reports, the 2023 review published by Ghaderi et al. revealed that T. rubrum was responsible for about 40% of TI cases and T. mentagrophytes followed with 24%, while Microsporum canis showed 19% [10]. In Assam, India, most tinea incognito cases showed T. rubrum cultures while T. mentagrophytes remained common and facial infections were high [5]. Different dermatophytes are responsible for TI, while local factors such as epidemiology and drug resistance patterns determine treatment success.

## Clinical Features and Diagnostic Challenges

Tinea incognito develops with clinical features that diverge from traditional dermatophyte infection patterns. Table 2 details the visual differences of tinea lesions between lighter and darker skin tones while explaining the importance of this information for recognizing less obvious symptoms like erythema in patients with darker skin. A standard tinea corporis lesion presents as an annular scaly plaque with a raised red active border surrounding a central clear area. Steroid treatment for tinea infections reduces the inflammatory response, which causes the lesions to lose their circular shape and clear borders [1].

The condition then presents as an ill-defined diffuse patch or plaque that could mimic eczema, seborrheic dermatitis, rosacea, or lupus erythematosus [24]. Light skin lesions show subtle pink hues or hypopigmentation, while darker skin lesions show minimal erythema alongside hyperpigmentation or grayish-to-purplish shades [11]. Patients often exhibit scaling, but this symptom can diminish when treated with steroids. Follicular pustules and acne-like symptoms can emerge when Majocchi's granuloma occurs due to steroid occlusion [3]. Tinea incognito patients experience continued itching even though they notice temporary relief from steroid treatment before experiencing increased itching as the infection progresses.


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**Table 2:** Clinical Presentation of Tinea Infections in Light vs. Dark Skin.

| Feature/Sign | Light Skin (Fitz I–III) | Skin of Color (Fitz IV–VI) |
|---|---|---|
| Erythema (Redness) | Typically pronounced red or pink at the active border. Center may clear or appear less red [1]. | Often subtle; may appear brown, violaceous, or barely visible. Inflammation can be underestimated due to background pigmentation [11]. |
| Scaling | Visible flaky or scaly edge; fine scaling in center of lesion. | Also present but contrast is lower. Scale might appear gray or white on dark background. Patients may notice surface roughness more than color change [11]. |
| Border Definition | Sharply demarcated, raised ring ("ringworm") in classic tinea. Steroid use can make borders less elevated and less distinct [4]. | Demarcation can be blurred, especially if erythema is faint. Edges may blend with surrounding skin except for pigmentation differences. Steroids use further flattens borders [3]. |
| Pigmentary Changes | Post-inflammatory hypopigmentation or minimal change once healed. | Post-inflammatory hyperpigmentation is common after inflammation subsides. Lesions may heal with dark spots; steroid use can cause hypopigmented patches amid the tinea [11]. |
| **Tinea Incognito Specifics** | | |
| Morphology | Eczematous, psoriasis-like or acneiform plaques; perhaps some central clearing remains but not obvious [1]. | Lichenoid or eczematous patches with more uniform color (brown or gray) rather than red ring. Might mimic lichen planus or chronic eczema [11]. |
| Distribution on Face | Often on beard area or periocular if misdiagnosed as seborrheic dermatitis. Steroid may cause telangiectasia on light skin, visible as redness [24]. | Often perioral or periocular, mimicking dermatoses common in skin of color (e.g., discoid lupus or dermatosis papulosa nigra if papules). Telangiectasia is less visible; may see slight sheen or atrophy [14]. |
| Itch/Burning | May have reduced itch initially with steroid, then returns; patients report "rash got better then worse." Burning can accompany rebound erythema when steroid stopped [5]. | Similar pattern: temporary relief, then worsening. In dark skin, patients may focus on color change or "dark spots" and mild itch. Burning is possible if potent steroids cause atrophy [13]. |

The ability of TI to mimic other conditions often results in delayed diagnosis. A key indicator of TI is the previous application of corticosteroid or immunosuppressive creams to the affected area. Clinicians should maintain high suspicion when encountering patients whose rashes have changed or intensified after applying potent cream obtained through prescription or purchase from retail outlets. Multiple case reports indicate that steroid withdrawal often leads to lesions that develop classic tinea-like symptoms such as edge redness and scaling, which emerge as patients discontinue steroids and show advanced infections [12,19]. Doctors should perform careful skin inspections and targeted testing for ringworm signs when encountering any unusual eczema or dermatosis without waiting for a rebound effect to appear.

Dermoscopy and mycological examination serve as essential diagnostic tools to identify cases of tinea incognito; through skin surface microscopy, known as dermoscopy, medical professionals can identify otherwise hidden characteristic features of tinea infections. The dermoscopic indicators for tinea infection include irregular "moth-eaten" scale edges alongside translucent short "comma" or "zigzag" hairs and perifollicular scaling [4,23] conducted a cross-sectional dermoscopy investigation of facial tinea altered by steroids compared with rosacea triggered by steroids (TSDF) [23]. They found that eyelid involvement was a distinguishing clinical feature: 60% of patients with tinea incognito eyelids exhibited skin involvement. At the same time, steroid-induced rosacea did not affect the eyelids at all.

The facial presentation of tinea incognito in dermoscopy revealed multiple morphological features, including scales and brown globules alongside tiny follicular pustules known as "micro pustules." While steroid-induced dermatosis predominantly exhibited vascular characteristics with telangiectasias and red dots [23]. The authors identify eyelid involvement with diffuse scaling as a key clinical indicator for diagnosing tinea incognito on the face. The quick dermoscopy tool in clinics helps direct dermatologists to the optimal scraping sites. The most reliable method for diagnosis continues to be mycological tests. Dermatophytosis confirmation occurs through direct visualization of fungal hyphae in skin scales using potassium hydroxide (KOH) preparation [5].

Patients with TI will usually test positive on a KOH prep even after steroid treatment, but recent steroid use may reduce the test's fungal detection rate. The study by [5] found that 85% of their 100 TI case samples tested positive with KOH preparation and demonstrated abundant fungi [5]. Fungal culture helps identify the species, yet only 63% of the cultures in the study were positive, as steroids or previous antifungal treatment may have partially suppressed growth. While PCR or fungal ITS sequencing methods allow precise pathogen identification in hard-to-treat cases, their use remains limited in everyday clinical settings [4].

Skin biopsy and histopathological examination using PAS or Grocott's methenamine silver stain for fungi is an alternative


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diagnostic method when the diagnosis remains uncertain [11]. A biopsy is an invasive procedure that becomes redundant when less invasive testing methods are performed correctly. The diagnostic strategy for TI requires clinicians to stay vigilant about the possibility of the condition and proceed with confirmatory testing. Figure 2 outlines a stepwise approach for diagnosing potential tinea incognito, which includes assessing the patient's steroid use history and performing a KOH exam prior to prescribing more steroids. A detailed patient history inquiry about cream usage often reveals the correct diagnosis [1].

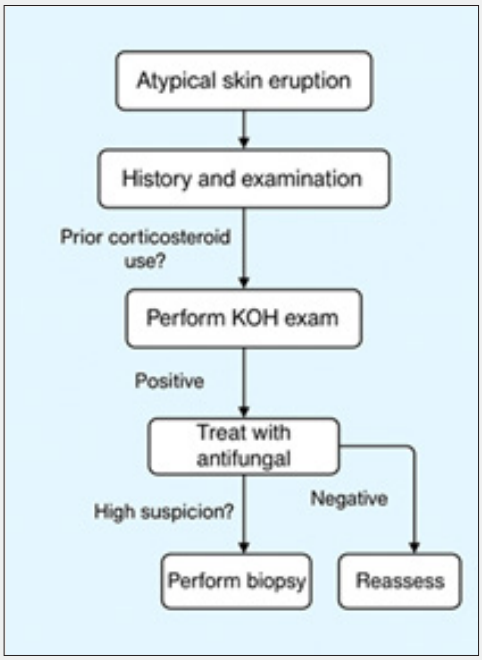


**Figure 2:** Diagnostic algorithm for suspected tinea incognito.

Research demonstrates that multiple healthcare visits resulted in several diagnoses for TI patients, such as eczema and allergy, before discovering its fungal origin [12]. The diagnostic delay permits the infection to spread extensively throughout the body, causing continuous illness. Clinicians are guided through the evaluation of atypical skin eruptions, history of corticosteroid use, and confirmatory testing such as potassium hydroxide preparation. Based on clinical suspicion and test results, management may involve antifungal therapy, biopsy, or continued observation [4,5,11,23].

## Dermatological and Socioeconomic Impacts

Steroid-modified tinea represents a serious issue that affects both the skin and mental health beyond mere aesthetic concerns. Medical analyses reveal that tinea incognito infections show more spread and intensity than standard infections. The suppression of local immunity by steroids allows dermatophytes to penetrate deeper into skin structures such as hair follicles, which results in Majocchi's granuloma and enables the infection to spread further with lesions merging and new infection rings forming at the edges [1,5]. Patients show large or oddly shaped lesions, such as widespread inflammatory plaques with pustules across the groin and thighs, which began as small ringworm patches [4].

A case report by [4] describes a man who developed extensive tinea incognito on his thighs and buttocks after using clobetasol for presumed eczema. The lesions turned red and became filled with pustules as they expanded "satellite" like beyond the initial steroid application site. The direct microscopy displayed many hyphae, and the culture showed growth of Trichophyton mentagrophytes, demonstrating the infection's aggressive progression while the patient used steroids [4]. The skin experiences additional effects through steroid side effects. The misuse of strong topical steroids over a prolonged period leads to skin thinning as well as changes in skin color and texture, including hypopigmentation and striae, along with the development of telangiectasias and acne-like eruptions [13,18].

The clinical presentation becomes more complex when it changes from medication overlay to a fungal infection. Steroid treatment can lead to hypopigmented patches that give the appearance of vitiligo or pityriasis alba on top of eczema when they surround a tinea incognito skin lesion [11]. Patients of skin of color face post-inflammatory hyperpigmentation due to tinea infections along with hypopigmented or depigmented streaks


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from extensive steroid use, causing a troubling alteration of skin tone. The term "topical steroid damaged face" (TSDF) refers to the condition that results from steroid overuse on facial skin, which causes tissue atrophy and telangiectasia and leads to dependency, a condition mainly affecting South Asian populations [23]. A tinea incognito lesion on the cheek can appear alongside steroid-induced redness and thin skin.

The resulting conditions from these changes complicate diagnosis and can persist permanently since striae and pigment alterations might not fully heal, thereby increasing morbidity [22]. Tinea incognito poses significant economic and social challenges. Patients often endure extended periods of suffering from unidentified infections before getting a diagnosis, while they undergo numerous doctoral consultations and medication trials and experience work or school absences. A questionnaire-based Indian study in 2023 quantified the quality-of-life (QoL) and financial impact of chronic dermatophytosis.

The mean Dermatology Life Quality Index (DLQI) reached 12.25, which represents moderate life impact from tinea incognito in 299 patients and a larger body surface area resulted in higher DLQI scores [13]. Many patients disclosed feelings of embarrassment, decreased social involvement, and adjustments to their clothing preferences, such as not wearing short sleeves when their arms were affected. The condition caused 15% of affected individuals to miss work or school, showing how common the infection is and the impact on the condition. Patients face increasing expenses when they require extended therapy sessions and seek multiple doctor opinions.

The study revealed that average treatment costs significantly impacted patients and financial concerns were widespread. Patients suffering from tinea for longer than three months experienced increased financial burden scores due to necessary treatments that forced them to reduce spending in other areas. Tinea incognito requires extended and stronger antifungal treatment lasting 6-12 weeks compared to uncomplicated tinea, which results in higher treatment costs [3]. Improper steroid use may result in antifungal resistance or unsuccessful treatment outcomes. Steroids alone do not create fungal resistance but misusing them postpones successful treatment and allows the development of more difficult infection situations like increased fungal load or semi-resistant strains.

Indian T. mentagrophytes strains show terbinafine resistance, according to emerging research, and improper use of steroid combinations might be worsening this problem [5,8]. Alternative azoles like itraconazole and voriconazole or other medical interventions may be needed in these cases, which result in increased care costs and complexity. The widespread TI signifies continual fungal spread among community members from a public health standpoint. Transmission of dermatophytes occurs through direct physical touch between people or contaminated objects like towels and bedding. Misdiagnosed lesions lead to inadequate treatment, which prolongs patients' infectious period and poses risks to their family members.

Research has shown that in family settings, steroid-treated tinea cases functioned as infection sources for other members [12]. According to U.S. CDC reports, a case of steroid-treated tinea capitis brought from overseas led to a family cluster infection, showing how individual health issues can escalate into community health problems when untreated [25]. The cultural stigma attached to fungal infections needs attention because many societies associate skin diseases with contagion risks and poor hygiene. Visible facial or arm lesions can lead to feelings of embarrassment or social isolation in patients. Tinea incognito should not be considered harmless because it significantly affects patients physically, mentally, and financially [13,18].

## Potential Solutions and Management Strategies

Effective management of tinea incognito in patients with skin of color requires both personalized care and systemic improvements within the healthcare system. On an individual level, the primary objectives are therapeutic efficacy and prompt resolution of symptoms. As noted by [1,3], the first critical step is the immediate discontinuation of the corticosteroid responsible for inducing the condition [1,3]. Patients should be informed that cessation of steroid use may temporarily worsen the rash due to the return of normal inflammatory processes; however, this response is essential for antifungal therapy to be effective.

In most cases, systemic antifungal treatment is necessary for complete resolution of tinea incognito, with topical therapies proving adequate only in rare situations [3]. Doctors recommend oral terbinafine at 250 mg daily for 4 to 6 weeks as primary treatment for extensive Tinea corporis/faciei because it is a fungicidal agent and offers convenience [11]. Patients who show signs of terbinafine resistance, especially in areas known to have resistance, or those who did not respond to terbinafine cream, should receive itraconazole at 100-200 mg twice daily for a period between 4 and 8 weeks [5,19]. To speed up their clearance, localized lesions can be treated with concurrent topical antifungals like sertaconazole, luliconazole, or ciclopirox. Health practitioners should consider weight-based dosing of griseofulvin or terbinafine for pediatric patients with either scalp involvement or extensive skin issues.

The entire treatment period is essential because stopping antifungals too early when rashes improve can lead to fungal regrowth [5]. Medical professionals must instruct patients to complete their entire medication regimen, which typically extends 2 to 4 weeks after clinical symptoms have disappeared. Another management aspect is treating any complications: Patients with steroid-induced atrophy or a secondary bacterial infection on top of TI may require additional treatment interventions. Antifungals may require support from gentle skincare and antibiotics when impetiginized pustules appear [4]. Public health priorities must


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focus on education and regulation to achieve effective outcomes. Both experts and professional organizations demand tighter regulation of high-potency steroid cream sales, specifically focusing on combination products in India [6,8].

The Indian government implemented a ban on numerous irrational steroid-antifungal combinations for over-the-counter sales in 2018 [6]. Enforcement of such bans, however, remains challenging. Medical specialists are working to educate pharmacists and general practitioners about the potential dangers of steroid misuse when treating fungal infections [7]. Medical education now stresses the phrase "If it's scaly, scrape it," advising clinicians to perform a KOH test for any scaly rash prior to prescribing steroid medications. Healthcare professionals in primary care settings can prevent diagnostic errors through algorithms and teledermatology consultations. One algorithm for tinea incognito appeared in Figure 2 earlier, which helps non-dermatologists evaluate fungal causes when disseminated.

Patient education is equally critical. Research shows that many patients using steroid-containing cream did not realize they contained potent steroids and were unable to differentiate between antifungal and steroid cream [13]. Dermatological associations have started public health campaigns in local languages to discourage the use of pharmacy mixtures for ringworm treatment. The Indian Association of Dermatologists, Venereologists, and Leprologists organized an initiative called "No Steroids for Fungal Infections." Patients need education about how steroids appear as immediate relief for itching while they mask symptoms and aggravate fungal infections [6].

Managing fungal infections requires appropriate antifungal treatments supported by proper hygiene practices. Patients who follow basic guidelines, including maintaining dry skin and avoiding sharing personal items, using hot water for laundry, and completing their medications, can effectively avoid re-infection [3,4]. Dermatologists in clinical settings are currently investigating additional tools to manage TI treatment. Dermoscopy serves as a diagnostic tool and enables monitoring of treatment effectiveness by tracking scale reduction and the appearance of "comma" hairs [23]. Patch testing for contact dermatitis is a suggested method in chronic tinea situations to identify steroid or ointment allergies, although it is considered supplementary [18].

Combating antifungal resistance is another aspect: In areas with high occurrence rates, laboratories conduct susceptibility tests on T. mentagrophytes isolates for terbinafine treatment and transition to itraconazole or voriconazole when resistance emerges [6,18]. Medical researchers have investigated combination therapy involving topical selenium sulfide or keratolytics with systemic drugs to achieve quicker fungal load reduction in difficult-to-treat cases. The educational responsibilities of dermatologists deserve special emphasis.

Each interaction with a TI patient represents a chance to educate about the dangers of steroid misuse. When patients recover, it is crucial to teach them how to distinguish between fungal and inflammatory conditions moving forward while warning them not to use steroid creams without medical advice to stop recurrence. The resolution to this hidden epidemic requires interrupting the cycle with proper diagnostic techniques and antifungal treatment for existing patients while implementing systemic reforms to limit incorrect steroid use within the community [6,8].

## Discussion

### Health Disparities and Access to Care

Tinea incognito exemplifies broader healthcare disparities. Resource-limited settings often see patients first approaching pharmacists or informal healthcare providers instead of dermatologists to seek help [6,7]. People in rural areas can easily buy powerful topical steroids over the counter and receive them for any rash without receiving a proper medical diagnosis [26]. Studies from South Asia report widespread unsupervised steroid use: A cross-sectional investigation discovered numerous female patients using potent steroid creams on their faces without proper medical direction before consulting a dermatologist [27,28].

A study among dermatology outpatients indicated that most pruritic rashes were treated initially with over-the-counter steroid creams [6]. Limited access to specialized care causes patients in underserved areas to depend on immediate solutions from pharmacies since they face financial or geographical barriers to obtaining formal medical treatment [13,21]. Patients from underserved areas seldom undergo preliminary mycological investigations like KOH smears, which can detect dermatophyte infections. People with easier access to dermatologists or lab facilities can receive quick fungal diagnoses and prevent steroid misuse [5].

The observed disparity identifies tinea incognito as an indicator of deficiencies in dermatologic healthcare provisions. Cultural factors also play a role. Topical steroids are popular skin-lightening agents and general blemish treatments in some skin-of-color communities [18,29]. Social pressures, together with steroid-promoting cosmetic advertisements, drive this improper use. Steroid-containing skin-lightening products have been reported to induce tinea incognito [30].

These situations demonstrate how social factors such as cultural standards for beauty and levels of health understanding led to steroid misuse among skin of color patients. We need to expand access to dermatologic care and offer culturally sensitive education to address these disparities. Teledermatology services alongside outreach programs could provide rural clinicians with tools to identify fungal patterns at early stages [31].


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Public health education programs need to alert people to the risks of steroid creams that lack regulation even while sold for cosmetic purposes and motivate individuals to seek early professional medical advice. To lessen the impact of steroid-modified tinea among vulnerable populations, it is essential to close the access gap and rectify misconceptions [32].

## Clinical Clues and Recognition

The diagnosis of tinea incognito becomes difficult because corticosteroids obscure the characteristic ring pattern of fungal inflammation [3,4]. Recent research has revealed clinical signs that help identify this elusive "great imitator," with eyelid or periocular skin involvement as one key indicator when facial dermatitis is suspected. Facial tinea modified by steroid treatment uniquely spreads to the eyelids, which typically remain unaffected in conditions like rosacea or seborrheic dermatitis. The occurrence of lesions with two distinct colorations serves as an indicator in patients who have brown or black skin tones [23]. Applying a strong steroid unevenly to an existing fungal infection result in blanching areas beside regions of post-inflammatory hyperpigmentation because of vasoconstriction [22].

Primary eczematous skin conditions rarely present with mixed color changes, which become more noticeable when observed in people with darker skin [11]. A chronic rash with steroid-induced skin atrophy, telangiectasia, or striae should lead healthcare providers to consider the possibility of steroid-altered dermatophytosis [33] discovered that dermoscopic telangiectasia and hypopigmented scarring occurred in facial dermatoses damaged by steroids [33]. Upon finding these changes in a lesion initially diagnosed as eczema or psoriasis, medical professionals must reevaluate and perform fungal tests (e.g., KOH prep or culture).

A rash that shows initial improvement to steroids but later deteriorates and takes unusual shapes or appears in unexpected locations signals tinea incognito [34]. Diagnostic delays occur frequently because TI exhibits symptoms like those of many dermatoses [35] described a case in which a patient was initially treated for lupus erythematosus without improvement, only achieving clinical resolution after a correct diagnosis of a fungal infection was made [35]. Additionally, in a Spanish pediatric series, most of the 54 tinea incognito cases received initial diagnoses of dermatitis, which delayed proper treatment [36]. When eczema treatment fails to produce the expected results, clinicians should strongly suspect alternative diagnoses and test their hypothesis by stopping steroid use to observe a rebound effect that displays typical signs of tinea infection [1]. Figure 3 demonstrates the standard TI diagnostic pathway, which begins with misdiagnosis and steroid treatment before confirming dermatophytosis and implementing the correct treatment.

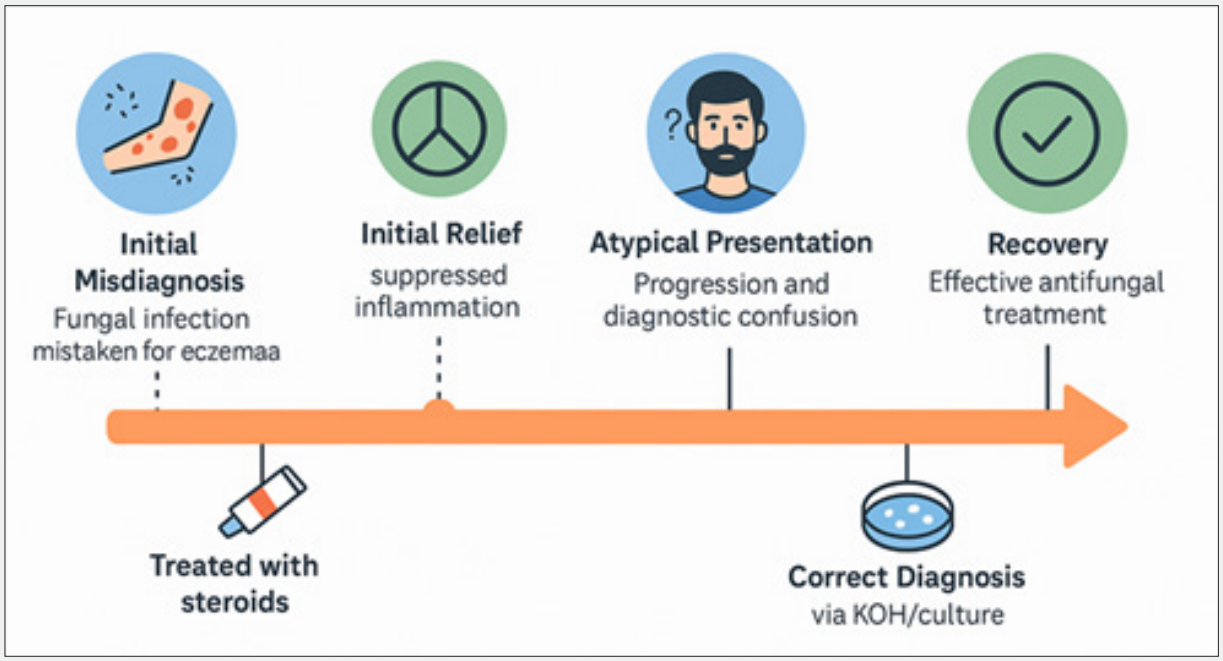


**Figure 3:** Schematic Timeline of a Tinea Incognito Case.

Misdiagnosis and steroid treatment suppress inflammation, allowing fungal spread and atypical presentation. Proper diagnosis and antifungal treatment often follow multiple failed therapies [1,3,4].



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## Global and Epidemiologic Perspectives

Tinea incognito was first described in medical literature in 1968 but has re-emerged as a global dermatologic concern since the mid-2010s. The condition has become particularly severe in South Asia, where it poses a significant and escalating public health challenge [8]. India experiences a widespread epidemic of steroid-modified dermatophytosis [5,6]. Recent research from India shows that between 30–70% of patients with tinea infection had used topical steroids before receiving an accurate diagnosis [6,7,20].

Thomas et al. (2020) found extensive improper use of over-the-counter steroid mixtures in rural areas of North India, which caused numerous tinea cases to remain chronic for extended periods because of unsteady steroid application [6]. Also, (2017) [5] demonstrated that Trichophyton rubrum was the dominant infecting species among tinea incognito patients who had all been exposed to steroids previously [5]. [19] description of India's steroid misuse as "harmful and out of control" supports these conclusions [8]. Medical professionals in India frequently observe widespread and unusual dermatophyte infections affecting the face, groin, or entire body because of the steroid craze [3,8].

Other regions are reporting similar trends. The easy accessibility of steroid creams in Pakistan, combined with their marketing as fairness products, has resulted in increased cases of steroid-modified tinea [15]. The Middle East has also seen cases: A Saudi Arabian study evaluated how tinea incognito complicates diagnosis [3], while research from Iraq showed widespread misuse of steroids by women who use them for cosmetic reasons [37]. The scarcity of detailed epidemiologic data from Africa combined with the widespread use of over-the-counter steroids indicates that undiagnosed cases of steroid-modified tinea probably remain unrecognized in many African countries [10].

Tinea incognito occurs less frequently across Europe and North America, but it does appear because many cases result from incorrect medical diagnoses. Medical cases from Italy and Serbia describe facial tinea incognito, misdiagnosed as psoriasis or rosacea [24,34]. Research in Italy spanning 15 years revealed intermittent tinea incognito cases caused by T. rubrum or T. mentagrophytes, which shows that misdiagnoses lead to TI even under strict prescription regulations [38]. Interest in TI is increasing throughout Latin America. The Ugalde-Trejo et al. (2024) [12] study establishes that steroid-modified dermatophyte infections occur globally and advocates for additional research focused on specific geographic regions [12]. Table 3 presents selected studies on steroid-modified tinea from 2015 to today, highlighting shared characteristics among various regions.

**Table 3:** Global Reports of Steroid-Modified Tinea ("Tinea Incognito") by region.

| Study (Author, Year) | Region | Main Pathogen(s) | Key Findings |
|---|---|---|---|
| Verma et al., 2015 [8] | India | T. mentagrophytes (Type VIII), T. rubrum | Widespread steroid misuse, resistance rising |
| Thomas et al., 2020 [6] | India (Rural North) | T. rubrum | Rampant OTC steroid-antifungal use; delays common |
| Dutta et al., 2017 [5] | India (Assam) | T. rubrum, T. mentagrophytes | High steroid use; 85% KOH+; facial sites often involved |
| Fasih et al., 2020 [15] | Pakistan | T. rubrum | Fairness creams contribute to atypical presentations |
| Kokandi, 2024 [3] | Saudi Arabia | Not specified | Facial tinea incognito mimicking other dermatoses |
| Sagban et al., 2024 [37] | Iraq | Not specified | Cosmetic steroid misuse among women |
| Romano et al., 2006 [38] | Italy | T. rubrum, T. mentagrophytes | Misdiagnosed tinea incognito over 15 years |
| Milčić et al., 2024 [24] | Serbia | T. rubrum | TI confused with rosacea or psoriasis |
| Ugalde-Trejo et al., 2024 [12] | Latin America | T. mentagrophytes, T. rubrum | Highlights global underreporting; calls for surveillance |

## Nomenclature and Classification

The terminology surrounding this condition has evolved [10] described how some authors choose to use the Latin phrase tinea incognita, which translates to "unseen" tinea, instead of the term "incognito." They recommend using tinea incognita in medical literature because it meets grammatical standards. According to [3], the term "tinea incognito," which originates from Ive and Marks' 1968 description, continues to be the preferred term in modern literature [3].

The debate exists beyond linguistic nuances about which name most accurately describes this entity. Many Indian dermatologists favor the term "steroid-modified tinea" or "steroid-modified dermatophytosis," which directly highlights the cause of the altered presentation. The misuse of topical corticosteroids has been discussed in multiple studies [19,21] reported "steroid-modified dermatophytosis" to describe the numerous cases in India resulting from corticosteroid misuse [5] introduced "steroid-modified tinea" in a BMJ report highlighting the outbreak of unusual tinea cases in India [19]. The term "tinea incognito"


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was chosen for this discussion due to its historical recognition and understanding while recognizing that it describes the same condition as steroid-modified tinea.

This condition presents itself in any body location and with any type of dermatophyte infection, including documented cases of tinea incognito faciei, corporis, cruris, and tinea capitis in children [4,16] suggested classification systems based on infection location or severity, but healthcare professionals still use traditional tinea categories with special notations for steroid modification [3]. The principal linking idea shows that immunosuppressive treatments before diagnosis-topical steroids being common but tacrolimus and oral steroids are rarely involved [1]-have changed or hidden dermatophyte infection features. Regardless of the nomenclature one prefers, the crux is the same: This superficial fungal infection shows a disguised clinical appearance due to incorrect corticosteroid treatment.

## Treatment Challenges and Resistance Trends

Doctors find tinea incognito infections more complex to manage than typical ringworm cases. Tinea incognito infections tend to become widespread by the time of diagnosis because they spread unchecked during steroid-induced immunosuppression [1,3], which results in compromised skin that may appear thin, dignified, or show acneiform eruptions from steroid side effects. A dual approach in treatment is required to combat both the fungal infection and any skin damage from steroid use.

Systemic antifungal treatment remains the primary therapeutic approach for moderately severe to severe tinea incognito [3,11]. A small number of lesions may respond to topical antifungals alone. However, most patients need oral therapy with medications like terbinafine or itraconazole for several weeks to eliminate the deep infection [4]. The discontinuation of corticosteroids produces a paradoxical effect whereby patients encounter a severe inflammatory response with reddened and pustular lesions that become intensely pruritic when their previously suppressed immune systems reactivate [1].

Patients must understand that the rebound flare represents a typical response and supports the fungal infection diagnosis known as the “Id reaction” or tinea recoil phenomenon. It is crucial to sustain antifungal treatment during this stage, while doctors may introduce a gentle, non-steroidal anti-inflammatory or cooling lotion to assist patients through the initial week of rebound symptoms [1,4]. When patients maintain regular antifungal treatment, the infection will clear after eliminating the fungus, while the post-steroid inflammation is resolved naturally. In recent times, numerous treatment-related challenges have arisen.

A significant treatment challenge involves the emergence of antifungal resistance among chronic dermatophyte infections. The newly designated Trichophyton indotineae strain has emerged as an aggressive pathogen in India and spreads mainly through patients who suffer from steroid-modified tinea [19]. The aggressive fungal strain displays substantial resistance to terbinafine, which serves as the primary medication for ringworm treatment [5]. Dermatologists now face tinea incognito cases that do not improve under usual terbinafine treatments. The best treatment approach in these cases often involves using other azole antifungals like itraconazole and voriconazole or implementing higher doses and longer treatment times [3,19].

Verma (2017) warned about an impending period when typical dermatophytes will act as “superbugs,” making routine infections hard to treat [19]. Medical reports show that patients with widespread steroid-altered tinea requiring large-area treatment needed combined therapy using oral and topical antifungals and keratolytic washes for a few months to attain complete recovery [21,27]. Extended treatment durations and the use of second-line medications add financial burdens to healthcare systems and trigger safety concerns related to drug side effects such as liver damage from systemic antifungals.

Healthcare providers face additional problems when treating the long-term effects of steroid misuse. Patients who used strong steroids for extended periods may continue to experience skin atrophy, hypopigmented scars, and telangiectasia after fungal infection resolution [39]. Cosmetic damage becomes distressing for patients, and treatment for these effects (using lasers and topical retinoids) adds to medical care requirements. The treatment of steroid-induced skin changes represents an extra facet of patient care [18].

Treatment of tinea incognito calls for a multifaceted strategy, including systemic antifungal medications and anti-inflammatory adjuvant therapies, as well as management of steroid-related skin alterations alongside vigilant monitoring for relapse or treatment resistance. Patients need regular follow-up visits because their chance of experiencing another recurrence increases when treatment is inadequate or when they return to using steroids prematurely.

## Advocacy, Education, and Policy Response

The emergence of tinea incognito in specific areas has generated responses from healthcare specialists and policymakers. Medical organizations from countries with high prevalence rates have demanded stricter control over steroid sales [6,8]. Dermatologists in India campaigned to prohibit the sale of over-the-counter steroid-antifungal combination creams. The government established restrictions in 2018 on multiple irrational steroid combinations as a measure to address medical concerns [8,6]. Although the regulatory change represented progress, its practical implementation remains problematic because numerous pharmacies continue to distribute high-strength steroids without sufficient supervision [7].

Similar advocacy is occurring elsewhere. Experts demand improved regulations of cosmetic fairness creams that hide


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steroids in their formula [30] and stronger advertising standards for these products. Education is equally crucial. It is essential that general practitioners, pharmacists, and traditional healers receive training to identify fungal infections and understand the risks associated with steroid misuse. Even brief educational interventions can help: A study by Pippin [31] showed that teaching primary care physicians how to identify tinea increased both their referral rates and their use of KOH testing methods. Long-term patient education stands out as the most vital solution. Patients with steroid-modified tinea frequently did not know inappropriate cream caused their condition.

According to research by [27], dermatologists should use TI cases to educate patients on correctly applying topical steroids [21,27]. Patients can prevent future medical errors by understanding that only eczema responds to steroid treatment, while fungal infections do not [13]. Community outreach can also correct myths. Strong creams create a false impression among many community members by making rashes look better before patients realize that reducing redness does not mean their condition is cured [27]. Public health initiatives that partner with local media outlets can educate people about the risks of using steroids for undiagnosed rashes, which might aggravate infections and result in extended and expensive health complications. The fight against misinformation represents another important aspect of the challenge.

Social media misinformation has led to "corticophobia" in some groups while other populations continue to overuse steroids. Balanced messaging must be established to avoid demonizing steroid use while promoting appropriate applications. Topical corticosteroids serve valid medical functions, such as treating eczema or psoriasis, when used under medical supervision, but they do not function as antifungal medications or cosmetic products [29] recommend creating educational materials that are easy for everyone to understand in local languages while involving community leaders and using personal stories about steroid misuse that causes disfigurement as methods to enhance outreach efforts [29].

Policy advocacy efforts must persist in enhancing regulatory standards. The policy could enforce stricter penalties for illegal high-potency steroid sales alongside mandatory prescription verification and oversight of pharmaceutical marketing. Global partnership benefits healthcare systems by exchanging information about antifungal resistance patterns and effective health intervention methods between nations. To stop steroid misuse effectively, both policy enforcement measures and grassroots educational initiatives need to be implemented together. Medical professionals must not only treat affected patients but also confront the underlying environmental and systemic factors that allow tinea incognito to persist. This requires a comprehensive approach that integrates long-term public policy development with robust patient advocacy and ongoing professional education.

## Limitations

The narrative review encounters multiple limitations. The scarcity of randomized controlled trials on tinea incognito means that observational studies and expert opinions provide most of the existing data, subject to inherent bias. Literature likely exhibits publication bias because researchers prefer to report more severe or unusual cases, which skew our understanding of the disease burden and treatment outcomes.

The review analyzed studies between 2015 and 2025, but regional data gaps mean trends in under-studied regions like Africa and parts of Latin America remain unclear. The absence of uniform diagnostic criteria for tinea incognito obstructs comparison between studies and collective interpretation of results. Our findings maintain relevance and applicability because global clinical observations show a converging pattern despite limitations.

## Future Research Directions

The narrative review reveals major gaps in our current knowledge about tinea incognito, which opens multiple directions for future research. The management of this condition suffers from a shortage of robust evidence. The medical community lacks randomized controlled trials for steroid-modified tinea treatment, while current guidance relies on case series data, expert input, or findings from typical tinea research [1,3]. We need controlled studies to establish the best antifungal treatment plans for extensive or steroid-altered dermatophytosis by testing higher doses of terbinafine against itraconazole and evaluating combination therapy effectiveness with systemic and topical antifungals to enhance recovery speed.

The development of terbinafine-resistant dermatophytosis searches for new antifungal treatments and methods is both necessary and timely. Researchers should investigate new antifungal options in complex TI cases, including oteseconazole or boron-based antifungals and adjunctive treatments like photodynamic therapy. Mycological research should focus on tracking the distribution patterns of resistant strains such as T. indotineae. Conducting surveillance studies throughout Asia and other regions will assist in determining the prevalence of this strain and identifying the genetic mechanisms (such as SQLE gene mutations) responsible for its resistance [10].

The study of dermatophyte mutations requires international collaboration, like antibiotic resistance monitoring because these fungal mutations can easily move across international boundaries through travel and interpersonal human contact. Another research direction is diagnostic innovation. The main issue with tinea incognito continues to be diagnostic delays.


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Point-of-care diagnostic tools that quickly identify dermatophytes would eliminate lengthy periods of incorrect treatment. Would smartphone-based dermoscopic algorithms alongside AI-driven apps play a role in identifying subtle characteristics of tinea infections? Researchers are developing machine-learning techniques to analyze dermoscopy images that can differentiate fungal infections from eczema while further validation in skin of color remains essential.

Enhanced fungal identification methods such as polymerase chain reaction (PCR) tests on skin scrapings may deliver quicker and more precise diagnoses than traditional culture while also identifying resistance genes. There is a crucial requirement for research to incorporate these diagnostic tools into primary care settings, which experience the highest rates of misdiagnosis [1,3]. Outcomes research holds the potential to determine the actual public health burden of steroid-modified tinea.

Research focused on quality-of-life metrics, economic burdens, and long-term skin complications in patients will enable better communication of this issue's significance to health authorities. To what extent can work productivity loss and school nonattendance be linked to chronic tinea incognito? Initial studies reveal that many patients experience moderate to severe impacts on their quality of life and substantial financial losses due to inappropriate treatments [27,25]. Improved data collection could lead to increased financial support for intervention programs.

Research into educational interventions should be conducted alongside other studies. How can we develop optimal teaching strategies for rural populations to learn about proper cream applications? Educational community trial programs that assess the effectiveness of printed leaflets versus radio campaigns versus social media outreach could establish best practices for health behavior modification and decreasing steroid misuse. Researchers from various disciplines, including social science experts, could develop well-balanced public health messages that clarify appropriate steroid usage by studying both corticophobia and steroid misuse, which represent misinformation extremes [25].

Future research endeavors must focus on continued documentation and publication of worldwide case reports and series. When these data sets are compiled, new tinea incognito information from under-reported areas like Africa, Southeast Asia, and South America will lead to a better epidemiological understanding. A centralized registry or multicenter international studies that combine cases of steroid-modified tinea would enhance existing medical literature. Through these investigations, researchers could discover trends such as differences in dominant dermatophyte species or steroid potency variations, which could lead to customized treatments.

In summary, continued research is needed on multiple fronts: Future research must pursue optimal treatment algorithms, explore resistance mechanisms, and develop diagnostic tools and educational strategies alongside global surveillance. The medical community will gain improved abilities to fight this hidden epidemic by eliminating these identified gaps. The author argued that our approach should focus on solving the root problem rather than just alleviating the symptoms, implying we must detect fungal infections early to halt improper treatment practices. The future reduction of tinea incognito cases depends on research and innovation to achieve our target.

## Conclusion

Tinea incognito, a dermatophytic infection altered by inappropriate topical corticosteroid use, poses a substantial diagnostic and therapeutic challenge, particularly among patients with skin of color. The misuse of corticosteroids suppresses the inflammatory response, leading to atypical presentations that mimic other dermatoses, thereby complicating clinical recognition. This issue is especially pronounced in skin of color populations, where subtle clinical features may be overlooked, and where disparities in healthcare access and education increase the likelihood of unregulated steroid use.

The condition affects a wide age range, from children with steroid-masked tinea capitis to older adults suffering from persistent, modified tinea corporis. Patients with tinea incognito often experience delayed diagnosis and treatment, resulting in more extensive infections, prolonged disease course, and a higher risk of complications such as secondary bacterial infections and antifungal resistance. Unlike classic tinea, these modified infections are harder to identify visually and often require diagnostic tools like KOH preparation or dermoscopy to confirm fungal involvement.

Misdiagnosis and mistreatment further extend the disease burden, both physically and psychologically, especially in communities already facing systemic barriers to dermatologic care. Effective management of tinea incognito hinges on early recognition, appropriate systemic antifungal therapy, and comprehensive patient education. Clinicians must maintain a high index of suspicion when evaluating unusual or treatment-resistant rashes and routinely inquire about prior or ongoing steroid use. Ensuring patients complete their antifungal treatment regimens and understanding the risks of unsupervised steroid application is crucial to preventing recurrence.

Broader public health interventions, including educational initiatives for healthcare providers and communities, as well as tighter regulation on over-the-counter steroid access-are also critical in curbing new cases. Ultimately, tinea incognito is both a clinical and public health concern. It reflects broader issues in dermatologic practice, including diagnostic oversight, medication misuse, and healthcare inequities. Addressing this hidden epidemic requires a dual strategy of prevention and timely intervention. By prioritizing culturally competent care, investing in targeted education, and implementing policy reforms, the medical community can reduce the burden of tinea incognito, particularly


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in skin of color populations, and improve dermatologic outcomes across diverse patient groups.

## Author Contributions

Conceptualization, CP; methodology, CP; software, CP; validation, CP, CG, and EW; formal analysis, CP, CG, and EW; investigation, CP and CG; resources, CP; data curation, CP; writing-original draft preparation, CP, CG, and EW; writing-review and editing, CP, CG, and EW; visualization, CP; supervision, EW; project administration, C.P. All authors have read and agreed to the published version of the manuscript.



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