

Tinea Incognito

Tinea incognito is a dermatologic condition that represents a variant of fungal infection, resulting from the inappropriate use of topical corticosteroids on fungal skin lesions. It is considered a clinical misrepresentation of more common dermatophyte infections such as *tinea corporis* (ringworm) and *tinea capitis* (scalp ringworm), leading to a change in both the appearance and extent of the infection. Typically, fungal infections present as a circumscribed, scaly, and erythematous rash, but with corticosteroid application, the inflammation is reduced, leading to a modified clinical appearance known as tinea incognito. Recognizing and managing this condition requires understanding its pathophysiology, appropriate diagnostic methods, and treatment strategies.

Pathophysiology and Clinical Presentation

Tinea incognito is most commonly caused by dermatophytes, particularly *Trichophyton rubrum*, which is one of the most prevalent pathogens responsible for skin fungal infections. These infections generally begin as flat, scaly rashes that develop into raised, circular lesions with a distinctive scaly border. The center of the lesion often becomes hypopigmented or brown, forming the classic "ring" appearance commonly seen in tinea corporis. In typical cases, the lesion enlarges over time, and the raised border becomes more pronounced.

However, when a topical corticosteroid is applied to the lesion, it suppresses the local inflammation associated with the fungal infection, altering the characteristic appearance of the lesion. The result is tinea incognito, a condition where the fungal infection loses its original presentation. The lesion may become more extensive, losing the typical ring shape and often becoming less erythematous and poorly demarcated. Affected areas, particularly the face and hands, may resemble other inflammatory skin conditions such as eczema or psoriasis, making diagnosis challenging.

The most prominent clinical features that differentiate tinea incognito from untreated superficial fungal infections are the following:

- Loss of the circular shape and advancing border.
- The lesion may become more extensive and less localized.
- The central area of the lesion may display erythema or a red rash, rather than the typical hypopigmented or scaly center.
- The rash often appears more diffuse, lacking the raised border typically seen in fungal infections.

Pathogenesis of Tinea Incognito

The use of topical corticosteroids suppresses the inflammatory response triggered by the fungal infection, leading to initial clinical improvement. However, while the inflammation is reduced, the fungal infection is not eradicated, and it may continue to thrive, unimpeded by the body's immune response. The altered immune environment caused by corticosteroids allows the fungus to proliferate, which eventually results in the clinical appearance of tinea incognito. This cycle of apparent improvement followed by worsening fungal growth is common and can lead to delayed or incorrect diagnoses.

Diagnosis

The diagnosis of tinea incognito is primarily clinical, but laboratory testing can aid in confirming the presence of fungal infection. A skin scraping microscopic examination is the most commonly used diagnostic tool, allowing for the identification of fungal hyphae. It is essential to cease the use of topical corticosteroids for a few days before performing the skin scraping to ensure that the test results are reliable. A fungal culture may be considered in rare cases, although it is not typically required for diagnosis in most situations.

It is important to distinguish tinea incognito from other inflammatory skin conditions that might share a similar appearance, such as eczema, psoriasis, or seborrheic dermatitis. This differentiation is crucial because the treatment strategies for these conditions are significantly different from those for fungal infections.

Treatment

The first and most critical step in treating tinea incognito is the cessation of topical corticosteroid use. Corticosteroids not only interfere with the body's natural immune response but also worsen fungal infections over time. Once the corticosteroids are discontinued, treatment should be directed at eradicating the fungal infection.

- **Topical Antifungal Agents:** For mild cases of tinea incognito, topical antifungal treatments are effective. Common antifungals such as clotrimazole, miconazole, or terbinafine cream are first-line treatments. These agents work by inhibiting the synthesis of ergosterol, a key component of the fungal cell membrane, thereby disrupting the integrity of the cell and leading to cell death. Treatment should continue for at least one week after the resolution of symptoms to ensure complete eradication of the infection.
- **Oral Antifungal Medications:** For more severe or extensive cases of tinea incognito, oral antifungals may be necessary. Terbinafine and fluconazole are commonly prescribed oral antifungals. These medications work by inhibiting fungal cell membrane synthesis and are particularly effective in treating deeper or widespread infections.

- **Antibiotics:** If the lesions become secondarily infected with bacteria, systemic antibiotics may be required to treat the bacterial infection. This is especially important if there is evidence of cellulitis or open, draining lesions.

Prevention and Management

Prevention of tinea incognito involves the careful use of topical corticosteroids, particularly when fungal infections are suspected. Patients should be educated about the importance of proper diagnosis and the risks of using corticosteroids without appropriate medical supervision. Prompt and effective treatment of dermatophyte infections with antifungal medications can prevent the development of tinea incognito. Regular follow-up with a healthcare provider is recommended to ensure the resolution of the infection and to avoid recurrence.

Conclusion

Tinea incognito is a unique and challenging dermatophyte infection that arises due to the inappropriate use of topical corticosteroids. This condition can present with altered clinical features that make it difficult to distinguish from other inflammatory skin diseases. Early recognition and proper treatment, including the discontinuation of corticosteroids and the use of antifungal agents, are crucial for effective management. Understanding the pathophysiology and clinical features of tinea incognito is essential for preventing misdiagnosis and ensuring appropriate treatment outcomes.

References

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