

# Tinea Incognito — Incorrect Initial Diagnosis. Case Series Presentation with Emphasis on the Mycological Examination

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## ABSTRACT

Tinea incognito defines a modified clinical aspect of a tinea following an immunosuppressive therapy, mostly with potent topical steroids. Its diagnosis may be delayed by its delusive appearance, especially in small children and young adults. We present a series of 2 cases of Tinea incognito developed at different ages and incorrectly diagnosed initially, where the clinical diagnosis was followed by mycological examination and positive therapeutic test with antifungal medication, helping to avoid unnecessary laboratory investigations and to prevent further complications.

**Keywords:** tinea incognito, diagnostic, mycology, therapy

## INTRODUCTION

Tinea incognito defines a modified clinical aspect of a tinea following an immunosuppressive therapy, mostly with potent topical steroids. Although the treatment of tinea incognito is simple, its diagnosis is delayed by its delusive appearance, especially in small children and young adults.

## CASE SERIES PRESENTATION

*Case 1:* A 4-year-old healthy female child presented with a 2-month history of moderately itchy erythematous large plaque on the face, with small pustules scattered at the edge of the lesion (Figure 1A). The mother described the appearance of an initially small erythematous scaly macule localized on the

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**FIGURE 1.** **A** – Tinea incognito in a 4-year-old female child; **B** – the same patient with clinical improvement after two weeks of treatment

right nasolabial area 2 months before, diagnosed as acute irritant contact eczema and treated with potent topical steroids for 2 weeks. The lesion eventually spread to the right malar area and became intensely erythematous, associated with pruritus and covered by small scales. A second diagnosis of atopic dermatitis was followed by administration of systemic antihistamines and a 7-day-cure of systemic steroids (10 mg/day of prednisone); as the lesion continued to worsen, self-medication with another potent topical steroid was applied in association with antibiotics and iodine. The facial lesion persisted during the following weeks, gradually extending and becoming extremely itchy.

Skin biopsy was refused by the mother who was afraid of the resulting scar on the face. Direct mycological examination of scrapings from different points of the plaque and from pustules was positive, and a treatment with systemic fluconazole was immediately recommended. Dramatic improvement was observed within the first two weeks of treatment (Figure 1B). Close follow-up of the child was recommended for 1 month, no recurrences were noticed.

Informed consent on the publication of the case images was obtained from the parents of the child.

**Case 2:** A 24-year-old woman addressed to Dermatology for a long history of an itchy skin lesion localized on the abdominal wall and thighs.

Dermatological examination revealed multiple, concentric erythematous ring-like plaques, with normal-appearing skin in the central part of the lesions, scattered pustules and slight desquamation covering the abdominal area and the inner part of the thighs (Figure 2A, 2B). The patient admitted to using two potent steroid creams on the abdomen and thighs continuously for the last 2 months for a presumed diagnosis of atopic eczema. Clinical suspicion of Tinea incognito was confirmed by the presence of fungal elements observed on direct microscopic examination of the skin scrapings taken from the affected area and treated with 10% potassium hydroxide; *Trichophyton rubrum* was isolated in culture. Complete clinical and mycological cure were achieved after 4 weeks of treatment with systemic itraconazole (200 mg per day orally) associated with topical antifungal cream



**FIGURE 2.** **A** – Large erythematous scaly plaques on the abdominal area; **B** – concentric erythematous ring-like plaque, pustules at the edge of the lesion, discrete desquamation on the inner part of the thigh; **C** – normal skin aspect after 4 weeks of treatment

based on terbinafine (Figure 2C). Clinical examination after 4 weeks of treatment showed complete resolution of the cutaneous lesion and the patient was not further followed-up. Informed consent on the publication of the case images was obtained from the patient. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

## DISCUSSION

In practice, the clinical picture of tinea incognito is misleading, the majority of cases receiving correct treatment after a long delay of time and after different wrong topical and systemic treatments.<sup>1,2</sup>

Tinea incognito is in fact a steroid-modified cutaneous response as a consequence of extensive use of steroids by patients and by non-dermatologists. It was reported as representing approximately 40% of all tinea infections, although in all cases it was confused with psoriasis, atopic eczema, impetigo, lupus erythematosus, or rosacea.<sup>3,4</sup>

The incidence of tinea incognito appears to have increased over recent years due to easier access to topical steroids by patients and hasty use of steroids by physicians (without confirmation of diagnosis in so-called “uncertain” skin lesions).<sup>5,6</sup> It has been demonstrated that potent topical steroids can increase the number of hyphae present on the surface of the skin in fungal infections and can completely change the clinical picture of the skin disease.<sup>7</sup> Different fungi have been isolated in tinea incognito lesions during recent years (*Trichophyton verrucosum*, *T. mentagrophytes*, *T. rubrum*, *Epidermophyton floccosum*, *Microsporum canis*, *T. violaceum*, *T. schoenleinii*, *T. erinacei*), the most involved one being *T. rubrum*.<sup>8</sup>

## CONCLUSION

It is important to think of the diagnosis of tinea incognito in a case of atypical clinical lesion treated with steroids, in the absence of clear anamnesis, to perform a simple noninvasive mycological examination; a positive therapeutic test with antifungal medication can be of help in some cases. This approach can avoid unnecessary laboratory investigations, including skin biopsy, especially in children, and can prevent further complications.

## CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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