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Case report

Tinea Incognito Due to *Trichophyton Rubrum* – A Case Report

Marija Kaštelan, Larisa Prpić Massari and Ines Brajac

Department of Dermatovenerology, School of Medicine, University of Rijeka, Rijeka, Croatia

A B S T R A C T

Tinea incognito is a dermatophyte infection modified by inappropriate and often prolonged use of topical steroids. We present a case of tinea incognito in a 72-year-old woman, referred by her family physician who had unsuccessfully treated the lesions for 3 weeks with topical steroid cream. Physical examination revealed multiple nummular scaly papules and plaques which spread over her arms and trunk. The lesions were circular, erythematous, sharply demarcated with raised scaly edge some coalescing to form moderately infiltrated areas. Direct microscopy was positive for fungal hyphae. Fungal culture on Sabouraud's agar grew Trichophyton rubrum. *The patient was successfully treated with oral terbinafine 250mg daily and 1% clotrimazole cream twice daily. The present case highlights the importance of considering a dermatophytosis when clinical presentation of dermatosis is atypical. Disseminated scaly infiltrate lesions should be investigated for fungal infection in patients previously treated with steroids, as to avoid misdiagnosis and spread of infection.*

Key words: *tinea incognito, Trichophyton rubrum, dermatophytosis*

Introduction

Tinea incognito was first described by Ive and Marks in 1968 as a dermatophyte infection modified by inappropriate and often prolonged use of topical steroids[1]. Normally, characteristic lesions of dermatophyte infection are annular, sharply defined with a raised scaly margins and typical central clearing. In patients on topical steroids, the clinical picture is modified, scaling is lost and the inflammation is reduced, thus the correct diagnosis and treatment is often delayed[2]. Tinea incognito is also a diagnostic challenge for dermatologist because it may mimic a variety of different dermatosis. Rosacea-like, psoriasiform and erythroderma-like presentation of tinea incognito have been described in the literature[3,4]. Here, we present a case of tinea incognito in a 72-year-old woman due to *Trichophyton rubrum* infection.

Case Report

A 72-year-old housewife presented at the outpatient clinic of the Department of dermatology at our hospital with a 2 month history of expanding lesions on the arms and trunk. She was referred by her family physician who had unsuccessfully treated the lesions for 3 weeks with topical steroid cream (0.05 betamethason dipropionate). Physical examination revealed multiple nummular scaly papules and plaques which spread over her arms and trunk (Fig 1). The lesions were circular, erythematous, sharply demarcated with raised scaly edge, some coalescing to form moderately infiltrated areas. The patient complained of moderate pruritus. The patient was otherwise healthy, not receiving any medications and had an unremarkable medical history. Results of routine laboratory tests were within normal limits. Direct microscopy of scraping specimens taken from the skin lesions was positive for fungal hyphae. Fungal culture on Sabouraud's agar grew *T. rubrum*. The diagnosis of tinea incognito caused by *T. rubrum* was made. The patient was treated with oral terbinafine 250mg once daily and 1% clotrimazole cream twice daily. At the follow up, after 4 weeks, the patient was clinically healed and both, potassium hydroxide examination and fungal culture were negative.

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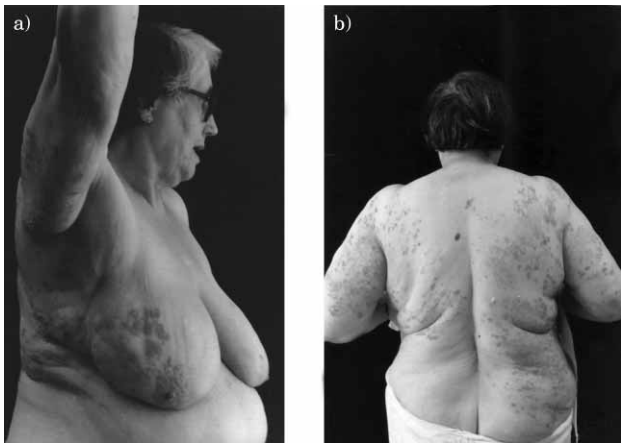

Fig. 1. A patient with tinea incognito due to Trichophyton rubrum. Note the a) intense inflammation with nummular infiltrated lesions on patient's breasts and right arm partly coalescing to form moderately infiltrated areas and b) circular, erythematous papules and plaques, some with raised scaly edge over patient's arms and trunk.

Discussion

Topical application of steroids may modify the presentation of the dermatophyte infection. Tinea incognito may mimic a number of other dermatosis including lupus erythematosus, rosacea, contact dermatitis and even erythema migrans[1,3,5]. The pathogenesis of tinea incognito is mostly due to a steroid-modified response of the host to fungal infection and not to a direct pharmacological effect on the fungus[6]. Potent fluorinated steroids most likely produce tinea incognito, but even non-fluorinated topical steroids can modify clinical picture of tinea[7]. A rise of tinea incognito infection in recent years is partly due to an increasing number of patients who self-treat their skin problems with superpotent topical steroids that are obtained »over the counter«. In recent study, Solomon et al. reported several cases of tinea incognito due to superpotent topical steroids available over the counter[8]. More recently, a few cases of tinea incognito due to use of topical tacrolimus and pimecrolimus were reported in literature[9-11]. The clinical appearance in such cases was similar to tinea incognito induced by topical steroids.

Here, we report a case of tinea incognito in a 72-year-old woman due to *T. rubrum* which is a frequent cause of fungal infections in adults. Previous steroid treatment, prescribed as a result of incorrect diagnosis, masked the early clinical manifestations of the disease in our patient and causes the spread of skin lesions. *T. rubrum* is one of the most common anthropophilic dermatophyte throughout the world and the most frequently isolated dermatophyte in tinea incognito[12-14]. In their review of 100 cases of tinea faciei, Alteras et al. reported *Trichophyton rubrum* and *mentagrophytes* as the most frequently isolated dermatophytes in both cases of tinea faciei and tinea incognito[15].

T. rubrum usually causes mild lesions with little inflammation, so such clinical picture can be therefore neglected by patients and misdiagnosed by physicians. However, if systemic or local immunity of the host is compromised, inflammatory lesions may develop[16,17]. The most prevalent clinical manifestation caused by *T. rubrum* is eczema-like clinical picture, although pityriasis-rosea-like, a form resembling atopic dermatitis, contact dermatitis, eczema associated with venous failure or nummular eczema have been reported in healthy adults[12]. Recently, a few cases with pustular inflammatory skin lesions caused by *T. rubrum* were described in literature[18,19].

Although localized dermatophyte infections respond well to topical antifungals agents, tinea incognito should be treated with oral antifungals along with cessation of topical steroid use. Terbinafin as well as the azoles like itraconazole and fluconazole are preferred over griseofulvin in treating tinea incognito[20].

The present case highlights the importance of considering a dermatophytosis when clinical presentation of dermatosis is atypical. Moreover, because of the reported self-treatment with topical steroids, disseminated scaly infiltrate lesions should be investigated for fungal infection in patients previously treated with steroids, as to avoid misdiagnosis and spread of infection.

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M. Kaštelan

Department of Dermatology, School of Medicine, University of Rijeka, Krešimirova 42, HR-51000 Rijeka, Croatia
e-mail: marijakastelan@yahoo.com

TINEA INCOGNITO UZROKOVANA GLJIVOM *TRICHOPHYTON RUBRUM* – PRIKAZ SLUČAJA

S A Ž E T A K

Tinea incognito je gljivična infekcija modificirana neodgovarajućom i često predugom uporabom topičkih steroidnih pripravaka. U radu je prikazan slučaj tinea incognito u 72-godišnje žene prethodno pogrešno liječene topičkom steroidnom kremom tijekom 3 tjedna. Kliničkim pregledom uočene su na koži gornjih ekstremiteta i trupa brojne numularne, ljuskave papule i ploče. Kožne promjene bile su okruglog oblika, crvenkaste boje, oštro ograničene od okolne kože, uzdignutog ljuskavog ruba, te su mjestimice konfluirajući tvorile blago infiltrirane areale. Izravnim mikroskopiranjem materijala nađene su hife, a u kulturi na Sabouraudovom agaru porasla je gljiva *Trichophyton rubrum*. Bolesnica je uspješno izliječena primjenom terbinafina u dozi 250 mg dnevno uz istovremenu primjenu 1% clotrimazol kreme dva puta dnevno. Zaključno, ukoliko je klinička prezentacija dermatoze atipična, diferencijalno dijagnostički treba isključiti dermatofitozu. Nadalje, u bolesnika s diseminiranim ljuskavim, infiltriranim lezijama koji su prethodno primjenjivali steroidne pripravke treba pomišljati i na gljivičnu infekciju te ispravno postavljenom dijagnozom spriječiti daljnje širenje infekcije.