Journal of Microbiology and Infectious Diseases / JMID
2011; 1 (2): 84-86
doi: 10.5799/ahinjs.02.2011.02.0021

CASE REPORT

A case of *Tinea incognito* diagnosed coincidentally

Dilek Şatana[1], Yıldız Yeğenoğlu[1], Meltem Uzun[1], Zayre Erturan[1], Nezahat Gürler[1], Güzin Özarmağan[2]

[1]*Istanbul University, Istanbul Medical Faculty, Department of Microbiology and Clinical Microbiology*

[2]*Istanbul University, Istanbul Medical Faculty, Department of Dermatology, Istanbul, Turkey*

ABSTRACT

Tinea incognito is a dermatophytosis of atypical clinical character, usually misdiagnosed and treated with corticosteroids. A 17-year-old girl had erythematous papules and pustules on her face, diagnosed earlier as allergy and mistreated by topical corticosteroids and antihistamines. Facial lesions had only been investigated by bacteriological methods. *Propionibacterium acnes* was isolated on blood agar. Culture plates of the patient were inadvertently kept in the laboratory for approximately two weeks until the growth of white powdery colonies, which were identified as *Trichopyton mentagrophytes* complex. Epithelial scrapings were collected again and reinvestigated by mycological methods; after two weeks *T. mentagrophytes* complex was isolated once again on culture media. Thus, the case was diagnosed accidentally as *Tinea incognito*. It was realized that the patient previously was misdiagnosed and mistreated by topical steroids. *J Microbiol Infect Dis 2011; 1(2): 84-86*

Key words: *Tinea incognito*, dermatophyte, *T. mentagrophytes*

Kazara tanı alan bir *Tinea incognito* olgusu

ÖZET

Tinea incognito atipik klinik özellikleri olan bir dermatofitoz olup genellikle yanlış tanı alır ve yanlışlıkla kortikosteroitlerle tedavi edilir. Yüzünde eritematöz papül ve püstüller bulunan 17 yaşındaki kadın hasta, başlangıçta allerji sanılıp yanlışlıkla topikal kortikosteroitlerle tedavi edildi. Yüzdeki lezyonlar yalnızca bakteriyolojik yöntemlerle incelendi. Kanlı agarda *Propionibacterium acnes* izole edildi. Hastanın kültür plaklarının laboratuvarda kazara iki hafta bekletilmesi sonucunda, beyaz pudra gibi kolonilerin oluştuğu gözlendi ve bu kolonilerin *Trichopyton mentagrophytes* kompleks olduğu anlaşıldı. Hastadan tekrar deri kazıntı örneği alındı ve mikolojik metotlarla incelenerek iki hafta sonraki kültür ortamında *T. mentagrophytes* kompleksi yeniden izole edildi. Böylece olgu kazara *Tinea incognito* olarak tanı almış oldu. Hastanın önceden yanlış tanı aldığı ve yanlış olarak topikal steroid ile tedavi edildiği.anlaşıldı.

Anahtar kelimeler: *Tinea incognito*, dermatofit, *T. mentagrophytes*

INTRODUCTION

Tinea incognito means dermatophytoses which have lost their usual clinical appearance due to the use of steroids.[1] In nonsystematic infections, local application of corticosteroids may modify the presentation of the dermatophyte infections. This steroid modified tinea, for which Ive and Marks coined the epithet "*tinea incognito*", can have various appearances. *Tinea incognito* can be misdiagnosed as lupus erythematosus, mimicking rosacea, seborrhoeic dermatitis, psoriasis and eczema, but also erythema migrans.[2-6]

Tinea incognito is usually caused by *T. rubrum*, *T. mentagrophytes, Epidermophyton flocosums, Microsporum canis,* and *M. gypseum*.[1,7,8] Here a misdiagnosed and mistreated case with *tinea incognito* was presented.

CASE

A 17-year old girl admitted to the outpatient clinic of the Department of Dermatology in Istanbul Faculty of Medicine with erythematous papules and pustules on the face, especially around the eyes and mouth. The patient and her family were agricultural workers. She had earlier been diag-

Correspondence: Dr. Dilek Satana, Istanbul University, Istanbul Faculty of Medicine, Department of Microbiology and Clinical Microbiology, Çapa, Istanbul, Turkey Email: dileksatana@yahoo.com
Received: 26.08.2011, Accepted: 28.09.2011

nosed as having allergy and treated with topical steroids and antihistamines, with no favorable result. Physical examination revealed lesions on the face especially around the eyes and mouth (Figure 1).

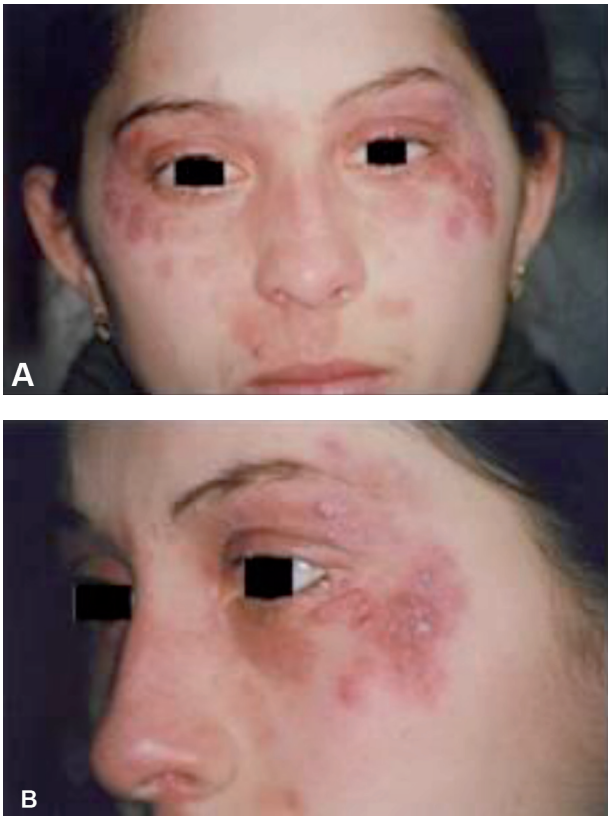

Figure 1. Erythematous papules and pustules on the patient's face (front and side).

The lesions were erythematous and not sharply demarcated, with prominent pustules and plaques. Erythematous lesions on the face were investigated only by bacteriological methods. Clinical specimens were cultured on blood agar and triptic soy broth under aerobe and anaerobe conditions. After three days' incubation at 37°C, anaerobic bacteria were isolated on blood agar and identified as *Propionibacterium acnes*. Thus, the patient was given tetracycline; however, she was not completely cured. Culture plates of the patient were inadvertently forgotten in the laboratory about two weeks.

After this period, white powdery colonies were noticed on the plate, and subculture was performed on Sabouraud dextrose agar (SDA). After incubation at 27^{0}C for 21 days, the colonies developing in the culture media were investigated with micro- and macroscopic methods. In the microscopic examination of these colonies, coiled spiral hyphae were seen, with round and pyriform, grape-like microconidia arranged along the sides of the hyphae. For differential diagnosis, urease activity and in vitro hair perforation were investigated and found to be positive for the isolate. It was not known whether the isolate was zoofilic or antropophilic and molecular identification methods could not have been applied, the isolate was identified as *T. mentagrophytes* complex.[9,10] After these findings, epithelial scrapings were collected from the facial lesions once more and reinvestigated by mycological methods. Direct microscopic examination processed by calcoflour-white and KOH 20% revealed hyphae. Clinical specimens were cultured on SDA. Yellow-cream powdery colonies with a red-brown pigment on the reverse were grown on the media after twelve days of incubation at 25^{0}C. This isolate was once again identified as *T. mentagrophytes* complex. The patient was treated by oral itraconazole 100 mg/day and topical clotrimazole once daily for 30 days, and total cure achieved.

DISCUSSION

Tinea faciei, a relatively uncommon dermatophyte infection usually presents as an erythematous, scaly patch with an annular edge that gradually increases in size. The clinical presentation which mimics other skin conditions such as seborrhoeic dermatitis, lichen ruber planus, folliculitis, atopic dermatitis, scleroderma and rosacea often leads to misdiagnosis of tinea faciei. As a result of misdiagnosis, tinea facei is often treated with topical steroids and can lead to a clinical presentation called T. incognito.[1-8,11-14]

Administration of potent topical steroids before microbiological diagnosis is one of the biggest problems in the management of fungal infections. It has been demonstrated that potent topical steroids can increase the numbers of hyphae present on the surface of the skin in fungal infections and change the appearance of the lesions.[1,5,8]

Some physicians believe that they can diagnose even only by visual appearances without KOH and culture examinations. Although simple microscopic examination by KOH preparations of skin scrapings and culture may immediately solve the problem, especially when they have been

treated earlier by local topical corticosteroids but no cure was established.[1,8]

In conclusion, the case described here illustrates that dermatophytes such as *Trichophyton spp.*, can cause suppurative infections. *Tinea incognito* should be included in the differential diagnosis of suppurative skin infections, especially when they have earlier been treated by local topical corticosteroids without response.[1-4,7,11-18] Therefore, in order to prevent unnecessarily use of steroids for the facial infections, we strongly suggest making mycological examination.

REFERENCES

1. Del Boz J, Crespo V, Rivas-Ruiz F, De Troya M. *Tinea incognito* in children: 54 cases. Mycoses 2011; 54:254-258.
2. Jacobs JA, Kolbach DN, Vermeulen AHM, Smeets MHMG, Neuman HAM. *Tinea incognito* due to Trichopyton rubrum after local steroid therapy. Clin Infec Dis 2001; 33:42-44.
3. Gorani A, Schiera A, Oriani A. Case report. Rosacea-like *Tinea incognito*. Mycoses 2002; 45:135-137.
4. Feder HM. *Tinea incognito* misdiagnosed as erythema migrans. N Engl J Med 2000; 343:69.
5. Ive A, Marks R. *Tinea incognito*. Br Med J 1968; 3:149-152.
6. Agostini G, Knöpfel B, Difonzo EM. Universelle Dermatophytose (*Tinea incognito*) durch T.rubrum .Hautarzt 1995; 46:190-193.
7. Lange M, Jasiel-Walikowska E, Nowicki R, Bykowska B. *Tinea incognito* due to Trichophyton mentagrophytes. Mycoses 2010; 53:455-457.
8. Rosenthal JR. Fungal infections of the skin. In: Gorbach SL, Bartlett JG, Blacklow NR eds. Infectious Diseases, 3rd edn. London: Lippincott Williams and Wilkins, 2004; 1162-1180.
9. De Hoog GS, Guarro J, Gene J, Figueras MJ. Atlas of Clinical Fungi, 2nd edn. Netherlands: Centraalbureau voor Schimmelcultures, 2000; 954-994.
10. Summerbell CR,Weitzman I, Padhye AA.Trichophyton, Microsporum Epidermophyton and agents of superficial mycoses. In: Murray PR, Baron EJ, Jergensen JH, Landry ML, Pfaller MA eds. Manual of Clinical Microbiology, 9 th edn. Washington, D.C.: ASM, 2007; 1874-1897.
11. Marks R, Dykes P, Motley R. Clinical signs and procedures in dermatology. London: Martin Dunitz LTD, 1993; 232-3.
12. Vivier A, McKee PH. Atlas of Clinical Dermatology. 2nd edn. London: Mosby-Wolfe, 1995; 1316-1318.
13. Sanchez-Castellanos ME, Mayorga-Rodriguez JA, Sandoval-Tress C, Hernandez-Torres M. *Tinea incognito* due to Trichophyton mentagrophytes. Mycoses 2006; 50:85-87.
14. Romano C, Maritati E, Gianni C. *Tinea incognito* in Italy: a 15-year survey. Mycoses 2006; 49:383-387.
15. Polilli E, Fazii P, Ursini T, Fantini F, Di Masi F, Tontodonati M, Sozio F, Parruti G. *Tinea incognito* Caused by Microsporum gypseum in a Patient with Advanced HIV Infection: A Case Report. Case Rep in Dermatol 2011; 3: 55-59.
16. Aliağaoğlu C, Atasoy M, Balık Ö, Aktaş A, Özdemir Ş. Farklı Bölgelerde Yerleşmiş Dört Tinea İnkognito Olgusu. Turkderm. 2006; 40:26-28.
17. Şavk EB, Karaman GC, Şendur N. Bir *Tinea Incognito* Olgusu. T Klin J Dermatol 2001; 11:30-33.
18. Ferahbaş A, Atasavun Ç, Canöz Ö, Borlu M, Koç AN, Utaş S. Trichophyton rubrum'a bağlı bir tinea inkognito olgusu. Turkderm 2005; 39:204-207.