Ege Tıp Dergisi 44 (1) : 67 - 69, 2005

A CASE WITH TINEA CORPORIS ET FACIEI DUE TO MICROSPORUM CANIS FROM A SYMPTOMATIC CAT

SEMPTOMATİK BİR KEDİDEN KAYNAKLANAN MİCROSPORUM CANİS'E BAĞLI TİNEA CORPORİS ET FACİEİ OLGUSU

Derya AYTİMUR Seciye Eda YÜKSEL İlgen ERTAM

Ege Üniversitesi Tıp Fakültesi Dermatoloji Anabilim Dalı, Bornova, İzmir

Anahtar Sözcükler : Microsporum canis, kedi, tinea corporis

Key Words: Microsporum canis, cat, tinea corporis

SUMMARY

We report the case of 8-year-old boy with multiple annular slightly endurated erythema with adherent scales surrounding its margin was seen on the arms, face and trunk. We find out that this lesions had appeared after a cat come into the house. On direct examination of the scales and also from the cat fungal elements were detected, and Microsporum canis (M. canis) was isolated. Symptoms disappeared after the patient was treated topically with terbinafine cream for three weeks. Human infection with M. canis from a symptomatic cat was demonstrated in a family in this case.

ÖZET

Burada yüzünde, kollarında ve gövdesinde multipl annuler hafif endüre, eritemli ve kenarı skuamlı lezyonları olan 8 yaşındaki bir erkek çocuk sunulmaktadır. Bu lezyonların eve dışarıdan gelen bir kedi sonrası oluştuğu saptanmıştır. Kedideki lezyondan ve olgunun derisinden elde edilen örneklerin direkt bakısında fungal elemanlar saptandı ve kültürde Microsporum canis (M. canis) üretildi. Hasta 3 hafta süreyle topikal terbinafin krem ile tedavi edildi ve lezyonlar kayboldu. Bu olgu sunumunda bir ailede semptomatik bir kediden bulaşan M. Canis enfeksiyonu bildirilmiştir.

INTRODUCTION

Tinea corporis is a classical dermatophyte infection, caused by zoophilic or geophilic, occasionally anthrophilic fungi. The typical lesion is a sharply bordered, peripherally spreading, slightly indurated patch or plaque with a more erythematous and scaly border (1). Tinea corporis is seen most often in children, although it occurs also in adults. The primary lesions are located usually on the face, shoulders, arms or other exposed parts of the body, and a typical case history may reveal exposure to an infected pet, cattle or horse. Secondary lesions may represent either exposure to these animals or accidental autoinoculation (2).

CASE

We report a 8-year-old boy, who presented with multiple scaly plaques on his arms, face and trunk, existing for 3 days. His elder sister also had same lesions on her face and arms for 2 days. Both didn't reported any topical or oral medication before the lesions appeared.

Yazışma adresi: Derya AYTİMUR, Ege Üniversitesi Tıp Fakültesi Dermantoloji ABD, İzmir, TURKİYE

Makalenin geliş tarihi : 14.07.2004 ; kabul tarihi :18.11.2004

Dermatologic examination showed circular plaques, pale pink to red in colour with scaling peripherally on face and arms in both. The boy had similar suprasternal lesions (Figure 1-2). Physical examination of the patients did not reveal any other pathological signs.

Figure 1. Face lesions.

Figure 2. Typical lesions on the arm.

Direct microscopic examination (with 20% KOH) of scales obtained by scraping of the plaques revealed numerous septate and ramified hyphae.

A cultural examination on Sabouraud dextrose agar with the addition of chloramphenicol and cycloheximide, at 26 ℃, for twenty days, yielded radiating fungal colonies that were whitish in colour on the top side and dull yellow on the reverse side, with a cotton-like surface (Figure3).

Figure 3. M. canis on Sabouraud dextrose agar.

Identification was based on both the macroscopic features of the colonies and examination of a portion of the culture teased out in lactophenol cotton blue, which revealed fusiform, rough-walled macroconidia, indicative of Microsporum canis.

Both mycological and clinical cure were achieved after topical treatment with terbinafine twice daily for 3 weeks. Since the patients didn't come for control, we made a telephone call and learned that the lesions disappeared in 2 weeks, but had appeared in the mother and then it spread to the son again. The mother and son were clear in a week with the same medication and there were no recurrence in a 2 months follow-up period.

DISCUSSION

Tinea corporis is a superficial cutaneous fungal infection clinically characterized by circular lesions that usually have clear margins with a raised edge (3). It usually involves the trunk, shoulders, or limbs, and occasionally the face (excluding the bearded area) (4). Single lesions may occur, or there may be multiple plaques, which may remain discrete or become confluent (3).

This disease may be caused by either zoophilic or antropophilic fungi, and less frequently by geophilic fungi (5). Microsporum canis is zoophilic and most human infections are acquired from animals. Cats may have inconspicuous lesions limited to small areas around the eyes or ears. Since these lesions, which are the important sources of human infections, may be only recognized after careful examination, and they should be investigated in family epidemics caused by these species (6). In Aegean region, %17.4 of tinea corporis lesions are caused by M. canis (7). Lesions may be disappeared at the examination time, so more attention should be paid to prevent infections from such animals that have no apparent lesion (8). Tinea corporis in our cases was transmitted by a cat which had a hypopigmented patch on his ear and made an outbreak in the house that he lived.

Tinea capitis as well as tinea corporis may occur under conditions of immunsuppression (9). There are literatures about tinea corporis outbreaks in crowded areas, such as hospitals and child-care centers (10,11).

According to a study, among children the most common fungal infection was found to be tinea capitis (mainly caused by M. canis), and the second one was tinea corporis which is mainly caused by Tricophyton rubrum (12).

The differential diagnoses of M. canis infections of adults are; on the scalp seborrhea capitis, folliculitis, discoid lupus erythematosus, on the face lymphocytic infiltration, granuloma faciale, discoid lupus erythematosus, rosacea, contact dermatitis, polymorphous light eruption, on the body erythema multiforme, psoriasiform eruption, pityriasis rosea and seborrheic dermatitis (13, 14).

Because there are atypical M. canis infections which are negative on direct examination, mycological screening of

certain dermatological disorders should be performed by culturing (15).

Among the adults who have tinea faciei infection, it was found that %85 of the patients the nails were also involved by the same agent found in the lesions of the face. On the basis of this observation it is recommended that all adult patients with tinea faciei should undergo a comprehensive mycological investigation to find the primary focus, which may be an infected nail (14).

Tinea corporis, when caused by geophilic or zoophilic dermatophyte, usually resolves spontaneously within a few months. A variety of topical agents is usually applied to speed up healing of local and uncomplicated lesions. Systemic therapy may be necessary because of widespread lesions caused by multiple inoculations. One-third of patients do not respond to treatment with griseofulvin which is the primary therapeutic agent in children. The therapeutic use of ketoconazole is, however, limited because of its rare side effects, such as liver toxicity, depressed adrenal activity and testosterone secretion, and drug-drug interactions. Itraconazole and terbinafine, taken orally, were reported to be generally safe and effective therapies against most of the common dermatophytes (6). Our cases had widespread lesions but owing to their age we started the therapy with topical agents. The lesions improved with topical therapy so we didn't switch the therapy to systemic form.

In the literature the frequency of M. canis infections shows that the pet animals are responsible for the spreading of this disease among people. The pet animals must be checked out periodically from this point of view. By this way the tinea corporis incidence can be decreased (16, 17).

REFERENCES

1. Braun-Falco O, Plewig G, Wolff HH. Burgdorf WHC. Fungal diseases. Dermatology, 2nd ed. New York: Springer 2000: 313-358.
2. Emmons CW, Binford CH, Utz JP. Dermatophytoses. Medical Mycology, 2nd ed. Philadelphia: Lea&Febiger, 1970: 109-150.
3. Hay RJ, Moore M. Mycology, in Rook A, Wilkinson DS, Ebling FJG. (eds) Textbook of Dermatology, Oxford: Blackwell Scientific Publ, 1998: 1277-1376.
4. Weitzman I, Summerbell RC. The Dermatophytes. Clin Microbiol Rev 1995;8(2):240-59.
5. Gorani A, Schiera A, Oriani A et al. Tinea corporis due to Microsporum canis in a professional cyclist. Mycoses 2002;45: 55-57
6. Padhye AA, Weitzman I. The Dermatophytes, Collier L, Balows A, Sussman M(eds), Microbiology and Microbial Infections, Great Britain: Arnold, 1998: 215-236.
7. Aytimur D, Ciger S. Dermatophytoses encountered in the Izmir area-Causative agents and distribution according to age and sex. Ege Tip Dergisi1992;31(1): 39-41.
8. Katoh T, Maruyama R, Nishioka K et al. Tinea corporis due to Microsporum canis from an asymptomatic dog. J of Dermatol 1991;Jun;18(6):356-9.
9. Mohrenschlager M, Seidl HP, Holtmann C et al. Tinea capitis et corporis due to Microsporum canis in an immunocompromised female adults patient. Mycoses 2003;46 (1):19-22.
10. Haedersdal M, Stenderup J, Moller B et al. An outbreak of tinea capitis in a child care center. Ugeskr Laeger 2002;164(49):5814-6.
11. Arnow PM, Houchins SG, Pugliese G. An outbreak of tinea corporis in hospital personnel caused by a patient with Trichophyton tonsurans infection. Pediatr Infect Dis J 1991;10(5): 355-9.
12. Fernandes NC, Akiti T, Barreiros MG. Dermatophytoses in children: study of 137 cases. Rev Inst Med Trop Sao Paulo 2001; 43(2):83-5,
13. Alteras I, Feuerman EJ, David M et al. The increasing role of Microsporum canis in the variety of dermatophytic manifestations reported from Israel. Mycopathologia 1986;95(2):105-7.
14. Alteras I, Sandbank M, David M et al. 15-year survey of tinea faciei in the adult. Dermatologica 1988;177(2):65-9.
15. Emtestam L, Kaaman T. The changing clinical picture of Microsporum canis infections in Sweden. Acta Derm Venereol 1982;62(6):539-41.
16. Tümbay E, Altan N. Kopekten gecen bir M.canis enfeksiyonu vakası dolayisiyla. Milli Mikrobiyoloji Kongresi Kitabı. 1974;310-314
17. Tumbay E, Inci R, Gezen C. Patrn of Dermatophytes in Aegean region of Turkey. FEMS Symposium on Dermatophytoses in Men and Animals (Ed: Tumbay E). Izmir, Bilgehan Publishing House, 1988; 299-304.