

White Superficial Onychomycosis of a Toenail due to *Microsporium canis*

Sir,

Onychomycosis is a mycotic infection of the nail units. Toenails are more often affected than fingernails (1). The common dermatophytes causing onychomycosis are *Trichophyton rubrum*, *Trichophyton mentagrophytes* and *Epidermophyton floccosum*. *Microsporium canis* is only rarely responsible for onychomycosis. We describe here a case of white superficial onychomycosis of a toenail due to *M. canis* in a 39-year-old man who had no signs of immunodeficiency.

CASE REPORT

A 39-year-old man presented with diffuse whitish or brownish discoloration and hyperkeratosis of unknown duration on the right fourth toenail (Fig. 1). The surface of the nail showed rough and friable scales that were easily removed on scraping. The skin of the surrounding nail folds was normal. The adjacent third interdigital web skin showed clinical signs of fungal infection.

Microscopic examination of a potassium hydroxide preparation of toenail scrapings showed numerous septated hyphae. Mycological culture on Sabouraud dextrose agar revealed the growth of *M. canis*. Microscopic examination of scrapings taken from the toe web also revealed septated hyphae, but fungal culture gave a negative result. He had no history of other recent fungal infections, such as tinea capitis or tinea corporis. He had no other conditions or diseases associated with immunosuppression. He denied contact with dogs or other animals. Nail and skin infections were treated with topical isconazole and the lesions cleared in 2 weeks, both mycologically and clinically.

DISCUSSION

M. canis is the most common cause of the zoophilic infections worldwide and spread occurs directly from an infected animal and, possibly, from contaminated furniture, floor and carpets



Fig. 91. White superficial onychomycosis of the toenail.

in the home (1). It is also the most frequent causal agent of tinea capitis and tinea corporis in humans. However, *M. canis* is rarely responsible for onychomycosis, which suggests a low affinity for nail keratin (2).

Onychomycosis due to *M. canis* has been reported to occur in immunocompromised patients (3, 4), except in a case (2). It was frequently preceded by tinea capitis or tinea corporis, which implies transfection of *M. canis* from the skin of the scalp or trunk. It usually affected the fingernails. In this patient, *M. canis* infection produced toenail onychomycosis of a white superficial type, which is known to be caused most commonly by *T. mentagrophytes var interdigitale* (1). The development of white superficial onychomycosis is an interesting finding considering the low affinity of *M. canis* for nail keratin (2). Unlike the previous cases in which fingernails were affected by *M. canis*, a toenail was affected in our patient. This may not be an unusual finding, as the fingernails are not affected in white superficial onychomycosis (1). The nail infection in our patient was presented with concurrent tinea pedis of the adjacent interdigital web. Nail invasion of *M. canis* might be associated with the tinea pedis, but unfortunately we could not identify the causative organism of the tinea pedis.

Not all oral antifungal drugs are effective against *M. canis* (1). Griseofulvin remains the drug of choice in *M. canis* infection. Ketoconazole, terbinafine and itraconazole are considered as alternatives to griseofulvin in the treatment of *M. canis*. In our patient, topical antifungal therapy produced a rapid clinical and mycological cure of the onychomycosis and tinea pedis.

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