

Tinea on a Tattoo

In the last twenty years, the prevalence of individuals with tattoos in the general population has increased in Europe (1) as well as in Australia (2) and the United States of America (3). A series of complications such as acute inflammatory reactions, allergic contact dermatitis (4,5), photoinduced, lichenoid, and granulomatous reactions (6, 7), pseudolymphoma (8), pseudoepitheliomatous hyperplasia (9), skin infections (6), and skin cancers (10) may occur on tattoos. Infectious complications on tattoos include bacterial infections (pyoderma, leprosy, syphilis, cutaneous tuberculosis, mycobacteriosis) (11-14), viral infections (molluscum contagiosum, warts, herpes simplex, hepatitis B and C) (15-17), and fungal infections (sporotrichosis, dermatophytosis) (18,19).

We present the case of a 29-year-old immunocompetent female patient who was consulted for the development of an erythematous-squamous placard that appeared on a tattoo about 18 days after tattooing. Dermatological examination revealed a circular, erythematous, scaly plaque, with centrifugal growth and central resolution, presenting an active, raised, erythematous, vesiculopustular edge, giving the appearance of tinea corporis. The lesion's starting

point was on the tattoo in two colors located on the middle third of the left calf and subsequently evolved to beyond the surface of tattoo (Figure 1). No other skin, scalp, or nail lesions were observed. Mycological examination of the material obtained by scraping of the scales and the vesicles from the edges and the surface of the plaque revealed numerous hyphae on direct microscopy examination, and white, flat colonies with a cottony surface and radial grooves developed in Sabouraud dextrose agar culture (Figure 2). Spindle-shaped, thick-walled macroconidia and a few pyriform microconidia were observed on microscopic examinations of the colonies. Based on macroscopic and microscopic characteristics, *Microsporum canis* was identified. Gram stain and bacterial culture results were negative. Patient history revealed the presence of a pet dog that was diagnosed with mycosis, the etiologic agent being *M. canis*. After 21 days of treatment with oral terbinafine (250 mg/day) and topical application of terbinafine 1% cream once a day, the lesion disappeared and mycological examination (direct microscopy and culture) was negative.

In the case of tattoos, cutaneous inoculation of a dermatophyte may occur after 1-3 weeks of tattooing, corresponding to the healing phase of the tattoo application. Dermatophyte inoculation can be done by direct contact with an infected person or animal or, exceptionally, by telluric contamination. Despite



Figure 1. Tinea on a tattoo on the left calf.



Figure 2. *Microsporum canis* culture.

the increasing number of tattooed people, there are only a few published cases of dermatophytosis arising on tattoos (19,20). Ammirati reported dermatophyte infection caused by *Trichophyton tonsurans* that occurred two weeks after tattooing, clinically presenting as concentric annular lesions with active vesiculopustular edges which progressively included the entire tattoo (19). Similarly, in our case the infection with *M. canis* occurred during the healing phase, the dermatophyte lesion occurring after 18 days from tattoo application by direct contact with the dog parasitized with *M. canis*. In conclusion, dermatophyte infection of tattoos remains possible, although rare.

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