Scaly Rash on the Back

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A 21 year-old woman presents with a non-pruritic, scaly, red rash on her back. The rash has not responded to eight months of increasingly potent topical steroids. She is otherwise healthy, with no rash elsewhere on her body.

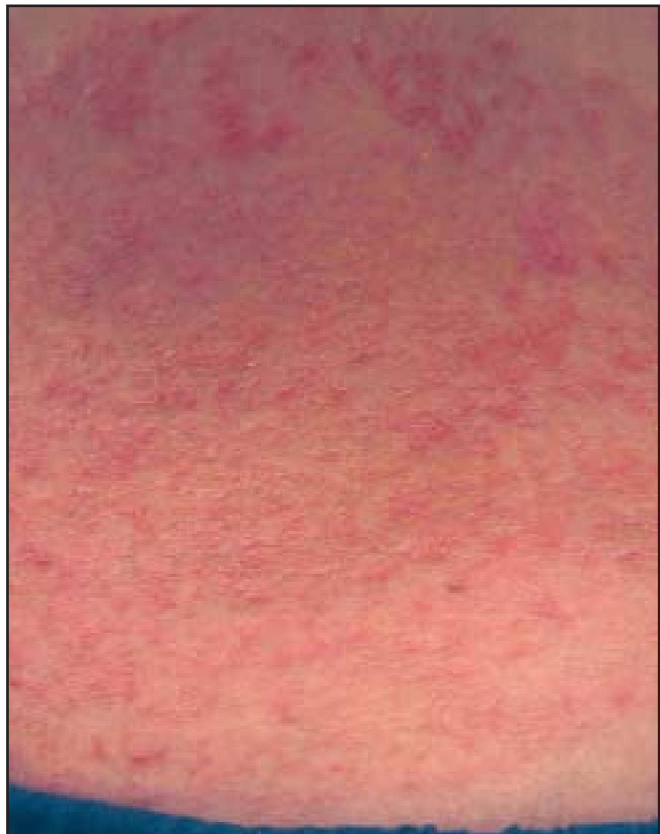


Figure 1. Scaly, red rash on the back.

What is your diagnosis?

Tinea corporis (tinea incognito) is a superficial dermatophyte infection. Dermatophytes preferentially inhabit the non-living, cornified layers of the skin, hair, and nails, rarely invading below the surface of the epidermis or its appendages. The skin responds to the infection through increased proliferation, resulting in scaling and epidermal thickening.

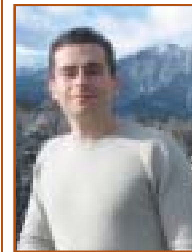
Tinea corporis is common, occurring more often in hot, humid climates. *Trichophyton rubrum* is the most common infectious agent globally. Infection may occur through contact with infected humans, animals, or inanimate objects. The infection is often asymptomatic, although a pruritic annular plaque is characteristic of a symptomatic infection. The rash is typically erythematous and scaly in the beginning and spreads out centrifugally. The rash becomes annular in shape after central resolu-

tion occurs. Crusting, vesicle formation, and papules may also be present.

The differential diagnosis includes:

- eczema,
- nummular dermatitis,
- tinea versicolor,
- pityriasis rosea,
- psoriasis, and
- granuloma annulare.

The history may include occupational exposure (*e.g.*, farm worker, veterinarian) or environmental and recreational exposure (*e.g.*, animals, gardening, contact sports). On further questioning, this patient revealed she has two dogs and two cats at home.



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A potassium hydroxide preparation of skin scrapings (taken from the active border) reveals numerous septate branching hyphae. A biopsy sample of tinea corporis shows spongiosis, parakeratosis, and a superficial inflammatory infiltrate. Septate branching hyphae are seen in the stratum corneum with fungal stains, such as periodic acid-Schiff.

What's the treatment?

Topical therapy, applied to an area extending beyond the edge of the identified lesion once or twice a day for at least two to four weeks, is recommended for localized cases. Topical azoles and allylamines show high rates of clinical efficacy.

Systemic therapy may be indicated for patients with extensive tinea corporis, those who are immunocompromised, or those who are not responsive to topical therapy. Oral griseofulvin, ketoconazole, fluconazole, itraconazole, and terbinafine are all effective agents varying in treatment duration from two to four weeks, depending on the agent. Use of oral agents requires attention to potential drug interactions and monitoring for adverse effects. CME