Erythematous Annular Scaly Plaques on the Upper Chest

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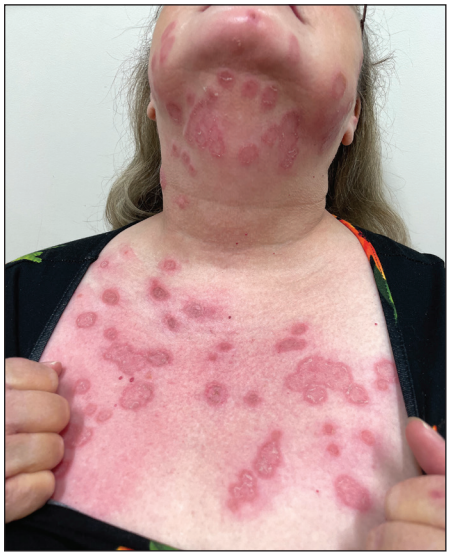

A 60-year-old woman with a history of keratinocyte carcinomas, hypertension, diabetes mellitus, and anxiety presented to the dermatology department with a widespread rash of more than 2 weeks' duration. The patient had tried 1 to 2 days of self-treatment with triamcinolone cream that she had previously been prescribed for an unknown dermatitis and zinc oxide cream, which caused considerable inflammation of the rash and prompted her to discontinue use. She could not recall any recent use of new personal care products or medications or eating any new foods. She also denied any recent yard work, known arthropod bites, illnesses, prolonged sun exposure, or constitutional symptoms. Her medications included metformin, hydrochlorothiazide, losartan, and sertraline. She also reported taking daily supplements of vitamins D, K, and C as well as acetaminophen and ibuprofen as needed. Physical examination revealed several 2- to 4-cm, erythematous, annular, circinate, petaloid plaques with scale mostly on photodistributed areas of the central anterior chest, neck, lower cheeks, and chin as well as a few scattered lesions with similar morphology on the arms, lower abdomen, left buttock, and back.

WHAT'S YOUR **DIAGNOSIS?**

a. erythema annulare centrifugum
b. pemphigus foliaceus
c. pityriasis rosea
d. subacute cutaneous lupus erythematosus
e. tinea corporis

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THE **DIAGNOSIS:** Tinea Corporis

Due to the scaly and acute nature of the rash, a potassium hydroxide (KOH) preparation was performed, and hyphal elements were floridly present. After further questioning, the patient reported finding a stray kitten a few weeks before the onset of the eruption and shared a picture of it lying on her chest in the area corresponding with the main distribution of the rash (Figure). Based on the patient's personal history and the positive KOH preparation, a diagnosis of tinea corporis was made. She was immediately started on fluconazole 300 mg once weekly for 4 weeks and naftifine gel 1%, which she used for 6 to 8 weeks with complete resolution of the eruption.

Tinea corporis is a dermatophyte infection that typically affects exposed areas of the skin such as the chest, arms, and legs. Spread via human-to-human contact, *Trichophyton rubrum* is the most common cause worldwide. The second most common is *Trichophyton mentagrophytes*, which is spread through animal-to-human contact.[1,2]

Symptoms of tinea corporis usually appear 1 to 3 weeks after exposure and manifest as itchy scaly papules that spread outward, forming annular, circinate, and petaloid erythematous plaques with central clearing. The condition most commonly is diagnosed through the examination of scale from the affected area using a KOH preparation, which will reveal hyphae when positive.[2-4] Cultures are the gold standard for identifying dermatophyte species,[5] but results can take several weeks. Biopsy also can confirm the diagnosis by showing the presence of hyphae in the stratum corneum, which can be highlighted using periodic acid–Schiff or silver stains.[3]

Topical antifungals are the first-line treatment for cutaneous dermatophyte infections.[3-5] The most effective topical therapies are allylamines and azoles, which work by inhibiting the growth of the fungus. Allylamines are more effective than azoles due to their fungicidal properties and ability to penetrate the skin more effectively.[6,7]

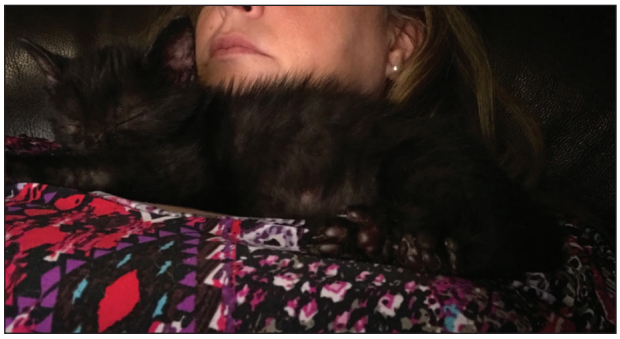

FIGURE. Patient with a kitten sleeping on the upper chest in the area of the main distribution of the rash diagnosed as tinea corporis.

Topical medications should be applied at least 2 cm beyond the infected area for 2 to 4 weeks or until the infection has cleared.[3] Systemic antifungals may be necessary in more complicated cases.

It is important to consider a broad differential and take into consideration the distribution of the plaques, the patient's history, and other clinical features when differentiating tinea corporis from other conditions. Erythema annulare centrifugum more often presents as nonpruritic annular plaques with a trailing scale instead of a leading scale seen in tinea corporis. Biopsy exhibits a dense, perivascular, lymphocytic infiltrate in superficial vessels, resembling a coat sleeve.[3,8] Pemphigus foliaceous can manifest with painful crusted scaly plaques and vesicles in a seborrheic distribution. Biopsy reveals subcorneal acantholytic vesicles and can be confirmed on direct immunofluorescence.[3,8] Subacute cutaneous lupus erythematosus presents with annular plaques that often are symmetric and most prominent in sun-exposed areas, sparing the face.[3,9,10] It can be associated with other autoimmune conditions as well as medications such as thiazides, terbinafine, and calcium channel blockers. Additionally, 76% to 90% of patients are Ro/SSA antibody positive.[3] Biopsy often demonstrates follicular plugging, perivascular and periadnexal lymphocytic infiltrates, and mucin.[3,10] Lastly, pityriasis rosea typically begins with a herald patch, followed by a widespread rash that often appears in a Christmas tree distribution.[3]

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