Case 1

"What's on my hand?"

A 36-year-old teacher has had a painful rash on her dominant, left hand for three days (Figure 1). She had noticed a tingling sensation before the lesions erupted. She is otherwise healthy and takes no medications.

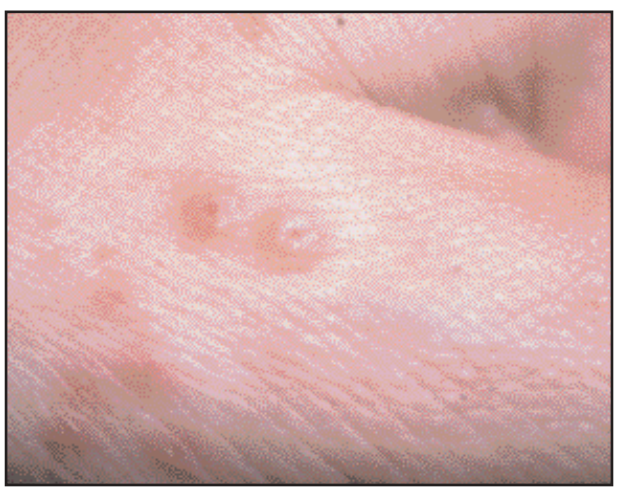

Figure 1. A painful rash on a patient's left hand.

What does this look like to you?

a. Hand-foot-and-mouth disease
b. Herpes simplex
c. Herpes zoster
d. Contact dermatitis
e. Impetigo

You offer which of the following?

a. Oral antiviral therapy for herpes simplex virus infection
b. Oral antiviral therapy for varicella-zoster virus infection
c. A corticosteroid cream
d. A one-week course of cephalexin
e. Reassurance

Answer

A culture grew herpes simplex virus (HSV) Type 1 **(answer from question 1: B)**, although nothing in the patient's history explained how she might have been exposed to the virus. Because of hand-to-mouth contact, dentists, hygienists, and nurses are at particular risk for acquiring this self-limited infection. Most HSV infections are painful. Patients also complain of an itching or tingling sensation. Antiviral therapy **(answer from question 2: A)** resolves the outbreak.

Herpes zoster is more extensive, since it generally affects the entire dermatome. Hand-foot-and-mouth disease involves both hands equally. Discrete, erythematous papules typically do not develop in contact dermatitis. Impetigo usually presents with a pruritic, tender, vesiculopustular eruption that rapidly becomes crusty.

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Case 2

"Why won't my rash go away?"

A 46-year-old man is bothered by a progressively worsening rash on his left calf that first erupted several months earlier (Figure 1). The intermittently pruritic eruption occasionally appears to begin to heal, then inexplicably flares again. Over-the-counter (OTC) topical antifungal and corticosteroid creams have not been effective. The patient owns a cat.

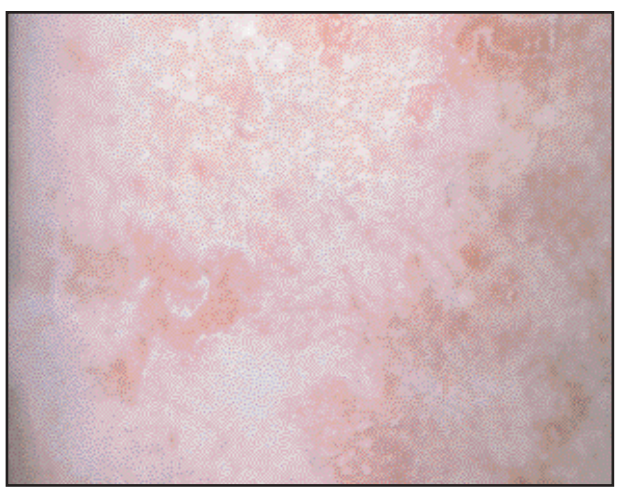

Figure 1. A red rash on a patient's calf.

What do you suspect?

a. Urticaria
b. Tinea corporis
c. Fixed drug eruption
d. Nummular eczema
e. Contact dermatitis

What is your first step?

a. Perform a fungal culture
b. Perform patch tests
c. Perform a potassium hydroxide evaluation
d. Have the cat examined by a veterinarian
e. Perform a skin biopsy

Answer

The lesion's raised, serpiginous border heightened suspicion of a fungal infection. Tinea corporis **(answer from question 1: B)** was confirmed by a potassium hydroxide (KOH) evaluation **(answer from question 2: C)**. A fungal culture can establish the diagnosis as well, but a KOH examination is more expedient. Most likely, the patient's cat was the source of the dermatophyte. OTC corticosteroid preparations can exacerbate dermatophyte infections, since their anti-inflammatory properties mask the infection. Some OTC antifungal creams are not especially effective against dermatophytes. Therefore, a lack of responses does not necessarily rule out this type of fungal infection.

Contact dermatitis and urticaria last for days, not months. A fixed drug eruption typically is more painful than pruritic. The usual flare upon rechallenge with the offending agent, which is a hallmark of this drug hypersensitivity, was absent from this patient's history. Nummular eczema can be persistent, but generally does not wax and wane at a single site.

A systemic antifungal agent was prescribed for this patient's fairly extensive tinea corporis. A topical preparation is another effective option. The patient was advised to have his pet evaluated and treated as well **(answer from question 2: D)**.

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Case 3

"What are the spots on his neck?"

A 41-year-old man's wife was concerned about the white spots that developed on her husband's neck during the last week (Figure 1). Because the lesions were asymptomatic, the patient was unaware of their presence. The patient is a construction worker. He take no medications.

Can you identify this condition?

a. Tinea versicolor
b. Pityriasis rosea
c. Drug eruption
d. Urticaria
e. Mycosis fungoides

What action do you take?

a. Prescribe a corticosteroid cream
b. Prescribe a systemic antifungal agent
c. Prescribe a tapered dosage of prednisone
d. Prescribe an antifungal cream
e. Offer reassurance

Answer

This is tinea versicolor **(answer from question 1: A)**, a yeast infection that can present as hyperpigmented or hypopigmented macules with a fine scale. A potassium hydroxide (KOH) evaluation of a scraping of scale confirmed the diagnosis. The difference in the skin pigmentation of the affected area, as compared with the surrounding noninvolved skin, is usually more apparent in the summer. It is thought that the more humid environment encourages the yeast to flourish.

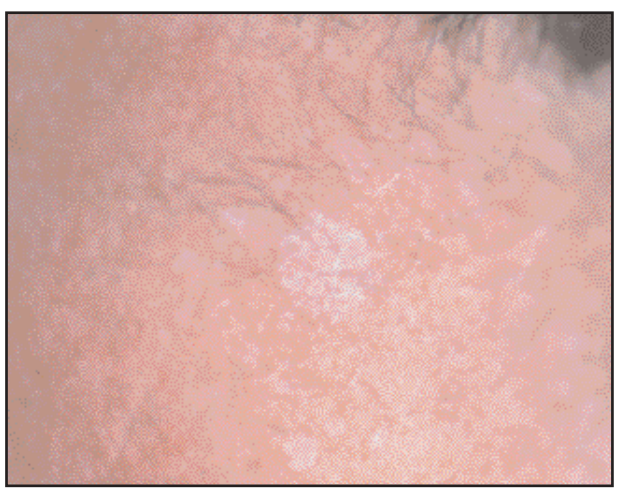

Figure 1. White spots on the neck of a patient.

Urticaria typically does not last for days. A drug eruption was not supported by the history. Pityriasis rosea was ruled out by the KOH examination. The rash of mycosis fungoides has a poikilodermatic appearance with atrophy and telangiectasia.

Although tinea versicolor responds to both topical and oral antifungal therapy **(answer from question 2: B and D)**, topical agents are not always as effective or as cosmetically acceptable as oral therapy. It has been suggested that the relapse rate following systemic therapy is lower because the antifungal antibiotic penetrates the sebaceous follicle more efficiently and eradicates the yeast. Inform patients that recurrences are not uncommon, regardless of the mode of treatment.

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Case 4

"What do I do for this rash?"

During the last few weeks, a pruritic rash developed on the extremities of an eight-year-old girl (Figure 1). Her only medication is a non-sedating antihistamine for seasonal allergies. The patient has several pet cats and a dog. The mother reported no change in the child's bathing or moisturizing habits.

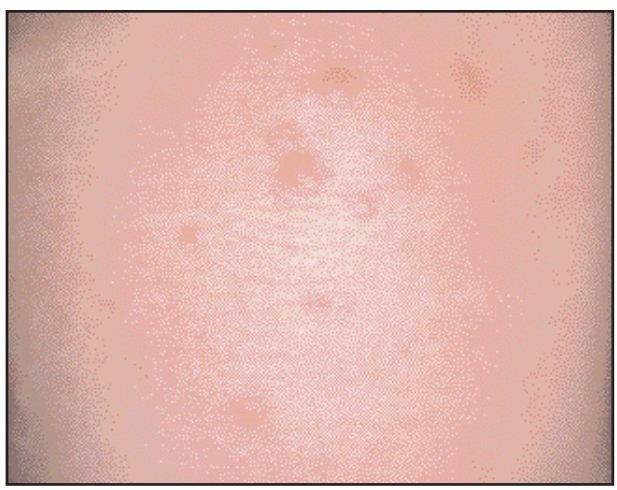

Figure 1. A pruritic rash on a young patient.

What are you looking at here?

a. Follicular eczema
b. Dermatophyte infection
c. Urticaria
d. Scabies
e. Contact dermatitis

Your management strategy includes which of the following?

a. Recommend a change in soap and bathing habits
b. Recommend use of a moisturizer
c. Prescribe a topical antifungal agent
d. Prescribe an oral antifungal agent
e. Prescribe a topical corticosteroid

Answer

The history of seasonal allergies suggested follicular eczema **(answer from question 1: A)**. A clinical variant of atopic dermatitis that manifests with erythematous, follicular papules on the trunk and/or extremities. Because the patient could have acquired a dermatophyte from one of her pets, a fungal infection was included in the differential. It was ruled out by the eruption's appearance and a negative potassium hydroxide examination. Multiple discrete lesions can arise in areas that are shaved. However, this eight-year-old does not shave. Nothing in the history supported a contact dermatitis. Urticarial wheals are generally more widespread and can be transient. They may erupt and resolve at different sites.

The limited rash, its absence on the child's hands, and the comparatively mild pruritus that did not disturb the patient's sleep argued against scabies, which is neither follicular nor confined to the extremities. If in doubt, a mineral oil scabies examination may be performed.

Mild soaps, short and less frequent baths, and the generous use of moisturizers are recommended for patients with an atopic diathesis who have follicular eczema. A topical corticosteroid can be helpful as well **(answer from question 2: A, B, and E)**.

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