# Photo Quiz

## Linear Hyperpigmentation

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**A 26-year-old patient** presented to urgent care with a worsening rash on the left forearm that developed four days earlier. The rash started after the patient spent a weekend at the beach. The rash was initially mildly erythematous but became hyperpigmented over the two days before presentation.

The patient had no associated symptoms, including pruritus, pain, fever, and myalgias. No close contacts had similar rashes, and the patient had no recent exposures or travel.

Physical examination revealed a linear hyperpigmented rash on the left forearm, extending from the wrist to the elbow *(Figure 1)*.

FIGURE 1

### Question

Based on the patient's history and physical examination findings, which one of the following is the most likely diagnosis?

- ☐ A. Cellulitis.
- ☐ B. Cutaneous larva migrans.
- ☐ C. Lymphangitis.
- ☐ D. Phytophotodermatitis.
- ☐ E. Superficial thrombophlebitis.

**See the following page for discussion.**

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**This series** is coordinated by John E. Delzell Jr., MD, MSPH, associate medical editor.

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## SUMMARY TABLE

| Condition | Characteristics |
|---|---|
| Cellulitis | Areas of erythema, warmth, tenderness, and swelling that are rarely streaky; affects superficial and subcutaneous skin layers |
| Cutaneous larva migrans | Pruritic, erythematous, migrating or creeping, serpiginous rash; develops after exposure to hookworms in contaminated soil or sand |
| Lymphangitis | Erythematous, linear streaks associated with pain and rapid spread along lymphatic vessels; often following an infected distal skin lesion, such as an insect bite |
| Phytophotodermatitis | Unusual nondermatomal, erythematous rash following exposure to photosensitizing compounds and then to sunlight; progresses to hyperpigmentation |
| Superficial thrombophlebitis | Erythema and induration along a vein; may be tender and warm on palpation |

## Discussion

The answer is D: phytophotodermatitis, a phototoxic eruption caused by exposure to furocoumarin compounds in plants and then to sunlight.[1] Furocoumarins are found in many plants, including citrus fruits (limes, lemons, oranges, and grapefruits), celery, parsley, carrots, dill, and figs. Most cases of phytophotodermatitis develop after exposure to citrus, often when consuming alcoholic beverages, leading to the nicknames "the other lime disease" and "margarita dermatitis." On further questioning, the patient recalled making margaritas with fresh limes during the beach weekend and lime juice dripping down the patient's forearm in the pigmented distribution.

Phytophotodermatitis also often occurs in children after playing outdoors, outdoor workers such as landscapers, and those employed in the food industry such as bartenders. The condition is more common in the spring and summer. Higher heat and humidity and more intense sunlight can enhance the photoreactive response.[2] The presentation can be highly variable depending on the caustic agent, distribution, and duration of exposure.[3] Inflammation usually begins within minutes of exposure and peaks at 48 hours. Lesions are typically well-demarcated, erythematous plaques that may progress to vesicles or bullae. Patients may report associated pain or a burning sensation, usually without pruritus. Hyperpigmentation then develops and may last months to years.[2]

The diagnosis of phytophotodermatitis is clinical, based on history findings and the appearance of the lesion. Indicators include unusual skin lesions that follow a nondermatomal distribution. The lack of pruritus helps to distinguish phytophotodermatitis from allergic contact dermatitis. "Drip lines" may be prominent, as with this patient. Aerosol application of plant-based perfumes may lead to a misted neck rash, and the use of high-powered gardening devices such as a weed eater may lead to widespread lesions.

Treatment of phytophotodermatitis is supportive with cool compresses, washing with soap and water, and analgesics if needed. Hyperpigmentation can be treated with topical steroids and reassurance. Educating the patient on preventing further causative exposures is important.[2]

Cellulitis presents as areas of erythema, warmth, tenderness, and swelling that are rarely streaky. It involves superficial and subcutaneous skin layers and may be accompanied by fever, leukocytosis, and lymphadenopathy.[4]

Cutaneous larva migrans is caused by infection with hookworms from dogs or cats. It presents with a pruritic, erythematous, migrating or creeping, serpiginous rash after exposure to contaminated soil or sand.[5]

Lymphangitis is characterized by erythematous, linear streaks associated with pain and rapid spread along lymphatic vessels, often following an infected distal skin lesion, such as an insect bite. It can be associated with systemic symptoms, including fever and lymphadenitis.[6,7]

Superficial thrombophlebitis leads to erythema and induration along a vein that may be tender and warm on palpation.

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