

SECTION EDITOR: WALTER W. TUNNESSEN, JR, MD

## Picture of the Month

Paul S. Bergeson, MD; Jeffrey C. Weiss, MD

**T**WO CHILDREN presented with skin lesions of different appearance but similar cause. Neither child had a history of lesions of this nature and neither had systemic symptoms. A 5-year-old girl was referred for evaluation of erythematous, vesicular, pruritic, and bullous skin lesions on her face, upper chest, abdomen, and extremities, which developed over 24 hours. The fluid in the bullae was clear. The skin covered by the top of

her 2-piece bathing suit was spared. Two siblings had similar skin lesions that had developed during the same time span (**Figure 1** and **Figure 2**). A 3-year-old boy presented with asymptomatic, macular, brownish skin lesions, predominantly on his arms, first noted on the day of referral (**Figure 3** and **Figure 4**).

*From the Division of General Pediatrics, Phoenix Children's Hospital, Phoenix, Ariz.*



Figure 1.



Figure 2.



Figure 3.



Figure 4.

# Denouement and Discussion

## Phytophotodermatitis

**Figure 1 and Figure 2.** The skin lesions on the trunk conform precisely to the borders of the bathing suit. Bullae and vesicles, some linear in arrangement, are set on an erythematous base. The history revealed that the girl and her siblings had eaten limes, the juice of which had run down onto the chest and abdomen. The children were exposed to sunlight.

**Figure 3 and Figure 4.** Hyperpigmented patches and macules are present on both arms. The skin lesions appeared shortly after harvesting ornamental oranges.

**P**hytophotodermatitis refers to a skin eruption that results from the interaction of radiant energy from the sun with photosensitizing compounds found in various plants. These agents that potentially produce phototoxic effects are present in many plant varieties, including several isomers of psoralens (furocoumarins). The psoralens form phototoxic compounds on exposure to UV-A radiation (wavelengths of 320-400 nm).<sup>1</sup> The compounds cause direct damage to the DNA of epidermal cells, resulting in reactions that range from macular erythema or hyperpigmentation to blistering lesions, depending on the extent of exposure. The figures show the spectrum of skin reactions that may be seen.

### CLINICAL MANIFESTATIONS

The acute phase of phytophotodermatitis is often characterized by erythematous plaques, vesicles, and bullae, much like a severe sunburn. Lesions may simply become erythematous or appear as hyperpigmented patches without a preceding erythematous phase. The shape of the lesions is often unusual, sometimes resembling streaks from dripping juices containing the phototoxic compounds. The hands and mouth are often extensively affected secondary to eating and handling. The unusual configuration of lesions is often a clue to the diagnosis. The skin eruptions may appear hours to days after exposure.

### PLANTS ASSOCIATED WITH PHYTOPHOTODERMATITIS

The plants that are the most common causes of this dermatitis are limes, lemons, and celery. Natural grasses, carrots, oranges, parsley, parsnips, and several plants in the family Compositae, such as sagebrush, goldenrod, chrysanthemum, ragweed, and cocklebur, may also contain natural psoralens.<sup>2</sup> Tobacco, figs, garlic, hot

peppers, and hyacinth and daffodil bulbs are among the other offenders.

### DIAGNOSIS AND TREATMENT

Phytophotodermatitis is a clinical diagnosis. The sunburnlike reactions with unusual configurations should suggest the diagnosis. A history of contact with one of the offending plants and subsequent sunlight exposure should be sought. The unusual nature of these skin lesions may suggest child abuse, scalding, cellulitis, and fungal infections.<sup>1,3</sup>

There is no specific treatment for this reaction. In severe cases, analgesics, antihistamines for itching, and wet compresses may be used. Blistered areas should be kept clean to prevent secondary infection. The hyperpigmentation fades over time as it does in sunburned skin.

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### REFERENCES

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### Submissions

The Editors welcome contributions to Pathological Case of the Month, Picture of the Month, and Radiological Case of the Month. Those who wish to contribute should send their manuscripts to Dr Gilbert-Barness (Pathological Case of the Month), Department of Pathology, Tampa General Hospital, University of South Florida, Davis Island, Tampa, FL 33606; Dr Tunnessen (Picture of the Month), The American Board of Pediatrics, 111 Silver Cedar Ct, Chapel Hill, NC 27514-1651; or Dr Wood (Radiological Case of the Month), KAM 211, USC-HSC, 1975 Zonal Ave, Los Angeles, CA 90089-9024. Articles and photographs accepted for publication will bear the contributor's name. There is no charge for reproduction and printing of color illustrations.