

Berloque Dermatitis Induced by “Florida Water”

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Phytophotodermatitis is a phototoxic dermatitis resulting from contact with psoralen-containing plants such as celery, limes, parsley, figs, and carrots. Berloque dermatitis is a variant of phytophotodermatitis and is caused by high concentrations of psoralen-containing fragrances, most commonly oil of bergamot. Berloque dermatitis is rarely seen today because of the removal of these fragrances from most cosmetic products in the United States. We report, however, a group of patients still at risk for berloque dermatitis. These patients use the colognes “Florida Water” and “Kananga Water,” which are popular in Hispanic, African American, and Caribbean populations. These fragrant waters are used for spiritual blessing, treating headaches, and personal hygiene.

Florida Water (Figure 1) is a versatile cologne that originated in the 19th century and is widely used by people of African and Hispanic descent in the United States and the Caribbean. The cologne contains oil of bergamot, oil of cinnamon, and oil of lemon in a water-alcohol base.¹ Kananga Water also contains oil of bergamot. Both Florida Water and Kananga Water are used in rituals of home protection and spiritual cleansing, in scenting bowls of water set out for the spirit of the dead, and as a basis for making ink-dyed water. These colognes also are used in the bath to refresh the body and applied to the skin after a shower to tone muscles and soothe nerves. They also can be applied to the skin as an astringent, deodorant, or aftershave, and to the forehead as a headache reliever. The colognes can be purchased at most convenience stores in the Hispanic section of Harlem, New York, near our dermatology clinic.



Figure 1. A bottle of Florida Water.

Case Report

A 3-year-old Hispanic girl in good health presented with hyperpigmented macules on her arms that appeared suddenly one month prior. The child's mother denied the girl taking any medications. There was no family history of skin disease and no known allergies. On further questioning, the patient's mother remembered that the child was splashed on her arms with Florida Water as part of a blessing 2 days before the eruption's onset. After the blessing, the child spent a large part of the day in the sun. The mother denied any blister formation or

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erythema before the hyperpigmentation. Physical examination results revealed well-demarcated linear and bizarre streaks of brown hyperpigmented macules and patches on the arms bilaterally (Figure 2).

Comment

Phytophotodermatitis is a phototoxic dermatitis resulting from exposure to furocoumarins (psoralen) containing compounds belonging to the Umbelliferae, Moraceae, or Rutaceae families, and subsequent activation of these chromophores by UVA light (320–400 nm).² Examples of furocoumarin-containing plants include dill, parsley, parsnip, celery, bergamot, lime, fig, mustard, meadow grass, mokihana berries, angelica, Saint-John's-wort, and wild and garden-variety carrot.³ Unlike other phototoxins, the psoralen-induced photosensitivity is an oxygen independent reaction and is delayed, peaking from 36 to 72 hours following UVA exposure.⁴ Plant psoralens intercalate with DNA of epidermal cells and produce a photodermatitis on exposure to UVA.⁵ Postinflammatory hyperpigmentation is caused by increased melanin deposition in keratinocytes and dermal macrophages.⁴

Berloque dermatitis, also called perfume dermatitis, is a variant of phytophotodermatitis that commonly occurs when high concentrations of psoralens, particularly 5-methoxypsoralen (a psoralen-derived compound), are present in perfumes.^{3,6} Oil of bergamot contains 5-methoxypsoralen and is the chief cause of berloque dermatitis. It has been removed from most perfumes and lotions, and berloque dermatitis is rarely seen in the present day.⁷ Today, oil of bergamot, with its fruity and floral scent, still exists in fragrances such as Florida Water, Kananga Water, specialized soaps, linen sprays, and cleansing pads and scrubs. Oil of bergamot also is sold as a fragrance to add to bath water, lotions, creams, shampoos, and conditioners. Clinicians should be aware of this popular fragrance when determining the etiology of suspected phytophotodermatitis, especially when a patient presents with a bizarre pattern of hyperpigmentation on the face, neck, shoulders, breasts, or other areas.

Phytophotodermatitis typically results in erythema and vesicle formation approximately 12 to 36 hours after psoralen and UVA exposure and lasts from 3 to 5 days with spontaneous resolution.⁸ The occurrence of berloque dermatitis, however, rarely is preceded by erythema or vesiculation; it usually presents as an asymptomatic brown hyperpigmentation on normally sun-exposed areas and corresponds to sites of application of psoralen-containing products.⁹



Figure 2. Linear and bizarre streaks of hyperpigmentation.

Treatment consists of avoiding the inciting agent, applying cool compresses, and taking oral salicylates as needed for pain and blistering.^{8,10} Generally, topical steroids may improve clearing of erythema and vesicles, but are not helpful for hyperpigmentation.⁸ The hyperpigmentation in this case could persist for months and generally fades over time.

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