

# Treatment of Phytophotodermatitis with Topical Antimicrobial: A Case Report

E. Koprince, DPM

## Abstract

We here report a case of a 38-year-old female with acute phytophotodermatitis to the anterior distal left shin. The wound measured 4.1 cm x 3.4 cm and appeared after exposure to a citrus plant. After 3 days of daily applications of CurX anti-microbial gel, the wound had reduced to the hyperpigmentation phase. After 1 additional week of daily CurX applications, the hyperpigmentation had resolved. We found that topical CurX was successful in reducing the appearance of post-inflammatory hyperpigmentation from phytophotodermatitis.

## Presentation

A 38-year-old woman with no significant medical history presented with a 2-day history of an erythematous vesiculobullous plaque with localized edema and erythema. She denies puritis, but admits to associated burning sensation. Prior to the onset of the lesion, she went hiking near her home during which she picked oranges off of a tree she found. Upon examination, the patient has a central plaque measuring 4.1 cm x 3.4 cm with interspersed vesicles/bullae which the patient admits to draining at home. There are 2 secondary patches: one measuring 0.9 cm and the other 4mm. The lesions are located on the left anterior shin. They are edematous and erythematous, but without appreciable temperature variation as compared to the contralateral side.

## Phytophotodermatitis

Based on the patient's presentation and recent exposure to citrus plants, she was diagnosed with phytophotodermatitis, a common dermatological condition resulting from contact with furocoumarins under direct sunlight. The result of this exposure causes a phototoxic inflammatory response to the localized area. A common defining feature of this clinical condition is the absence of puritis with the patient complaining of burning instead, which differentiates this from contact dermatitis. There are four species of plants that are known to contain furocoumarins: Apiaceae, Rutaceae, Moraceae, and Leguminosae. Members of Apiaceae include parsnip, celery, and parsley. Rutaceae includes citrus fruits, and is thus the likely culprit in the present case. Figs belong to the Moraceae family and lastly, *Psoralea corylifolia* belongs in Leguminosae family (Bologna et al, 2012).

The course of this condition begins with the acute phase, which peaks at day 3 and can last 3-5 days. The more concerning aspect of this condition, from the patient standpoint, is the resultant hyperpigmentation which often persists for years. This condition most commonly affects areas that are exposed to the element, such as hands, arms, and lower legs, so patients tend to be distressed over the resultant physical deformity (Cather et al, 2000).

## Method:

A thin layer of CurX was applied to the plaque and surrounding tissues. The area was covered with sterile telfa, wrapped with kerlix and paper tape, taking care to avoid placing adhesive directly in contact with the skin. This dressing was changed daily. At each dressing change, the wound was cleaned with sterile saline.

## Results

After 3 days of application, the acute phase resolved and the post-inflammatory hyperpigmentation set in. The patient continued with daily dressing changes and by 20 days of treatment, the hyperpigmentation was almost totally resolved with only mild patchy spotting remaining.

Day 1:



Day 3:



Day 20:



Conclusion:

CurX antimicrobial gel was found to be efficacious in treating both the acute and post-inflammatory hyperpigmentation phases of phytophotodermatitis, the latter of which is known to often persist for years. In the future, it is recommended that randomized control trials be established to further observe and understand the ability of CurX to treat hyperpigmented lesions.