

Phytophotodermatitis, report of four cases

Patricia Chang¹, María Gabriela Herrera Gutiérrez²

¹Dermatologist at Paseo Plaza Clinic Center, Guatemala City, Guatemala, ²General Doctor at Urgencias Médicas, S.A. Guatemala City, Guatemala

Corresponding author: Patricia Chang, MD, E-mail: pchang2622@gmail.com

Sir

Phytophotodermatitis is a non-immunological inflammatory reaction of the skin to phototoxic substances, typically triggered by contact with botanicals sensitive to ultraviolet A light. Clinically, it may present with lesions characterized by erythema, blisters, and burning sensation, resembling a burn, and in the final phase, it can leave pigmentation.

A 30-year-old male presented with dark spots on his back, evolving over 5 days. Upon evaluation, he exhibited localized dermatosis on the back characterized by linear and irregular spots, along with two rounded ones (Fig. 1).

A 20-year-old male consulted due to the presence of brown spots on his back, evolving over 4 days. He exhibits localized dermatosis on the upper third of the back, consisting of a map-like dark spot and linear streaks resembling drips (Fig. 2).

A 40-year-old male consulted due to the presence of dark spots on his left leg, evolving over 8 days. Initially, he developed blisters which subsequently ruptured, leaving behind that dark hue, prompting the consultation. He exhibits localized dermatosis on the anterior aspect of the left leg, characterized by rounded dark spots (Fig. 3).

A 45-year-old female consulted regarding the presence of black spots on the anterior chest and exposed areas of the upper limbs, characterized by dark spots. She mentioned that one of them blistered. She presents disseminated dermatosis on the anterior chest and upper third of the upper limbs, characterized by irregularly shaped brown spots. The largest spot has a plaque with an erythematous center and surrounding

scales, as well as hyperpigmented skin around it (Fig. 4).

All these patients were diagnosed with phytophotodermatitis, without any significant personal or family history. They all had a history of being at the beach for vacation and consuming salads, guacamole, beer, tequila, and rum with lemon.

Phytophotodermatitis is a cutaneous phototoxic inflammatory eruption, its name comes from Greek roots: “phyto” meaning plant, “photo” referring to light, and “dermatitis” indicating skin inflammation [1]. It occurs by ingestion of or topical exposure to furocoumarins, which are present in some plants like: carrots, citrus fruits, bergamot, buttercup, peppers and celery [2,3].

These substances respond to UVA radiation by utilizing their main component, psoralen, resulting in skin reactions of erythema, edema, tenderness, burning sensation, pain, inflammation, itching and bullae with subsequent hyperpigmentation can develop [2,3].

Previous sensitization is not necessary for the rash to occur because it is a non-immunological reaction. The skin lesions can be irregularly shaped, typically painful rather than itchy, and appear exclusively on sun-exposed areas. This characteristic helps distinguish the condition from contact dermatitis caused by plants [3].

The signs and symptoms of Phytophotodermatitis usually start 24 hours after contact with the skin and reach their peak between 48 to 72 hours afterward [4]. Acute dermatitis is self-limiting and resolves within a period of days to weeks, but resulting hyperpigmentation, caused by increased melanin production stimulated by psoralens, can last weeks to months [1,5].

How to cite this article: Chang P, Herrera Gutiérrez MG. Phytophotodermatitis, report of four cases. *Our Dermatol Online*. 2025;16(1):110-112.

Submission: 31.05.2024; **Acceptance:** 01.08.2024

DOI: 10.7241/ourd.20251.25



Figure 1: Linear scattered spots on the back.



Figure 2: Blackish cartographic and linear spots resembling streaks.

All patients should be instructed to steer clear of sunlight and photosensitizing substances after experiencing the initial reaction. Typically, phytophotodermatitis resolves on its own without lasting effects, so treatment is generally unnecessary [4].

For acute lesions, applying cool, damp compresses can help. Moderate symptoms may benefit from short-term use of corticosteroids or antihistamines to relieve discomfort. In severe cases with swollen eruptions, topical steroids may be prescribed. Adults might take

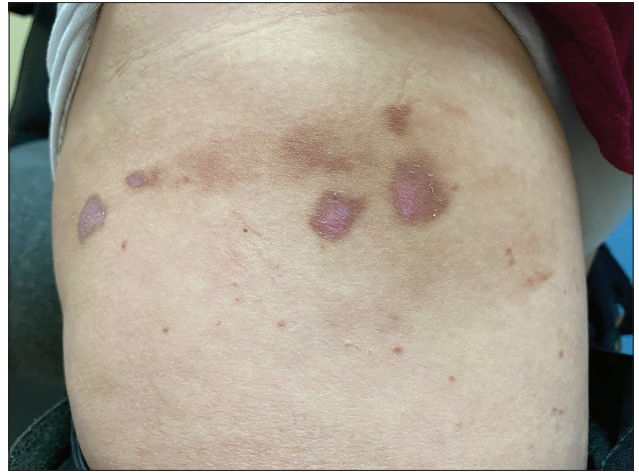


Figure 3: Presence of rounded blackish spots on the anterior aspect of the left leg.



Figure 4: Disseminated dermatosis on the anterior chest and upper third of the upper limbs with the presence of blackish spots of variable shape and size.

Indomethacin orally (50-75 mg). If the condition worsens or affects more than 30% of the body, it is recommended to seek admission to a burn unit for specialized local wound care [4].

This condition could be mistaken for cellulitis, allergic contact dermatitis, or a fungal skin infection [6].

Consent

The examination of the patient was conducted according to the principles of the Declaration of Helsinki.

The authors certify that they have obtained all appropriate patient consent forms, in which the patients gave their consent for images and other clinical information to be included in the journal. The patients understand that their names and initials will not be published, and due effort will be made to conceal their identity, but that anonymity cannot be guaranteed.

REFERENCES

1. Nguyen DA, Muhammad MK, Lee GL. Phytophotodermatitis. En: Trevino J, Chen AY, editors. Dermatological Manual of Outdoor Hazards. United States Springer Nature Switzerland; 2020. P. 43-56.
2. Maniam G, Light KM, Wilson J. Margarita burn: Recognition and treatment of phytophotodermatitis. J Am Board Fam Med.

- 2021;34:398–401.
3. Marcos LA, Kahler R. Phytophotodermatitis. *Int J Infect Dis.* 2015;38:7-8.
 4. Kumar Saha A, Veeves Singh A, Sanjayrao Deshpande S, Vijaya Kumar A. Phytophotodermatitis: A Case Report. *Int J Res Pharm Sci.* 2020;11:5886-8.
 5. Harshman J, Quan Y, Hsiang D. Phytophotodermatitis: A Case Report. *Can Fam Physician.* 2017;63:938-40.
 6. Mioduszewski M, Beecker J. Phytophotodermatitis from making

sangria: a phototoxic reaction to lime and lemon juice. *CMAJ.* 2015;187:756.

Copyright by Patricia Chang, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Source of Support: This article has no funding source.

Conflict of Interest: The authors have no conflict of interest to declare.