

PHYTOPHOTODERMATITIS - AN OCCUPATIONAL AND RECREATIONAL SKIN DISEASE

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Figura 1 - Erythema and large fluid-filled blisters after contact with *Ruta graveolens*. Note the linear arrangement



Figura 2 - Erythematous plaques, edema, vesicles and blisters on the left forearm



CASE REPORTS

CASE 1

A 45 year old woman presented with erythema and large fluid-filled blisters on both legs. She was a rural worker and four days before had been harvesting rue (*Ruta graveolens*) with continuous exposure to sunlight. The lesions had the typical linear arrangement (Figure 1). She was treated with antihistamines, topical and oral corticosteroids. Residual hyperpigmentation was seen two weeks later.

CASE 2

A 56 year old woman, rural worker, was referred for evaluation of erythematous plaques, edema, vesicles and blisters on her left hand, forearm and arm (Figure 2). It was not possible to determine the responsible sensitizer plant, as the patient had come in contact with numerous plants. The same kind of treatment as in the previous case was instituted with severe hyperpigmented patches.

CASE 3

A 49 year old male, recreational fisher was admitted with dusky erythematous plaques and bullae in a linear pattern on his forearms. Three days before he had been fishing near a mossy wall. It was not possible to determine the exact offending plant. He was treated in the same way as above and ten days later the lesions had completely healed without scarring.

Figura 3 - Phytophotodermatitis after contact with a fig tree



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CASE 4

A 57-year old woman, rural worker, presented with the same kind of lesions on the arms, forearms and chest after exposure to *Ruta graveolens*, four days before. She was treated with corticosteroids and lesions were healed within 9 days.

CASE 5

A 32-year old male, construction worker was referred for evaluation of erythema with large blisters in a linear pattern on his arms, forearms and trunk (Figure 3). Six days previously he had been cutting down a fig tree with exposure to sunlight. Ten days after treatment his wounds were totally healed.

DISCUSSION

Plants containing furocoumarin derivatives (psoralen, 5 and 8-methoxypsoralen) are a common cause of phototoxic reactions. *Ruta graveolens*, an herb commonly known as rue, belongs to the Rutaceae family and contains numerous chemicals, including essential oils, furocoumarins and carotenoids. It is native to the Mediterranean region but is now widespread throughout Europe, North America and South Africa.

The Moraceae family is otherwise known as the mulberry family. The most notable species in this family is the fig tree, *Ficus carica*, which is native to the Middle East. Psoralens are found chiefly in the stem and leaves^{1,2}.

A number of factors such as geographical location, seasonal variations, humidity and plant fungal infections can alter the level of furocoumarin in a given plant.

When diagnosing phytophototoxic reactions, history and clinical presentation are critical. This dermatitis is a

non-immunologic cutaneous reaction and the photopatch tests should be avoided.

This dermatosis can be confused with more common forms of occupationally related skin disorders and, although unusual, the condition should be familiar to occupational health professionals in order to ensure appropriate management. Although the reaction is an unusual work-related dermatosis there are reports by farmers, gardeners, bartenders and florists^{3,4}.

It is prudent to advise the use of gloves and protective clothing while working with plants containing furocoumarins in order to avoid simultaneous exposure to sunlight⁴.

REFERENCES

1. Eickhorst K, DeLeo V, Csaposs J. Rue the herb: *ruta graveolens* - associated phytophototoxicity. *Dermatitis*. 2007;18 (1):52-5.
2. Bowers AG. Phytophotodermatitis. *Am J Contact Dermat*, 1999;10(2):89-93.
3. Koh D, Ong CN. Phytophotodermatitis due to the application of citrus hystrix as a folk remedy. *Br J Dermatol*. 1999;140(4):737-8.
4. Wynn P, Bell S. Phytophotodermatitis in grounds operatives. *Occup Med*. 2005;55(5):393-5.

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