

IMAGING CASES

Dermatology clinical case

Caso clínico dermatológico

Inês Viegas¹ , Ana Pinto² , Cristina Tapadinhas² 

A four-year-old boy presented to the Dermatology consultation due to asymptomatic rash on the back of both hands with one week of evolution (**Figure 1**). Numerous erythematous macules and papules were evident, many with linear arciform configuration (**Figure 2**). The boy had been playing with plants the day before.

What is your diagnosis?



Figure 1. Erythematous macules and papules on the dorsa of the hands



Figure 2. Multiple lesions with linear arciform pattern on the dorsa of the hands

1. Department of Pediatrics, Hospital de Santa Maria, Centro Hospitalar Universitário Lisboa Norte. 1649-028 Lisboa, Portugal. ines.viegas@campus.ul.pt
2. Department of Dermatology, Hospital de Santa Maria, Centro Hospitalar Universitário Lisboa Norte. 1649-028 Lisboa, Portugal. anaimarcos.pinto@gmail.com; mctapadinhas@hotmail.com

DIAGNOSIS

The diagnosis of phytophotodermatitis was straightforward in the present case. Retrospectively, when shown a photography, the boy's mother recognized the plants as being common rue (*Ruta graveolens*), one of the most acknowledged photodermatitis-inducing plant. The mother was reassured of the auto-limited nature of the condition, and no treatment was prescribed. Spontaneous recovery was observed after several weeks.

DISCUSSION

Phototoxic reactions are non-immunologic sunburn-like reactions caused by photosensitizers that reach the skin topically or systemically.

⁽¹⁾ Phytophotodermatitis is a contact plant-induced photosensitivity and the commonest phototoxic reaction in children. Most of these reactions result from furocoumarin compounds (psoralens) found, for instance, in limes, lemons, parsley, figs, and common rue. After contact with these photosensitizers, UVA light exposure results in inflammation and subsequent hyperpigmentation.⁽²⁾

Phytophotodermatitis ranges from mild erythema to severe blistering, depending on the intensity of sun exposure, type of plant, and extent of contact.^(1,2) It usually appears within one day after exposure. Bizarre linear streaking or arciform lesions or marks from the leaves and stalks are typically seen on skin-exposed areas.^(1,3) The intensity of the inflammatory reaction correlates to the residual brownish or purple hyperpigmentation.⁽¹⁾

The diagnosis is clinical, elicited by the presence of bizarre linear lesions on areas exposed to both sun and plant.⁽⁴⁾ In bullous phytophotodermatitis, burns, infections, and autoimmune dermatosis are usually excluded by clinical criteria.^(5,6) The streaking pattern and residual hyperpigmentation should not be mistaken for child abuse.^(1,2)

No treatment is usually required in non-bullous phytophotodermatitis, as in the present case. Hyperpigmentation fades away spontaneously within weeks.⁽²⁾ In cases with pruritic inflammation, topical corticosteroids are indicated.^(1,2) Prevention is possible by washing the areas that contacted potential phototoxic plants and applying a photoprotector.^(1,2,7)

Take-home messages

- In children presenting with erythematous or brownish macules and papules on sun-exposed areas, particularly if showing a bizarre pattern, phytophotodermatitis should be considered in the differential diagnosis.
- Skin washing immediately after contact with potential psoralen-containing plants and avoiding sunlight in contact areas prevent these reactions.
- Complete and spontaneous resolution is the most common

outcome, but residual hyperpigmentation may take several weeks to months to resolve.

ABSTRACT

Phytophotodermatitis is a plant-induced cutaneous photosensitive reaction, being the most common phototoxic reaction in children. The diagnosis is clinical, and the presentation can range from mild erythema to severe blisters according to the intensity of exposure. The physical examination often reveals an irregular pattern with arciform contact lesions. No treatment is required in mild cases, with reactive hyperpigmentation usually fading with time.

Keywords: phototoxicity; plant-induced; rash

RESUMO

A fitofotodermatose é uma reação cutânea fotossensível induzida por plantas, sendo a reação fototóxica mais comum em crianças. O diagnóstico é clínico, podendo apresentar-se como ligeiro eritema até reações graves com bolhas, dependendo da intensidade da exposição. Ao exame objetivo, pode ser observado um padrão bizarro e arciforme das lesões, coincidente com as zonas de contacto. Os casos ligeiros não requerem tratamento e a hiperpigmentação reativa tende a desaparecer com o tempo.

Palavras-chave: exantema; fototoxicidade; induzido por plantas

AUTHORSHIP

Inês Viegas - Data curation; Writing – original draft; Writing – review & editing

Ana Pinto - Data curation; Validation; Visualization; Writing – review & editing

Cristina Tapadinhas - Conceptualization; Methodology; Supervision; Validation; Writing – review & editing

REFERENCES

1. Carlsen K, Weismann K. Phytophotodermatitis in 19 children admitted to hospital and their differential diagnoses: Child abuse and herpes simplex virus infection. *J Am Acad Dermatol.* 2007;57(5 Suppl):S88-91.
2. Machado M, Vidal RL, Cardoso P, Coelho S. Phytophotodermatitis: a diagnosis to consider. *BMJ Case Rep.* 2015;2015:bcr2015213388.
3. Córdoba S, González M, Martínez-Morán C, Borbujo JM. Bullous

- Phytophotodermatitis Caused by an Esoteric Remedy. *Actas Dermosifiliogr.* 2017;108(1):79-81.
4. Robl M, Robl R, Marinoni LP, Abagge KT, Carvalho VO. Assemble the puzzle: bizarre-looking lesions. *Arch Dis Child.* 2013;98(11):915.
 5. Furniss D, Adams T. Herb of grace: an unusual cause of phytophotodermatitis mimicking burn injury. *J Burn Care Res.* 2007;28(5):767-9.
 6. Pfurtsheller K, Trop M. Phototoxic plant burns: report of a case and review of topical wound treatment in children. *Pediatr Dermatol.* 2014;31(6):e156-9.
 7. Eickhorst K, DeLeo V, Csaposs J. Rue the herb: *Ruta graveolens*--associated phytophototoxicity. *Dermatitis.* 2007;18(1):52-5.

CORRESPONDENCE TO

Inês Viegas
Department of Pediatrics
Hospital de Santa Maria
Centro Hospitalar Universitário Lisboa Norte
Av. Prof. Egas Moniz
1649-028 Lisboa
Email: ines.viegas@campus.ul.pt

Received for publication: 23.01.2021

Accepted in revised form: 27.08.2021