

Bullous irritant contact dermatitis caused by an alcoholic extract from *Juglans regia* leaves

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Phytotherapeutic remedies can be responsible for allergic and irritant contact dermatitis, and even chemical burns.¹ We report a case of irritant contact dermatitis caused by an alcoholic extract from *Juglans regia* leaves.

CASE REPORT

A 45-year-old non-atopic woman developed pigmented, bullous dermatitis, resembling a partial thickness burn, on her left knee (Figure 1). She had wrapped walnut (*J. regia*) leaves soaked in grappa around her left knee for two consecutive nights in order to treat her painful, swollen knee. This “traditional” remedy had been suggested by a friend of hers who had found the information on the internet. Patch tests with the Italian Society of Allergological, Occupational

and Environmental Dermatology (SIDAPA) baseline series (Lofarma, Milano, Italy) and with a piece of leaf “as is” were performed. Patch test chambers (Van der Bend, Brielle, The Netherlands) were applied in occlusion on the patient’s back for 2 days. Readings were performed on day (D) 2 and D3 according to ESCD guidelines. The patient did not show any positive reactions. Bullous irritant contact dermatitis was diagnosed.

DISCUSSION

J. regia is a common large walnut tree whose parts are used to treat various diseases (eg, diarrhoea, sinusitis, arthritis, skin disorders, and diabetes) in popular medicine. In particular, fresh leaves of *J. regia* are applied on the forehead and body to alleviate fever, and on the joints to reduce rheumatic pain.² Cases of irritant contact dermatitis caused by the juice of green walnut husks have been described.^{3,4} The responsible agent is juglone, an aromatic naphthoquinone present in *J. regia* husks and leaves. Juglone has an exogenous pigmenting action; for this reason, walnut husks are used in the preparation of vegetable hair dyes, similar to henna (*Lawsonia inermis*).³ Although juglone is a strong sensitizer in guinea-pigs, few cases of allergic contact dermatitis caused by walnut husks have been described in humans.³ In 2015, Foti et al described a case of allergic contact dermatitis caused by an unknown allergen contained in walnut husks.⁵

In our case, the alcoholic grappa imbibition may have favoured the ethanolic extraction of juglone, as well as numerous other irritant active principles of walnuts, as described by Schwindl et al.^{5,6} Furthermore, the prolonged skin maceration may have favoured their penetration. This case emphasizes how today’s remedies found on the internet may increase the adverse effects of traditional remedies.



FIGURE 1 Bullous dermatitis on a pigmented background on the left knee

CONFLICTS OF INTEREST

The authors have no conflicts of interest to report.

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