Actas Dermosifiliogr. 2018;109(5):449–459

ACTAS Dermo-Sifiliográficas

Full English text available at www.actasdermo.org

CASE AND RESEARCH LETTERS

Airborne Allergic Contact Dermatitis Caused by Neem Oil☆

Dermatitis de contacto alérgica aerotransportada por aceite de neem

Dear Editor:

The incidence of allergic contact dermatitis to essential oils is rising as these compounds are found in a wide range of products.[1] They are a common ingredient in cosmetic products, together with fragrances, and sensitization to both is common.[2] Sensitization to essential oils and fragrances can be accurately diagnosed by patch testing with fragrance markers from the standard series of allergens of the Spanish Contact Dermatitis and Skin Allergy Research Group (GEIDAC), markers from specific allergen series, and products brought in by the patient.[3] A 58-year-old man with a history of psoriasis being treated with topical corticosteroids and emollients presented with edema and erythema on both eyelids that had appeared 24 hours after fumigating a vegetable plot with a homemade fumigation mix. The cutaneous manifestations disappeared with the application of topical clobetasol propionate. The fumigation mix contained pure neem oil bought from an online distributor (Fig. 1). The patient reported that he had used neem oil as an emollient for psoriasis plaques in the past. The plaques disappeared, but the man developed eczematous lesions after repeated applications and decided to stop using the oil. The lesions cleared when he did this. We performed patch tests with the GEIDAC standard series, the Chemotechnique Diagnostics Fragrance Series, limonene hydroperoxide, linalool, and neem oil (brought in by the patient). Readings at 48 and 96 hours were positive for nickel (++) and neem oil (+++) (Fig. 1B). Dilutions at 25% and 50% were also positive at 48 and 96 hours (Fig. 1C). The same tests in 16 controls were negative. The patient applied neem oil to his forearm and developed an eczematous reaction at the application site and on both eyelids at 48 hours. Based on these findings, we established a diagnosis of airborne allergic contact dermatitis to neem oil in a patient who had already exhibited

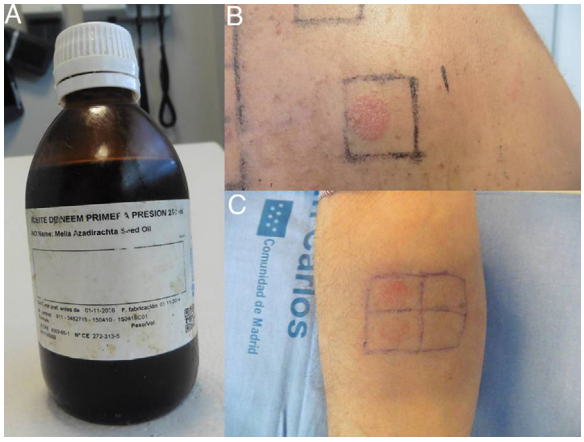

Figure 1 A, Neem oil. B, Patch test results at 96 h for neem oil (+++). C, Patch test results at 96 h for dilutions at 25% and 50%.

manifestations of allergic contact dermatitis to the same substance. Neem oil is extracted from the seeds of the neem tree (*Azadirachta indica*), which is native to India and has been widely used in Hindu medicine for years. The neem tree has anti-infective, immunomodulatory, anti-inflammatory, antioxidant, and anticarcinogenic properties and has been used to treat many systemic and dermatological diseases, including alopecia, ulcers, leprosy, acne, psoriasis, eczema, ringworm, warts, and radiodermatitis.[4,5] It is also used in cosmetic products, pesticides, fungicides, insect repellents, and fertilizers.[6] Just 4 cases of contact dermatitis to neem oil have been reported and they have all involved different diseases treated topically. Two of the patients had psoriasis[7,8] (like our patient), 1 had alopecia areata,[6] and 1 had a boil.[7] In the cases described by Greenblatt et al.[7] and Lauriola and Corrazza,[8] the same tests performed in 5 and 8 controls, respectively, were negative. Only one of the studies cited, that of Hamamoto, tested diluted forms and these were positive.[7] Two of the patients tested positive to other fragrances (fragrance mix I and other essential oils contained in the patients' own products).[6,8] Our patient only tested positive to neem oil. The allergen in neem oil is unknown as over 140 components have been isolated.[8] Of these, triterpenoids (azadirachtin and nimbin), coumarins, contaminants, and oxidation subproducts all have allergenic potential. Components may also be altered during the oil extraction process. Products with a high concentration of azadirachtin are potent pesticides but they can also act as irritants. It is therefore important to perform a complete

☆ Please cite this article as: Sánchez-Gilo A, Nuño González A, Gutiérrez Pascual M, Vicente Martín FJ. Dermatitis de contacto alérgica aerotransportada por aceite de neem. Actas Dermosifiliogr. 2018;109:449–450.

study with dilutions and controls to rule out irritant contact dermatitis.[7] The current case highlights the importance of thoroughly questioning patients with suspected allergic contact dermatitis. It is important to obtain information about the products the patients are exposed to in different areas of their lives, including hobbies and the use of alternative treatments, perhaps even for another condition.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References

1. de Groot AC, Schmidt E. Essential oils, part I: Introduction. Dermatitis. 2016;27:39–42.
2. Sabroe RA, Holden CR, Gawkrodger DJ. Contact allergy to essential oils cannot always be predicted from allergy to fragrance markers in the baseline series. Contact Dermatitis. 2016;74:236–41.
3. Arribas MP, Soro P, Silvestre JF. Allergic contact dermatitis to fragances: Part 2. Actas Dermosifiliogr. 2013;104:29–37.
4. Kumar VS, Navaratman V. Neem *(Azadirachta indica)*: Prehistory to contemporary medicinal uses to humankind. Asian Pac J Trop Biomed. 2013;3:505–51.
5. Franco P, Potenza I, Moretto F, Segantin M, Grosso M, Lombardo A, et al. Hypericum perforatum and neem oil for the management of acute skin toxicity in head and neck cancer patients undergoing radiation or chemo-radiation: A single-arm prospective observational study. Radiat Oncol. 2014;9:297.
6. Reutemann P, Ehrlich A. Neem oil: An herbal therapy for alopecia causes dermatitis. Dermatitis. 2008;19:E12–5.
7. Greenblatt DT, Banerjee P, White JM. Allergic contact dermatitis caused by neem oil. Contact Dermatitis. 2012;67:242–3.
8. Lauriola MM, Corazza M. Allergic contact dermatitis caused by argan oil, neem oil, and *Mimosa tenuiflora*. Contact Dermatitis. 2016;75:338–90.

A. Sánchez-Gilo,* A. Nuño González, M. Gutiérrez Pascual, F.J. Vicente Martín

Servicio de Dermatología, Hospital Universitario Rey Juan Carlos, Móstoles, Madrid, España

* Corresponding author.
E-mail address: aracelisanchezg@hotmail.com (A. Sánchez-Gilo).

1578-2190/

A Typical Case of Lipoblastoma on the Lower Limb of an Infant☆

Lipoblastoma en la extremidad inferior de un lactante. Un caso representativo

Dear Editor:

Lipoblastoma is a childhood tumor that usually appears in the first 3 years of life, although it may sometimes be present at birth. It occurs as a well-circumscribed lesion in the superficial subcutaneous tissue.[1]

Lipoblastoma accounts for between 5% and 30% of all soft-tissue tumors in children. The most common sites of occurrence are the upper and lower extremities, although the head, neck, and trunk may also be affected. On fewer occasions, there have been reports of retroperitoneal, mesenterial, mediastinal, and parotid lipoblastomas.[1,2] The classic presentation is that of a smooth, painless, slow-growing mass that can sometimes displace neighboring structures or cause deformity of the anatomic region in which it is located.[3]

We report the case of a 5-month-old boy with a soft, recalcitrant mass on his middle left toe (Fig. 1). The mass had appeared in the first month of life and had exhibited fast, progressive growth. Soft-tissue ultrasound showed a solid, circumscribed lesion with a vascular appearance. Contrast magnetic resonance imaging (MRI) showed a well-defined solid mass with a vascular appearance consistent with a hemangioma or a low-flow vascular malformation.

Because of its fast growth and deforming nature, the mass was removed by complete skin-sparing surgical excision with Z-plasty repair (Fig. 2). The pathology report described a well-defined, expansive mesenchymal lesion with multiple lobules of fat cells, some of which were immature, accompanied by an abundant myxoid matrix and a proliferation of nonatypical spindle cells with a soft appearance (Figs. 3A and B)

The patient progressed adequately and showed no signs of recurrence in the 6 months after the procedure.

Lipoblastomas are rare, benign mesenchymal tumors. They can be superficial (slow-growing well-circumscribed

Figure 1 Soft erythematous mass on the right middle toe.

☆ Please cite this article as: Mordecay LG, Candia MPN, Fuentes CET, Zuluaga AMS. Lipoblastoma en la extremidad inferior de un lactante. Un caso representativo. Actas Dermosifiliogr. 2018;109:450–452.