

Hyperpigmentation as a manifestation of contact allergy to *Magnolia officinalis* bark extract

Alberto Fernández-Bernáldez  | Ana Reymundo | Beatriz Butrón | Javier Sánchez-Pérez

Dermatology Department, Hospital Universitario de la Princesa, Madrid, Spain

Correspondence

Alberto Fernández-Bernáldez, Dermatology Department, Hospital Universitario de la Princesa, Diego de León, 62, 28006 Madrid, España.
Email: alberto_pswd@hotmail.com

KEYWORDS: allergic contact dermatitis, anti-ageing, case report, honokiol, magnolia, *Magnolia officinalis*, magnolol

Over the last few years, several reports of allergic contact dermatitis (ACD) to *Magnolia officinalis* bark extract (MOBE) have been published, as this product is increasingly used in anti-ageing skin care products.¹⁻³ We report a case of ACD to MOBE with an unusual clinical presentation.

scientifically proven. The two major compounds found in this extract are magnolol and honokiol.⁴ Studies have shown that magnolol has antibacterial, anti-inflammatory, anti-tumour, and anti-oxidant properties.⁵ Honokiol has been shown to have anti-cancer properties.⁶

CASE REPORT

A 65-year-old woman with no history of atopic dermatitis was referred to our department for a pruriginous, slate-grey hyperpigmentation affecting the cheeks and neck (Figure 1). The lesions had developed 1 year before and were treated with oral and topical corticosteroids by a private clinician. Pruritus improved at first, but the grey hyperpigmentation persisted, together with several flares of pruritus. Questioned at our department, the patient acknowledged using a new anti-ageing cream and a vitamin C serum shortly before begin of symptoms.

We performed patch testing with the European baseline series as well as the fragrance series (Chemotechnique Diagnostics, Vellinge, Sweden) and the patient's cosmetic products "as is". A positive reaction was observed to Nivea Cellular Anti-Age (Beiersdorf, Hamburg, Germany) at day (D)2 and D4. Further testing was carried out with the components of the anti-ageing cream, kindly provided by the manufacturer. A positive test reaction was observed only to MOBE 0.5% pet. at D2 and D4 (Figure 2). Twenty controls patch tests were performed with MOBE and all were negative. The patient was advised to stop using the cream and has since not experienced further episodes of pruritus. The grey hyperpigmentation is slowly resolving.

DISCUSSION

Cosmetics containing *M. officinalis* bark extract have recently appeared on the market, although their anti-aging effects have not been



FIGURE 1 Slate gray pigmentation sharply demarcated affecting the neck and face of the patient



FIGURE 2 Positive test reaction to *Magnolia officinalis* bark extract 0.5% pet. at day 2

We report a case of ACD to MOBE presenting as grey hyperpigmented patches on the cheeks and neck, which is an unusual clinical manifestation of contact dermatitis. As anti-ageing products are gaining popularity, it is important to keep in mind that this clinical presentation can be associated with ACD to such creams; therefore, ACD to MOBE should be suspected in these cases. The case presented here shows that patch testing the products used by the patient is important to find the clinically relevant allergen.

CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

AUTHOR CONTRIBUTIONS

Alberto Fernández-Bernáldez: Conceptualization; data curation; formal analysis; funding acquisition; investigation; methodology; project

administration; resources; software; supervision; validation; visualization; writing-original draft; writing-review and editing. **Ana Reymundo:** Conceptualization; data curation; formal analysis; funding acquisition; investigation; methodology; project administration; resources; software; supervision; validation; visualization; writing-original draft; writing-review and editing. **Beatriz Butrón:** Conceptualization; data curation; formal analysis; funding acquisition; investigation; methodology; project administration; resources; software; supervision; validation; visualization; writing-original draft; writing-review and editing. **Javier Sanchez-Perez:** Conceptualization; data curation; formal analysis; funding acquisition; investigation; methodology; project administration; resources; software; supervision; validation; visualization; writing-original draft; writing-review and editing.

ORCID

Alberto Fernández-Bernáldez  <https://orcid.org/0000-0001-6479-5541>

REFERENCES

1. Ghys K, de Palma A, Vandevenne A, Werbrout J, Goossens A. *Magnolia officinalis* bark extract, a recently identified contact allergen in 'anti-ageing' cosmetics. *Contact Dermatitis*. 2015;73(2):130-132.
2. Raison-Peyron N, Césaire A, Du-Thanh A, Dereure O. Allergic contact dermatitis caused by *Magnolia officinalis* bark extract in a facial anti-ageing cream. *Contact Dermatitis*. 2015;72(6):416-417.
3. Nilausen TD, Johansen JD, Thyssen JP. Allergic contact dermatitis of the face caused by *Magnolia officinalis* bark extract. *Contact Dermatitis*. 2016;75(6):385-387.
4. Sarrica A, Kirika N, Romeo M, Salmona M, Diomedea L. Safety and toxicology of Magnolol and Honokiol. *Planta Med*. 2018;84(16):1151-1164.
5. Chen H, Fu W, Chen H, et al. Magnolol attenuates the inflammation and enhances phagocytosis through the activation of MAPK, NF- κ B signal pathways in vitro and in vivo. *Mol Immunol*. 2019; 105:96-106.
6. Arora S, Singh S, Piazza GA, Contreras CM, Panyam J, Singh AP. Honokiol: a novel natural agent for cancer prevention and therapy. *Curr Mol Med*. 2012;12(10):1244-1252.

How to cite this article: Fernández-Bernáldez A, Reymundo A, Butrón B, Sánchez-Pérez J. Hyperpigmentation as a manifestation of contact allergy to *Magnolia officinalis* bark extract. *Contact Dermatitis*. 2020;1-2. <https://doi.org/10.1111/cod.13731>