

Ectopic Periorbital Dermatitis and Mycosis Fungoides-Like Dermatitis Due to Propolis

To the Editor:

We draw readers' attention to propolis as a rising cause of allergic contact dermatitis, the diagnosis of which may be missed because of atypical presentations exemplified in 2 cases below.

The first patient was a 28-year-old white woman with a 4-month history of a recurrent itchy rash of the eyelids presenting as ill-defined erythematous patches without scale. Previous TRUE test was interpreted as allergy to parabens, but her eruption continued despite avoidance of paraben-

containing products. Patch testing to the NACDG 80 series and to her personal skin care products showed positive reactions to neomycin, nickel, and propolis. Daily application of beeswax-containing lip gloss using her fingers implicated propolis in beeswax as the relevant allergen.

The second patient was a 65-year-old white woman with non-Hodgkin B-cell lymphoma and a 3-year history of a recurrent itchy widespread rash presenting as confluent erythematous and scaly plaques of the scalp, ears, chest, axillae, back, abdomen, upper arms, and thighs (Fig. 1). Lesional skin biopsies of the left upper chest and back revealed sparse perivascular lymphocytic infiltrate with focal epidermotropism



FIGURE 1. Skin manifestations of patient 2.

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Dr Cruz has received honoraria from Mary Kay and RCTS and is currently receiving a grant (#5RO1AI64927) from the National Institutes of Health and grant (#1101BX000896) from the Department of Veterans Affairs. The remaining authors have no conflicts to declare.

DOI: 10.1097/DER.0b013e31829e0ff3

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interpreted as mycosis fungoides and treated with triamcinolone cream and narrowband UVB phototherapy over 2 years, which relieved itching but not the rash. We patch tested her to the NACDG 80 series, which showed positive reactions to *Myroxylon pereirae* and propolis. *Myroxylon pereirae* was judged relevant, given her known sensitivity to fragrance-containing skin care products. Propolis was also relevant because her hobby was glass beading, in which she manually lubricated the wire with beeswax. Avoidance of fragrance-containing products and of glass beading resolved her dermatitis.

Derived from 2 Greek words meaning “before the city,” propolis denotes the resin collected and mixed with wax by honeybees to narrow the entrance to their hives for protection against invaders and cold weather.¹ Propolis is composed of more than 300 chemicals that vary depending on geographic locality. Several commercial products (lozenges, cough syrups, shampoos, toothpastes, varnishes, lipsticks/chapsticks) contain propolis; indeed, almost all products with beeswax are contaminated with propolis. Its use for medicinal purposes dates to the 12th century; antibiotic properties have been ascribed to its phenolic compounds. Antitumor, anti-inflammatory, antioxidant, and hepatoprotective properties have also been claimed.¹

Propolis is a contact allergen with sensitization rates between 1.2% and 6.6%.¹ Cases of propolis allergy have been due to skincare products, oral ingestion, airborne exposure, and occupational exposure in beekeepers,¹ including anaphylactic shock.¹ Propolis allergy has been misdiagnosed as psoriasis flare or pemphigus in patients using propolis-containing medicaments.¹

The principal allergens in propolis are caffeate esters, specifically 3-methyl-2-butenyl caffeate and phenylethyl caffeate.¹ A procedure eliminating caffeate esters from propolis and its consequent allergic property without reducing medicinal properties was reported recently.² Barrier creams may help patients with airborne dermatitis due to propolis.³ Particularly relevant to our second patient is that propolis and *M. pereirae* share several chemicals in common, raising the possibility of cross reactivity;

overlapping allergens include benzyl benzoate, benzyl cinnamate, and cinnamyl cinnamate.

Contact allergy to propolis can be missed because it is a relatively uncommon sensitizer that can present in less obvious ways, as highlighted by our 2 cases presented. However, its incidence is rising because of its inclusion in many over-the-counter products and because it shares common components with *M. pereirae*.

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