

Non-occupational contact dermatitis: Epoxy resin in dried flowers

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CASE REPORT

A 41 year-old female was referred to our clinic with a 3-day history of intensely itchy eczema on her face and both hands. Examination showed localized, well-demarcated patches on the eyelids, cheeks, nasolabial folds, and chin. Both ears were also affected. Some erythematous papules covered the neckline (Figure 1A and B) and the

dorsal aspect of the fingers. The patient denied exposure to topical drugs or cosmetics. She worked as accountant and had no previous history of eczema or atopy. When asked about hobbies, she explained that she had been following YouTube tutorials about how to cast dried flowers in resin (Figure 2A). To do this, she mixed a specific type of resin with a hardener. Her routine included mixing the resin and then covering the dried flowers with the mixture. The



FIGURE 1 Eczematous eruption. Note the involvement of (A) eyelids, nasolabial folds, neckline, and (B) ears



FIGURE 2 (A) Resin flower craft made by the patient; (B) Positive patch test reaction to epoxy resin at day 7

flowers were then laid to harden after exposing them to a light source for a variable time. She did not always wear vinyl gloves for protection during the craft work.

The resin and hardener were obtained online through a website called *fantasycraftshop.com*. The name of the resin was “Fantasy resin” for jewelry and it was supplied in two bottles: bottle A containing transparent epoxy resin and bottle B containing the hardener. Unfortunately, information concerning the chemical names were not available on the product website and the patient had disposed of both bottles.

Airborne allergic contact dermatitis (ACD) was suspected. The rash cleared after 3 weeks of oral prednisone, initially 30 mg once daily, reduced by 10 mg every 7 days. She also applied topical clobetasol propionate 0.05% ointment once daily.

Patch tests were performed 3 months later with the latest version of Spanish Contact Dermatitis Research Group (GEIDAC) baseline series (TRUE Test, supplemented with allergens obtained from Chemotechnique Diagnostics [Vellinge, Sweden]). Patch tests were removed after 48 hours and readings carried out at day (D)3, and D7. We observed a +++ reaction to the resin epoxy at D3 and D7 (Figure 2B). ACD to epoxy resin due to her dried flowers hobby was diagnosed. After diagnosis, the patient quit her hobby and has had no further recurrence of eczema.

DISCUSSION

We present a case of airborne ACD to diglycidyl ether of bisphenol A epoxy resin (DGEBA-ER) used in the casting of dried flowers. DGEBA-ER is widely used in occupational settings, specifically in construction work.¹ Although ACD most typically develops in occupational exposure, some papers emphasize that domestic sensitization sources are

also important (hobby glues, boat painting/coating, painting of floor or roof).² ACD to epoxy systems usually involves the dorsal aspect of fingers due to a closer contact to epoxy resin monomers. Airborne ACD to epoxy resin, as in our case, may affect hands and forearms, but also face (mostly eyelids), neck, and the retroauricular area.

We emphasize the importance of performing a detailed medical history and asking about patient hobbies for the diagnosis of ACD. Additionally, it is important to be aware of the specific safety measures required when handling high risk sensitizing allergens that are increasingly being used in homemade craft kits.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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