

### Occupational allergic contact dermatitis to epoxy resin in a gravestone repairer

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Epoxy resins (ER) are ubiquitous chemicals based on epichlorhydrin and bisphenol A, used commonly in adhesives, but also found in plastic coatings, electrical insulation, paints, and inks. ER allergic contact dermatitis (ACD) is recognized to cause severe reactions in an airborne distribution as well as at sites of direct contact.

#### Case Report

An 18-year-old man presented with a 2-month history of an itchy, dry,

scaly rash affecting his forearms and face, but sparing the hands. The rash followed an episode of dramatic periorbital oedema, necessitating an overnight hospital stay and treatment with oral steroids. The subsequent rash settled with topical steroids and emollients. The eruption began 8 weeks after starting work as a gravestone repairer. He described his work as using a butane burner to remove any debris or lichen from the surface of broken gravestones, and then using a 2-part ER to glue the 2 pieces of the gravestone together. The rash occurred during a week of carrying out this work and cleared when he stayed away from work.

A working diagnosis was considered of either an ACD to the ER or possibly an airborne ACD to the burnt off gravestone lichens. He was patch tested to the British Contact Dermatitis Society standard, medication, facial, plant, and ER series, as well as to scrapings of the gravestone lichens. He tested positive to ER (D2+, D4+) only, with no reaction to the lichens.

On return to work, despite avoiding direct contact with ER, he developed a similar rash as before on his eyelids, face, and forearms. On direct questioning, he admitted to burning off excess glue on the gravestones that would have exposed him to airborne ER. At work he wore a T-shirt and wrist-length protective gloves, which was consistent with the distribution of his rash being airborne ACD. He was given advice on avoiding this form of exposure in the future.

#### Discussion

ER is one of the common allergens causing occupational ACD (1). Construction workers including carpenters, epoxy floor finishers, and ski factory workers are some of the individuals reported to be prone to occupational ACD to ER (2–4). Occupational ACD to ER in a gravestone repairer has not been previously reported.

Cahill et al. (3) reported that the prognosis of ACD from ER is not always favourable even when individuals avoid further ER exposure. However, patients with occupational ACD to ER should be counselled cautiously about their prognosis as this conclusion was based on a small sample size.

The most common site of ACD from ER is the hands following direct contact. Airborne ACD to ER should however be considered when other body sites are affected. A detailed occupational history will elucidate the relevance of positive patch test results as illustrated by our case.

#### References

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