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Airborne contact dermatitis caused by the sarcotesta of *Ginkgo biloba*

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The leaves, nuts and sarcotesta of *Ginkgo biloba* L. (Ginkgoaceae) are used in China not only for medical purposes, but also in 'health foods' and cosmetics. Cases of allergic contact dermatitis caused by ginkgo leaves, fruits and nuts have been previously reported (1–3), including occupational contact dermatitis in Central Europe (1). We report a case of allergic contact dermatitis caused by *G. biloba* sarcotesta (Fig. 1) as a result of occupational airborne exposure.

Case Report

A 51-year-old woman was referred to us with a 3-day history of widespread dermatitis around the eyes, and on the face and arms. She had no previous history of skin disease and no history of atopy. The dermatitis appeared 1 week after she started work involving the removal of the sarcotesta from *G. biloba* fruits, for which she wore rubber gloves. Examination showed erythema on the face and arms, with severe facial and periorcular oedema (Fig. 2).

Patch tests were performed with the Chinese baseline series, and with ginkgo leaf and sarcotesta. Results were assessed after 48 and 72 h. Ginkgo leaves tested 'as is', as crushed pulp and as ultrasonic extract of dried leaves in 50% ethanol gave negative results. A positive reaction

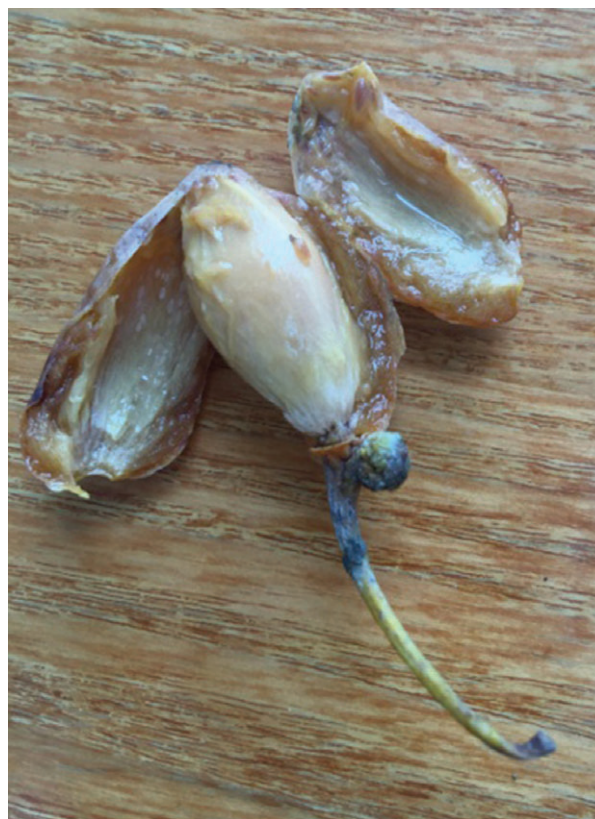


Fig. 1. The sarcotesta of *Ginkgo biloba*.

(++) occurred with extract of the sarcotesta (10% pet.; the extract was prepared as for the dried leaves), which had previously been found to be non-irritating in 31 control subjects. These findings led to the diagnosis of occupational allergic contact dermatitis associated with the peeling of the sarcotesta. The skin reaction resolved after

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Fig. 2. Erythema on the face and arms with severe diffuse facial and periocular edema.

the patient stopped performing this work, but reappeared when she re-exposed herself to the sarcotesta. For this reason, she had to give up her work.

Discussion

G. biloba fruits constitute a recognized cause of allergic contact dermatitis through inadvertent exposure (2, 3). Various ginkgolic acids and alkenyl resorcinols have been identified as the sensitizers (4–6). On the basis of the patient's history and the nature of her occupational exposure, airborne contact dermatitis was suspected, which is unusual. Her hands were protected by the rubber gloves that she used, but dermatitis nevertheless developed on unprotected areas of her face and arms. To the best of our knowledge, this is the first report of airborne allergic contact dermatitis developing occupationally in an individual handling *G. biloba* sarcotesta. However, the apparent rarity of the condition may be explained by under-reporting. Nakamura (7) described what appeared to be the same airborne reaction on the face and neck in 4 patients in Japan who had manually removed the sarcotesta from the fruits to obtain the edible seed.

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