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Cashew nut oil is used in the manufacture of some phenol-formaldehyde resins. We report a case of occupational exposure to the oil causing an acute allergic contact dermatitis.

Case Report

A 37-year-old Japanese male, working as a researcher in an industry producing phenol-formaldehyde resins, presented with painful, oedematous erythema with bullae on his right leg (Fig. 1). He had dropped pure cashew nut oil from a bottle onto his right thigh 14 D previously but had taken off his work clothes immediately and thoroughly washed the skin. However, an itchy erythema began to develop 10 D later. Because of the

severe swelling, the patient was hospitalized. The dermatitis was treated with systemic and topical steroids and an oral antihistamine.

Patch testing was performed with cashew nut oil 3% alcohol (alc.), 0.3% alc., 0.03% alc., urushiol 0.01% pet., ethanol 'as is', and pet. 'as is'. Cashew nut oil was provided by his employer. Urushiol (diluted to 0.01% pet.) was purchased from Torii Pharmaceutical Co., Ltd. (Tokyo, Japan). Reactions were recorded as follows: pet. and ethanol were negative (Fig. 2).

	D2	D3	D4
Cashew nut oil 3% alc.	+	++	++
Cashew nut oil 0.3% alc.	+	+	+
Cashew nut oil 0.03% alc.	?+	?+	+
Urushiol 0.01% pet.	+	+	+

The patient was diagnosed as having occupational allergic contact dermatitis from cashew nut oil.



**Occupational allergic
contact dermatitis due to
cashew nut oil**

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Fig. 1. Clinical picture of occupational allergic contact dermatitis from cashew nut oil. Painful erythema with bullae present on the right leg.

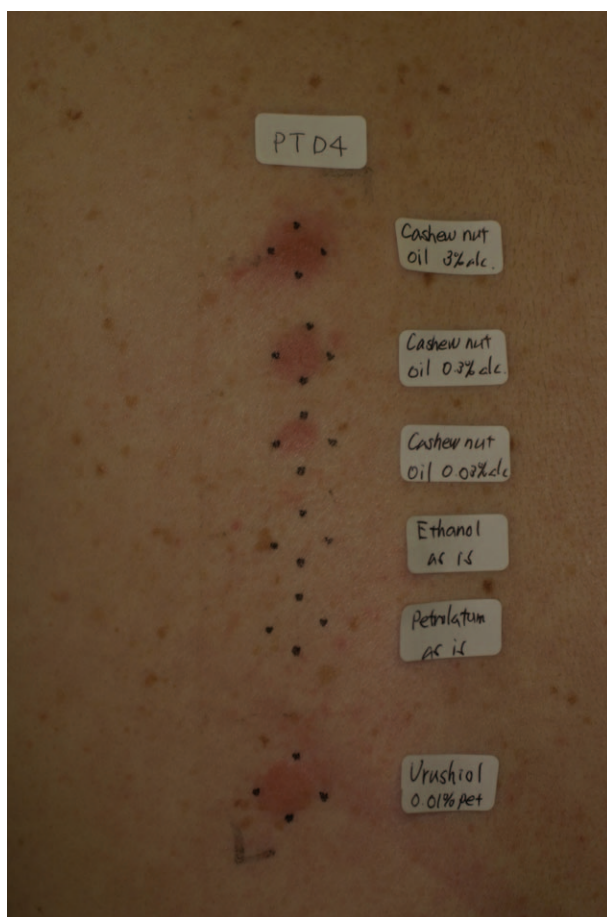


Fig. 2. Patch test reactions to cashew nut oil and urushiol at 4 D.

Discussion

Cashew nut oil is used in the phenol-formaldehyde resin industry (1). It is

derived from the shell of *Anacardium occidentale*, belonging to the Anacardiaceae family. Allergic sensitization

to cashew nut oil is described (2). Cashew nut oil 3% alc. has been recommended for patch testing (1), but our result suggests that cashew nut 0.3% alc. may also be appropriate for patch testing.

The Anacardiaceae family includes poison ivy, poison oak, mango, and the Japanese lacquer tree. The reaction to urushiol was a cross-reaction. Urushiol is from the Japanese lacquer tree, 'urushi'. We recommended that our patient avoids contact with cashew nut oil at work, as well as products made of 'urushi' at home.

This report again illustrates the risk of allergic contact sensitization to cashew nut oil and the need for care in industry.

References

1. Rietschel R L, Fowler J F Jr. *Fisher's Contact Dermatitis*, 5th edition. Baltimore, Lippincott Williams and Wilkins, 2001.
2. Maje H A, Freedman D O. Cashew nut dermatitis in a returned traveler. *J Travel Med* 2001; 8: 213-215.

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