

Allergic contact eczema caused by exotic wood material in sauna interior decoration

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Case Report

A 45-year-old female teacher was referred to our clinic because of a severe and treatment-resistant dermatitis. She had no previous history of eczema. Dermatitis first appeared in her right elbow and upper arm. Over the next few weeks, the dermatitis spread to her back and left upper arm. We took two skin bunch biopsies from her back. She was told to avoid sauna bathing for 2 weeks because of the stitches. Topical corticosteroid ointment was prescribed for treatment of the dermatitis.

During the next 2 weeks, the patient experienced dramatic healing of her skin. Avoiding sauna baths seemed to have a clearly positive impact on her skin condition. This led her to ask whether something in her sauna that had been renovated a few months earlier was irritating her skin. The interior material of the sauna was unvarnished western red cedar. The origin of the wood was confirmed by an expert from the Finnish wood importer, and an independent skilled carpenter was asked to ensure that the wooden material detached from the sauna was western red cedar.

Patch tests were performed with a baseline series, a cosmetic series, and western red cedar sawdust from the sauna interior material. Western red cedar sawdust gave a firmly positive (++) reaction (Fig. 1a). Nickel sulfate gave a strong positive reaction (+++), cobalt chloride a positive reaction (+) and formaldehyde an irritant reaction in the baseline series. Histological findings of the skin bunch biopsies suggested eczema-type dermatitis.

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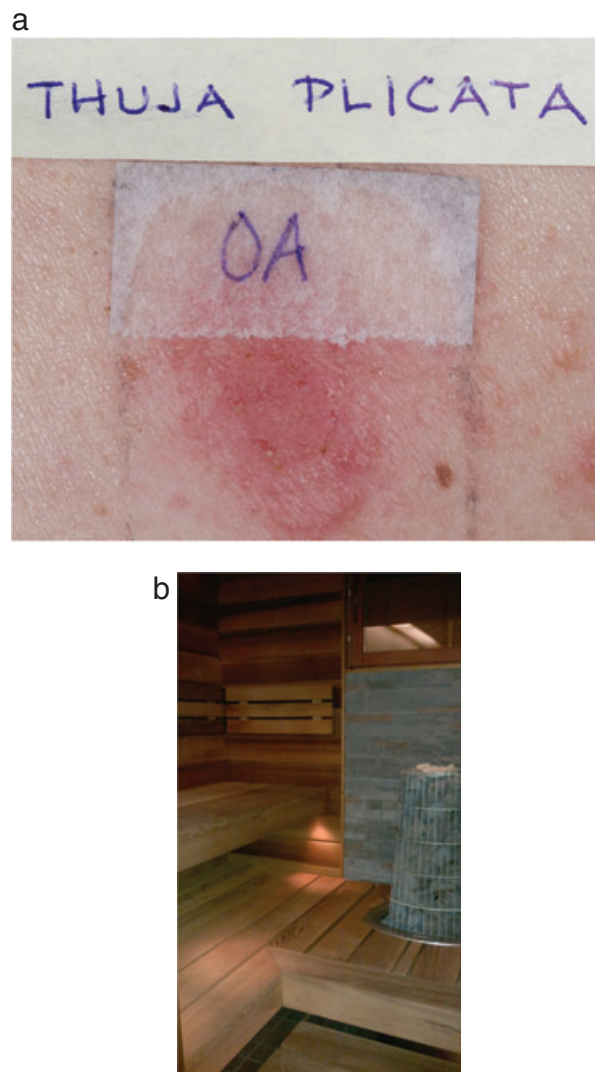


Fig. 1. (a) Patch test reaction to western red cedar (*Thuja plicata*) sawdust. OA, patient's own sample. (b) A Finnish sauna with interior decoration made from western red cedar.

The same western red cedar sawdust was tested on 10 controls, with negative results. The patient was diagnosed with allergic contact dermatitis caused by western red cedar.

Discussion

Typically, Finnish people take a sauna bath once or twice a week. The traditional Finnish-style sauna is a dry sauna, where the average air temperature is approximately 70–80°C, with steam vapour being created by splashing water on heated rocks. The interior is typically furnished with wooden panelling (Fig. 1b).

We speculate that, in this case, as in our previous case report (1), sweating and direct occlusion-like repeated skin contact with the contact allergen caused the severe skin symptoms. Topical corticosteroid treatment did not markedly clear the skin symptoms at first, but avoiding sauna bathing had a dramatic effect on the symptoms.

Non-occupational contact allergy to finished wood material is rather rare, but has been reported (2–4). The changing styles regarding the use of exotic wood materials could, in some cases, lead to a change in the incidence of allergic contact dermatitis (3, 4).

References

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