

A 58-year-old man was referred to the patch test clinic. Over the past 2 years he had developed itch, scale, and fissuring of his hands. There was no history of skin disorders and no history of atopy. His skin elsewhere was unaffected. On examination, the palms and dorsa of the hands were erythematous with associated scale. There was a sharply demarcated border at the wrists between normal and abnormal skin.

The patient had worked in window-frame manufacturing for 26 years, feeding softwood window frames into a painting and drying machine. A number of paints, detergents, and wood primers are used in the machine operated by our patient.

The window manufacturer employs approximately 175 people and no one else in the factory is known to have any similar problems with their skin. Raw pine is imported from Scandinavia and treated with preservative on arrival. It is then cut to size and assembled into window frames, prior to application of wood primer.

The wood preservative was a compound called 'Vacsol™' containing propiconazole 0.25%, tebuconazole 0.25%, and 3-iodo-2-propynyl butylcarbamate (IPBC) 0.2% dissolved in white spirit. The primer used was a water-based acrylic containing glycol ethers.

We patch tested the patient to the British standard series, bases and preservatives, epoxy resins, miconazole, econazole and 0.1% IPBC. A ++ reaction was seen on day 2 to IPBC. All the other patch tests were negative.

Despite treatment with emollients, clobetasol propionate 0.05% and hand care advice, the patient initially failed to improve. His employer had moved the patient further down the production line so that he was unloading the painted window frames at the end of the machine, rather than handling the newly preserved wood. He wore gloves, protective clothing, and goggles at all times.

A factory visit was arranged. By the time of the visit, however, there had been a marked improvement in the patient's hands. It transpired that although the timber was still being treated with Vacsol™, the preparation had coincidentally changed to a version of the Vacsol™ product not containing IPBC.

IPBC is a halogenated unsaturated carbamate, which is lipophilic and readily penetrates the skin. It is an

effective preservative with action against fungi, bacteria, and some parasites and has been used since the 1970s as a fungicide in paints and wood preservatives (1). IPBC is now better known as a cosmetic allergen having been approved for use in cosmetics in 1996. IPBC is present in household items such as moist sanitary wipes, shampoos, makeup, contact lenses (2), and emollient skin sprays. In cosmetics, the maximum allowed concentration in Europe is 0.05%, whereas in metalworking and wood preservatives up to 4% is permitted (1).

4883 unselected Danish patients with dermatitis were patch tested with 0.1% IPBC. 14 developed a + reaction and 2 patients a ++ reaction, giving an overall prevalence of 0.3% (3). The only previous occupational report due to wood preservatives was a 34-year-old female paint factory worker who developed an allergic contact dermatitis in an airborne distribution, while working in an area where 20% IPBC was being mixed with wood preservative (4).

This case reminds us that despite the increasing importance of IPBC as a contact sensitizer in cosmetics, it retains its original role as an occupational allergen in wood preservatives and metalworking fluids.

References

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Iodopropynyl butylcarbamate contact allergy from wood preservative

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