for 8 months. Sonopal is a UV-cured prepolymer consisting of a mixture of acrylated urethane oligomer and methacrylated urethane. This photopolymer is composed, for the greater part, of a mixture of a urethane prepolymer containing several olefinic bonds and a polythiol. This photopolymer mixture appears to be sensitizing to humans (5). The glass coating (Sillac (S)-Siemens) used consisted of a mixture of methyl methacrylate and acrylated urethane. Our patient was not sensitized to methyl methacrylate, which is often used in hearing aids.

It may be assumed that the patient was sensitized to Sonopal in the earmoulds. Perhaps UV-curing was not as complete as heat-curing would have been. This has already been established for cold-curing. Allergic reactions to Sonopal and to Sillac (S)-glass coating were apparently due to urethane acrylates present in these products.

Since various kinds of acrylates are possible ingredients for acrylate spectacle frames, once again it is shown that patch testing with methyl methacrylate alone is not a reliable screen for acrylate sensitization.

References

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Allergic contact dermatitis of the eyelids from rubber chemicals

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Key words: eyelash curlers; allergic contact dermatitis; rubber; thiurams; carbamates; eyelids.

A 39-year-old female chemist had pruriginous symmetrical erythema, scaling and oedema of both upper and lower eyelids. The lesions, present for 6 months, had no relation to her work and cleared transiently with topical corticosteroids. In her daily facial toilette, she applied several eye and face cosmetics and, since her youth, she had regularly used eyelash curlers.

There was no atopic background and no previous history of intolerance to rubber gloves.

Patch tests with the standard series of the Portuguese Contact Dermatitis Group, her cosmetics and fragments of the rubber fillers of the eyelash curlers, showed positive reactions to thiuram-mix and to the rubber fragments (Table 1). Further tests with rubber chemicals are shown in Table 1.

Table 1. Patch test results

<table>
<thead>
<tr>
<th></th>
<th>D2</th>
<th>D4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard series</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>thiuram-mix</td>
<td>++++</td>
<td>++++</td>
</tr>
<tr>
<td><strong>Own materials</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eyelash curler (rubber fillers)</td>
<td>++++</td>
<td>++++</td>
</tr>
<tr>
<td><strong>Rubber chemicals</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tetramethylthiuram monosulfide (TMTM)</td>
<td>++++</td>
<td>++++</td>
</tr>
<tr>
<td>tetramethylthiuram disulfide (TMTD)</td>
<td>++++</td>
<td>++++</td>
</tr>
<tr>
<td>tetraethylthiuram disulfide (TETD)</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>dipentamethylenethiuram disulfide (PTD)</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>zinc diethylthiocarbanate (ZDC)</td>
<td>++</td>
<td>++</td>
</tr>
</tbody>
</table>
Thin-layer chromatography on rubber fragments from eyelash curlers revealed the presence of tetramethylthiuram mono- and disulfide and zinc diethylidithiocarbamate.

Comment

This is a peculiar case of allergic contact dermatitis of the eyelids from rubber, caused by a cosmetic appliance that is going out of fashion.

Occasional cases of nickel dermatitis of the eyelids from eyelash curlers have been reported (1). In 1945, Curtis (2) reported 7 cases of contact dermatitis from rubber on eyelash curlers, 5 of whom reacted to phenyl-β-naphthylamine.

In our case, rubber chemicals were also the cause. TMTM, TMTD and ZDC, whose presence in rubber fragments was confirmed by thin-layer chromatography (3), gave positive patch tests in our patient. Additional positive tests to TETD and PTD may be explained by cross-reactions among thiurams (4).

This case illustrates another possible source of nonoccupational allergic contact dermatitis from rubber vulcanization accelerators, thiurams and carbamates.

References


Hyposensitization to urushiol among Japanese lacquer craftsmen

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Key words: hyposensitization; urushiol; allergic contact dermatitis; Japanese lacquer craftsmen: occupational; continued exposure; questionnaire study.

Lacquerware is a traditional Japanese industrial art. Unfortunately, urushiol, components of which are contained in lacquer, is a strong sensitizer, and may cause allergic contact dermatitis (lacquer dermatitis). Recently, we have investigated lacquer dermatitis among Japanese lacquer craftsmen by questionnaire.

Methods and Results

Questionnaires were mailed to 324 lacquer craftsmen, and 232 valid replies were received (189 male and 43 female, age 46.0 ± 14.6 years).

Of these 323, 189 persons (81.5%) had experienced lacquer dermatitis. They were divided into 4 groups according to their history of lacquer dermatitis. The 3 persons in group 1 (1.3%) suffered serious lacquer dermatitis continuously. The 128 persons in group 2 (55.2%) had become hyposensitive to urushiol, i.e., they showed spontaneous improvement after continuous prolonged exposure to lacquer. The 30 per-
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