Contact Dermatitis 1976: **2**: 232–236

Short Communications

Thiuram-mix

W. G. VAN KETEL

Department of Dermatology, Free University Hospital, de Boelelaan 117, Amsterdam, The Netherlands

Thiuram-mix (in the standard series of the I.C.D.R.G.) is composed of four thiuram compounds: tetramethylthiuramdisulfide (TMTD), tetramethylthiuram-monosulfide (TETD) and dipentamethylenethiuramdisulfide (PTD), each in a concentration of 0.25 % in pet.

When one is using a mixture of allergens two factors have to be considered. A weak positive reaction may be due either to a mild irritant effect of the total mixture, or to a weak allergy to one of the components which is present in the mix in a low concentration (Malten et al. 1976). The components are also tested separately. On the other hand, a negative reaction to the mix cannot rule out the possibility of a weak allergy to one of the components which is not present in sufficient concentration to elicit a positive reaction. Allergy to rubber might be overlooked in these cases. In 34 patients with positive patch test reactions to thiuram-mix, the components were tested (1 % pet.) separately. All 34 patients were suffering from a relevant rubber dermatitis caused by gloves or footwear.

Results

1. In two out of 34 patients all component materials of the mix gave a negative reaction.
2. TMTD showed a positive patch test reaction in only 20 out of 34 patients. Eight out of 20 patients reacted to TMTD only; 12 out of 20 showed a cross-reactivity with others: TMTD + TMTM (8) TMTD + TMTM + TETD (2), TMTD + TMTM + TETD + PTD (2). This result is important, as in some standard series other than that of the I.C.D.R.G. only TMTD is used as an indicator of thiuram allergy (Malten 1965).
3. In 12 out of 34 patients with negative patch test reactions to TMTD the results are as follows:
   TMTM only – 2
   TMTD + TETD – 5
   TMTD + TETD + PTD – 0
   TETD only – 5
   PTD only – 0
4. It follows from the data that in 19 out of 34 patients TMTM was positive. TETD showed positive reactions in 14 out of 34 patients. With PTD only two positive reactions were seen.

Conclusions

1. The thiuram-mix of the I.C.D.R.G. can be regarded as a good indicator in cases of thiuram allergy.
2. TMTD only is not a reliable material for detecting thiuram allergy.
3. PTD does not seem to be a strong sensitizer since only two cases of allergy to this compound were found. This finding is in contrast with the very high frequency of allergy to PTD published by Wilson (1969). Another explanation for this contrast could be ecological or industrial circumstances. Perhaps PTD in the rubber industry in Holland is used less often than formerly. When thiuram compounds are investigated, PTD in the series of Hjorth and Fregert (1972) should be replaced by TMTM.

References

Hjorth, N. & Fregert, S. (1972) In *Textbook of Dermatology*, ed. Rook, A., Wilkinson, D. S.

and Ebling, F. J. G. 2nd. edition, p. 343. Oxford: Blackwell.
Malten, K. E. (1969) Contact allergisch onderzoek. In *Haarlems Allergene Laboratorium*, p. 40.
Malten, K. E., Nater, J. P. & van Ketel, W. G. (1976) In *Patch Testing Guidelines*, p. 95. Nijmegen: Dekker en van de Vegt.
Wilson, H. T. H. (1969) Rubber dermatitis – an investigation of 106 cases of contact dermatitis caused by rubber. *British Journal of Dermatology*, 175–181.

Ethylene glycol sensitivity

T. A. J. Dawson

Craigavon Area Hospital, Craigavon, Northern Ireland

A 17-year-old male was referred with an eczematous dermatitis. He was employed in a factory manufacturing spectacles where he operated a machine which burnished glass lenses. During this process the lenses are bathed in a fluid made up of ethylene glycol (one part) and water (three parts). The patient had been employed in the same position for one year and the rash developed about four months after starting the work. The dermatitis mainly affected the fingers, dorsa of the hands, wrists and forearms. Some less conspicuous lesions were present on the dorsa of the feet.

Patch testing was carried out with ethylene glycol 1 and 5 % in water and 3 % in ethanol. Water and ethanol control patches were also applied. At 48 h a faint positive reaction was noted with the 3 % solution in ethanol. At 72 h this result had become strongly positive with erythema and swelling. All the other tests and control patches were negative throughout.

After patch testing he was moved to a different department in the factory where he no longer came into contact with ethylene glycol. Six weeks later there was a marked improvement in his condition.

Nine control subjects were tested with 3 % ethylene glycol in ethanol and with ethanol alone. In one subject a faint reaction was present with the 3 % solution at 48 h but this had disappeared at 72 h.

A case was reported by Hindson & Ratcliffe (1975) who found that ethylene glycol 5 % in water produced a strong positive result at 48 h. However, in view of the false negative result on testing with 5 % in water and the true positive result with 3 % in ethanol in the present case, it appears that alcohol may be a better vehicle than water for testing with ethylene glycol.

Reference

Hindson, C. & Ratcliffe, G. (1975) Ethylene glycol in glass lens cutting. *Contact Dermatitis 1*, 386–387.

Contact dermatitis to one ingredient of Xerumenex ear drops

J. D. Boxley and R. P. R. Dawber

North Staffordshire Hospital Centre, Stoke-on-Trent, Great Britain

A woman of 38 with no previous history of otitis externa or other skin disease had used Xerumenex® ear drops on one occasion only, three weeks before presentation, in an attempt to remove some troublesome aural wax. Twelve days later, having suffered no ill effects, but

This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.