

Short Communication

Occupational airborne allergic contact dermatitis from succinimidyl carbonates

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Key words: occupational; airborne; allergic contact dermatitis; laboratory worker; 9-fluorenylmethyl N-succinimidyl carbonate; N-benzyloxycarbonyl-succinimidyl carbonate. © Munksgaard, 2001.

We report a case of contact sensitization to fmoc-osu (9-fluorenylmethyl N-succinimidyl carbonate) and z-osu (N-benzyloxycarbonyl-succinimidyl carbonate), used in organic chemistry to block or protect functional amine groups in a reaction sequence, most notably in solid-phase peptide synthesis (1).

Case Report

A 32-year-old man presented with a 6-month history of recurrent dermatitis of the eyelids, face, and neck, spreading to the right hand and arm. He had worked for 5 years as a chemist for a company involved in amino acid and peptide synthesis, beginning a new job at about the time of his initial dermatitis. Prednisone had been successful in alleviating the dermatitis. Examination showed scattered facial edema, erythema, and some scaling, more severe periorbitally. There was erythema and scaling on the right side of the neck as well as erythema, scaling, and vesicles on the dorsum of the right hand, forearm and wrist.

Patch testing was performed to 50 screening allergens of the NACDG and substances from work. Positive reactions are noted in Table 1. 3 controls were tested to fmoc-osu and z-osu with negative results.

The patient was started on oral Allegra® and Cutivate® cream. At 1-month follow-up, he had significant resolution of his dermatitis, although there remained

Table 1. Positive patch test results

	D2	D4
fmoc-osu 10% pet.	+++	+
z-osu 10% pet.	+++	+++

some mild residual dermatitis on the right wrist and periorbitally.

Comment

40% of occupational disease is dermatologic, 90% of which is contact dermatitis (2). While irritant contact dermatitis probably comprises the majority of these cases, allergic contact dermatitis remains a significant problem (3). To our knowledge, this is the 1st reported case of allergic contact dermatitis from fmoc-osu or z-osu.

References

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