

Human studies fail to detect the allergenic potential of cystamine bis-lactamide

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Key words: cystamine bis-lactamide; allergic contact dermatitis; cosmetics; human volunteer studies; 'designer chemicals'. © Munksgaard, 1998.

Case Report

A 37-year-old woman presented with florid facial eczema. Patch tests to an extended European standard and facial series were negative, but there was a ++ reaction to her facial moisturizer. Further patch testing to this cream, together with its individual ingredients, again showed a ++ reaction to the whole product and also to cystamine bis-lactamide 0.2% aq. 20 control patients did not react when patch tested to cystamine bis-lactamide.

The manufacturers explained that cystamine bis-lactamide was a new chemical that had been designed 'in house' in an attempt to retain lactic acid within the stratum corneum. Extensive human studies had failed to reveal that there was any skin problem with cystamine bis-lactamide. Once incorporated into skin-care products, however, reports of people reacting to these creams came to light. Further investigation revealed that it was the

'designer chemical' cystamine bis-lactamide that clients were reacting to.

Discussion

Alert physicians patch testing patients earlier (P. Elsner, personal communications) and close cooperation of the cosmetic company identified cystamine bis-lactamide as a contact allergen. In 1997, this chemical was withdrawn and, as it is not available from any other source, once the original supplies of creams have been used up, it is unlikely that any further allergic reactions will be seen.

We live in a time where technological advance allows for the development of 'designer chemicals', but also in a time when ethics dictate that animal testing, where possible, be avoided. Our case serves to illustrate the limitations of screening chemicals in human volunteers.

Photocontact dermatitis from cinchocaine (dibucaine)

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Key words: antihaemorrhoidal ointment; caines; cinchocaine; photocontact dermatitis; dibucaine; local anaesthetics; photopatch testing; photosensitivity. © Munksgaard, 1998.

Case Report

A 39-year-old woman presented with pruritic skin lesions in the perineal area, extending sometimes to the legs and arms, appearing at irregular intervals more in the summer, and responding well to topical corticosteroids. She had had this problem for 4 years, being diagnosed as irritant contact dermatitis on a dry skin. She had a previous history of mite and grass pollen-allergic rhinoconjunctivitis, and also suffered from haemorrhoids, which she treated with an antihaemorrhoidal ointment *Ruscus Llorens* (ruscogenin, prednisolone, cinchocaine, menthol, zinc oxide, Nipastat, polyethylene glycol, cetyl alcohol, disodium edetate and water).

The European standard series (TRUE Test), amethocaine, benzocaine, cinchocaine, procaine, lidocaine, and *Ruscus Llorens* ointment, as is, were patch tested. The standard series showed positive reactions to nickel and cobalt. Caine mix and all the local anaesthetics tested

were negative, as well as the ointment as is. On the 5th day, the patient was incidentally exposed to UV radiation on a sunbed for skin tanning. Some hours later, 3 unknown patches became positive. Our patient then told us that she sunbathed often at a suntan salon and at the beach, and could not omit the use of her antihaemorrhoidal ointment before sunbathing.

Photopatch testing was subsequently carried out, using an Ultra Vitalux lamp (Osram), with 30-min irradiation of the patient's back. A 3-mm window glass was put between the light source and the skin to exclude UVB radiation (6). Amethocaine, benzocaine, cinchocaine, procaine, lidocaine, and *Ruscus Llorens* as is were all tested, resulting in positive reactions to *Ruscus Llorens* ointment and cinchocaine, only after exposure to UVA radiation.

After avoiding cinchocaine, the patient became asymptomatic. She tolerated an antihaemorrhoidal topical medicament without local anaesthetics.

Discussion

Local anaesthetics are a frequent cause of allergic contact dermatitis, the allergenicity of ester anaesthetics like benzocaine and tetracaine being well known (1). Amide anaesthetics, though less commonly, can also induce allergic contact dermatitis. There are several reports of cases from cinchocaine (2–4). In Japan, cinchocaine has become a common cause of allergic contact dermatitis from local anaesthetics, maybe because of its extensive use in OTC topical medicaments (3). Benzocaine is also known to produce photocontact reactions (5–7), being a photoallergen commonly tested in photopatch series (8). Cinchocaine has also been shown to induce photosensitivity, and experimental studies in guinea pigs suggested that it might be a potent photosensitizing agent (9).

If light exposure is not suspected, as it scarcely could be in this case, photosensitivity may be the origin of undiagnosed allergy. Cinchocaine is not indeed a frequent cause of contact dermatitis among our patients. At our outpatient department, among 19 recent positive reactions to caine mix, only 1 other case of cinchocaine hypersensitivity was found, and this patient reacted to benzocaine and procaine as well. The remainder of the patients were allergic to benzocaine (all of them to p-phenylenediamine too), benzocaine+procaine, and tetracaine (only 1 of them to p-phenylenediamine too) (unpublished data).

To our knowledge, photocontact allergy to cinchocaine has rarely been described, either because it is infrequent or because it is underdiagnosed.

References

1. Rietschel R L, Fowler J F. Local anesthetics. In: *Fisher's Contact dermatitis*, 4th edition. Baltimore: Williams and Wilkins, 1995: 236–248.
2. Wilson H T H. Dermatitis from anaesthetic ointments. *Practitioner* 1966; 197: 673.
3. Amano K. Clinical study of patients with positive reactions in patch tests with local anesthetics. *Nippon Ika Daigaku Zasshi* 1997; 64: 139–146.
4. Marques C, Faria E, Machado A, Gonçalves M, Gonçalves S. Allergic contact dermatitis and systemic contact dermatitis from cinchocaine. *Contact Dermatitis* 1995; 33: 443.
5. Rietschel R L, Fowler J F. Contact photodermatitis. In: *Fisher's Contact dermatitis*, 4th edition. Baltimore: Williams and Wilkins, 1995: 524–543.
6. Epstein S. Photocontact dermatitis from benzocaine. *Arch Dermatol* 1965; 92: 591.
7. Kaidbey K H, Allen H. Photocontact allergy to benzocaine. *Arch Dermatol* 1981; 117: 77–79.
8. Gould J W, Mercurio M G, Elmetts C A. Cutaneous photosensitivity diseases induced by exogenous agents. *J Am Acad Dermatol* 1995; 33: 551–573.
9. Horio T. Photosensitivity reaction to dibucaine. Case report and experimental induction. *Arch Dermatol* 1979; 115: 986–987.

Allergic contact dermatitis from parabens in a tar shampoo

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Key words: allergic contact dermatitis; parabens; shampoo; T Gel®; cosmetics; preservatives; medicaments. © Munksgaard, 1998.

Case Report

A 74-year-old woman presented with a 4-year history of a dry flaky scalp, diagnosed as pityriasis amiantacea. She reported severe itching and erythema of the face and scalp, with eyelid oedema, after using a tar shampoo (T/Gel®). This happened on several occasions, she having initially tolerated the preparation. There was no previous skin disease and she was a very infrequent user of cosmetics.

Patch testing was undertaken with the European standard series, a facial series, and coal and wood tars. Patch tests to paraben mix and balsam of Peru were positive (D2+/D4+). Further testing with individual components of paraben mix showed positive results to propylparaben (D2+/D4+), ethylparaben (D2+, D4–) and butylparaben (D2–, D4+). The ingredient listing of T/Gel® shampoo includes parabens. Subsequent avoidance of this product resolved her symptoms.

Comment

Parabens are widely used as preservatives in medicaments and cosmetics. In one series, the sensitization rate to parabens on patch testing was 0.46% (1). Sensitization is uncommon except on damaged skin (2), where it is frequently from topical medicaments for leg ulceration or venous eczema. An allergic contact dermatitis from parabens in a shampoo is unusual.

References

1. Jacobs M C, White I R, Rycroft R J G, Taub N. Patch testing with preservatives at St John's from 1982 to 1993. *Contact Dermatitis* 1995; 33: 247–254.
2. Rietschel R L, Fowler J. In: Fisher A A (ed): *Contact dermatitis*, 4th edition. Baltimore: Williams & Wilkins, 1995: 265–268.