

Recalcitrant atopic dermatitis due to allergy to Compositae

M. WINTZEN, A. S. DONKER¹ AND E. J. VAN ZUUREN

Departments of Dermatology and ¹Dietetics and Nutrition, Leiden University Medical Center, Leiden, the Netherlands

Atopic dermatitis is often complicated by allergic contact dermatitis, although patch testing may reveal positive reactions of uncertain relevance. We report a case of a 35-year-old woman with recalcitrant atopic dermatitis, with a positive patch-test reaction to Compositae mix (CM). Initially, sensitization appeared to be of past relevance only, due to use of calendula. However, it turned out that she followed a self-devised diet consisting largely of food products of the Compositae family. On excluding these food products her skin condition improved quickly. This case report underscores the difficulty in determining the relevance of positive patch tests, and shows that thorough analysis of positive patch tests, by both patient and physician, may reveal unexpected or less common sources of contact allergens.

Key words: allergic contact dermatitis; Compositae; patch testing; plants; relevance; sesquiterpene lactones. © Blackwell Munksgaard, 2003.

Accepted for publication 30 October 2002

Atopic dermatitis is a common chronic skin disease, though not always easy to control. Whenever eczema fails to respond to adequate treatment with emollients and potent topical corticosteroids, one needs to consider a contact allergy. Interpretation of patch testing, however, is often complicated by positive reactions of uncertain relevance. Thorough analysis by both patient and physician may reveal unexpected relevant allergens.

Case Report

A 35-year-old woman, with a 10-year history of atopic dermatitis, presented with an exacerbation of her eczema in November 1999. Treatment with triamcinolone and betamethasone ointments and a cetomacrogol-based emollient had only moderate success, and severe pruritus persisted. In February 2000, UVA-1 cold-light therapy was initiated, but discontinued prematurely because itch had become unbearable. With increased total IgE (678 IE/mL) in serum, Phadiatop (Pharmacia Diagnostics, Uppsala, Sweden) only showed a 2 + reaction to birch; food-specific IgE antibodies were negative. At this point, patch testing was planned, but subsequently postponed because the patient had become pregnant.

During the following months, during summer,

skin lesions gradually spread to involve the entire body, including the face. The latter was highly unusual for her, and in addition she complained of malaise and fatigue. Pruritus was often increased after application of her cetomacrogol-based emollient cream. Despite negative food-specific IgE antibodies, she feared that she might have multiple food allergies, and followed a self-devised diet. During the last 2 months of her pregnancy she was successfully treated with UVB, but after giving birth she did not visit our department until an exacerbation in May 2001. At that point, patch testing was performed with European standard, cream/ointment, cosmetics, and topical corticosteroids series, which showed the following reactions at day 3 (D3): nickel (5% pet.) +, cetomacrogol cream (as is) +, Compositae mix (CM; 6% pet.) +; no reactions were noted to topical corticosteroids or her own cosmetics.

Nickel was a known allergen, and of past relevance only. The identified contact allergy to cetomacrogol cream was clearly relevant, and local therapy was adjusted accordingly. After explaining the sources of Compositae, sensitization to the CM appeared to be of past relevance only, as our patient remembered frequent use of calendula in the past. She was not an avid gardener and had had no occupational contact with plants or flowers.

However, after reading the information leaflet on 'allergy to CM', her self-devised diet turned out to consist largely of food products of the Compositae family: chamomile tea, lettuce, chicory, and endive. Only now did she realize that eczema, itch, and fatigue often increased after drinking chamomile tea. She also frequently ate a spread made from sunflower seeds, which, although these contain sesquiterpene lactones, showed no positive patch-test reaction. After excluding Compositae from her diet, her skin improved vastly within 2 weeks. To date, 9 months later, she has used virtually no topical corticosteroids, her fatigue has disappeared, and generally she feels 'reborn'.

Discussion

Contact allergy to cetomacrogol cream was clearly relevant, and explained the pruritus on application of emollient cream. Clinical improvement can partly be explained by substitution of topical therapy. The positive reaction to CM is highly relevant in this case, considering the unusually high intake of Compositae-containing food products. Also summer exacerbations (in 2000 and 2001), systemic symptoms like fatigue, and eczema on previously unaffected skin (i.e. the face) are supportive of a systemic contact dermatitis reaction due to Compositae (1). Compositae commonly cause allergic contact dermatitis, though systemic contact dermatitis is easily overlooked (2). The incidence of contact sensitization to Compositae is reportedly increasing, and suggested to be due to increasing popularity of herbal remedies (3).

Recently, a discussion has been going on as to whether or not to substitute the SL mix in the European standard series with CM, the latter being more sensitive in detecting Compositae-allergic patients (87% vs. 65%) (4). Indeed, our patient showed no reaction to SL mix (0.1% pet.), but did have a positive reaction to CM. As CM is a relatively concentrated (6%) product, irritant reactions (1–1.5%) as well as patch test sensitization occur more frequently than with the SL mix (5). However, in our patient the + reaction to CM at

D3 is unlikely to be irritant, as this site showed no reaction at D2. On the other hand, the increasing popularity of phytotherapy makes it tempting to use a diluted (0.6%) form of CM as a more sensitive as well as safe way to detect Compositae allergy (6).

Aside from the discussion as to whether or not to use routinely (a diluted form of) the CM instead of, or in addition to, SL mix, with this case report we wish to underscore the difficulty in determining relevance of positive patch tests. Particularly in recalcitrant atopic dermatitis, thorough analysis of positive patch tests, by both patient and physician, may reveal unexpected or less common sources of contact allergens.

References

1. Rycroft R J G, Menné T, Frosch P J, Lepoittevin J-P. *Textbook of Contact Dermatitis*, 3rd edn. Heidelberg: Springer-Verlag 2001 (Chapter 16, pp. 357–366).
2. Oliwiecki S, Beck Mh, Hausen B M. Compositae dermatitis aggravated by eating lettuce. *Contact Dermatitis* 1991; 24: 318–319.
3. Reider N, Komericki P, Hausen B M, Fritsch P, Aberer W. The seamy side of natural medicines. contact sensitization to arnica (*Arnica montana* L.) and marigold (*Calendula officinalis* L.). *Contact Dermatitis* 2001; 45: 269–272.
4. Paulsen E, Andersen K E, Hausen B M. An 8-year experience with routine SL mix patch testing supplemented with Compositae mix in Denmark. *Contact Dermatitis* 2001; 45: 29–35.
5. de Groot A C. [Is de compositae-mix een betere indicator voor allergie voor compositae dan de sesquiterpeenlactonen-mix (SL-mix) ?]. *Ned Tijdschr Derm Venereol* 2001; 11: 218–220.
6. Bong J L, English J S, Wilkinson S M. Diluted Compositae mix versus sesquiterpene lactone mix as a screening agent for Compositae dermatitis: a multicentre study. *Contact Dermatitis* 2001; 45: 26–28.

Address:

M. Wintzen
Department of Dermatology B1-Q
Leiden University Medical Center
Albinusdreef 2
2333 ZA Leiden
the Netherlands
Tel: +31 71 5269111
Fax: +31 71 5248106
e-mail: mwintzen@knmg.nl