

after using deodorants. Patch testing revealed contact allergy to aluminium chloride. With avoidance of aluminium-containing deodorants, the eczema cleared completely.

Aluminium and its salts are widely used but contact allergy to them is uncommon. It is occasionally recognised incidentally as a reaction to aluminium Finn Chambers®. Exposure and sensitisation to aluminium usually occurs through exposure to aluminium preparations in topical medicaments, hyposensitization injections, or deodorants (1–4), however, in some cases the cause is unclear.

Case Report

A 28-year-old woman presented with eczema in both axillae which occurred after the use of deodorants, and settled when these were avoided.

Patch testing was performed to the British Contact Dermatitis Society (BCDS) baseline series, fragrance series, and aluminium chloride (allergens supplied by Trolab®, Reinbeck, Germany and Chemotechnique Diagnostics®, Vellinge, Sweden). Results were scored according to International Contact Dermatitis Research Group (ICDRG) criteria. She had the following reactions: 3+ reaction to aluminium chloride (AlCl_3 2% pet.); 2+ reaction to quaternium-15 (1% pet.) at D2 and D4; and a 1+ reaction to benzophenone 4 (10% in pet.), farnesol (2.5% pet.) and citral (1% pet.) at D4 only. There was no reaction to the 8 mm aluminium Finn Chambers® (Epitest Ltd Oy, Tuusula, Finland).

We diagnosed allergic contact dermatitis to aluminium salts. All the deodorants she had been using contained an aluminium salt (aluminium chlorohydrate), but did not contain the other allergens to which she reacted. She is now using aluminium-free deodorants and is symptom free.

Allergic contact dermatitis from aluminium in deodorants

Contact Dermatitis 2010; 62: 57–58

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Key words: aluminium; axillary dermatitis; contact allergy; deodorant.

Introduction

A 28-year-old woman presented with an axillary eczema that occurred

Discussion

Aluminium and its salts are uncommon allergens considering their widespread use, and there are few reports of contact allergy. In most cases, allergy to aluminium is not suspected clinically but is uncovered incidentally during patch testing when the patient shows a rim reaction to aluminium Finn Chambers®.

Sensitization may be to aluminium in topical medicaments (1), antiperspirants (2, 3), or hyposensitization injections (3). Some patients have no obvious cause (2, 4), and the clinical relevance of aluminium allergy is sometimes unclear (2, 3).

Allergic contact dermatitis affecting the axillae has been related to textile dye allergy (5) as well as to deodorants. When deodorants are implicated, the most common allergens are fragrances, for example hydroxyisohexyl 3-cyclohexene carboxaldehyde (6, 7). However, aluminium salts should also be considered as a potential causative agent and patch testing to AlCl_3 should be performed (2, 3). It is unclear why our patient did not react to the aluminium in the Finn Chambers[®]. It is possible that insufficient ionic aluminium was released to initiate an allergic reaction.

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