Comparison of irritant reactions between using lyophilized and commercial food allergen extracts in atopy patch tests in a normal population

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Abstract

Background: Several authors have investigated the use of the atopy patch tests (APT) for the diagnosis of non-IgE mediated food allergy, primarily in patients with atopic dermatitis and digestive disorders. However, one of the difficulties in atopy patch testing is the lack of standardization. Several commercial APTs containing freeze-dried food extracts are now available, but their diagnostic accuracy is still largely undefined. The objective of this study is to evaluate the irritant reactions and safety of atopy patch tests in healthy subjects by using lyophilized and commercial food allergen extracts.

Methods: A cross-sectional study was carried out in healthy volunteers. Atopy patches using lyophilized and commercial allergens, including cow's milk, egg, wheat, soy and shrimp, were assessed. Additionally, commercial extracts of house dust mite (D. pteronyssinus 10,000 AU/ml, D. farinae 10,000 AU/ml) and American cockroach were also evaluated.

Results: Eighteen healthy volunteers (13 women, median age 26 years) were enrolled. All APT results, both from using lyophilized and commercial allergen extracts, showed no reactions. There were no systemic allergic reactions or irritant reactions observed.

Conclusion: APTs using lyophilized and commercial food allergen extracts and commercial extracts of house dust mite and American cockroach showed no irritant reactions in Thai nonatopic subjects.