

Patch-Testing with Dust Mite (*Dermatophagoides* Mix): Still a High Rate of Reactivity with 0.1% Concentration

To the Editor:

We report the results of patch-testing with a low concentration (0.1%) of *Dermatophagoides* mix. Patch-testing to this preparation (the atopy patch test) has been advocated as a means of identifying patients with atopic dermatitis who would benefit from avoidance of *Dermatophagoides* (dust mite). In 2002, we reported a very high rate of reaction after an assessment of the results of adding the commercially available 20% *Dermatophagoides* mix to our standard series.¹ Of 662 patients who had patch tests with the preparation, 55% had a reaction at 96 hours, a rate higher than with any of the other allergens in the standard series. This report was consistent with a report by Jamora and colleagues,² who found that a high proportion—15 of 18 (83%) nonatopic healthy control subjects—had positive reactions to the 20% *Dermatophagoides* preparation. After patch-testing patients to different dilutions of the allergen, Jamora and colleagues reported that a 0.1% dilution of 20% *Dermatophagoides pteronyssinus/farinae* mix antigen (Chemotechnique Diagnostics, Malmö, Sweden) was useful for identifying mite-allergic persons with atopic dermatitis.

We therefore substituted a 0.1% dilution (in petrolatum) for the 20% *D. pteronyssinus/farinae* mix antigen in our standard series during the 2 years from April 1, 2002, to March 31, 2004.

During this 2-year period, 1,582 patients suspected of having allergic contact dermatitis had patch tests to the standard series, which included *Dermatophagoides* mix 0.1%. Among these patients, after irritant reactions were excluded, 108 (6.8%) patients were found to have a positive allergic patch-test reaction at 96 hours. Intriguingly, the rate of reaction to *Dermatophagoides* mix 0.1% was not

statistically higher in patients with a history of atopy as defined by a personal history of recurrent dermatitis, asthma, or hay fever ($p = .16$).

We recognize the limitations of this study; although we did try to exclude irritant reactions (reactions that decreased in severity between readings were called irritant and were excluded from the calculation), it is possible that some irritant reactions are included in this reaction rate. Additionally, the definition of atopy is weak, and we recognize the limitations of making any definite conclusions from the observation that the rate of reaction was not statistically higher in patients with a history of atopy.

What is the relevance of a reaction to *Dermatophagoides*? This is a controversial question; ultimately, this patch test has been advocated as a means of identifying patients with atopic dermatitis who would benefit from avoidance of *Dermatophagoides*. We do not have sufficient follow-up data on our patients who had patch tests to be able to say that this reaction was predictive of such a benefit.

We conclude that patch-testing to the lower concentration of 0.1% *Dermatophagoides* mix is associated with a lower rate of allergic patch-test reaction than is the 20% preparation, but this rate is still higher than that of most other allergens on the standard series, a finding that raises a question regarding the utility of this antigen.

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