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Evaluation of venom skin test sensitivity

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To the Editor:

The recent article by Golden et al (J Allergy Clin Immunol 1997;100:760-6) addresses the detection of individuals at risk for initial insect sting anaphylaxis. Because conclusions based on serial venom skin tests in persons previously without insect allergy might have significant clinical relevance, the “nuts and bolts” data deserve analysis.

One dilution of venom, 1.0 µg/mL, was used for testing. One extensive study of venom skin tests not referenced in this report suggests that this concentration of venom may induce a nonimmunologic reaction in almost 50% of individuals without insect allergy.¹ The authors use different criteria (1+ vs 2+) to define a positive reaction to 2 different venoms. Why? Finally, if tests are done over time, the potency of the test materials must be the same. Although venoms are standardized to have an adequate content of major allergens, the total allergen content may vary. The authors briefly allude to that possibility, and it may be the explanation for the 7 patients whose test responses changed from negative to positive in the absence of a sting. Similar concerns relate to the RAST results. Coupled carriers prepared with new venom must be compared with previously used carriers. Also, skin test and RAST results can only be compared if the same venom is used.

The authors do not differentiate between reactions to honeybee and yellow jacket venom. How is a patient classified who may have reacted to one venom and not the other? Data on insect stings do not identify the insect in relationship to these tests.

These data are further confused by 7 patients who had re-sting reactions, but who had subsequent stings with no reaction. Variation in clinical reactions has been described previously. It raises questions, however, regarding the need to identify the insect responsible for the sting.

Estimates of the decline in skin test sensitivity over time may require grading of the reactions to serial dilutions of venom. Those individuals who have the greatest skin test sensitivity may require more time to lose skin test reactivity. In addition, patients allergic to insect venom who had not received venom immunotherapy had considerable variation in the decline of serum venom-specific IgE.²

If the authors estimate that 17% of individuals who tolerate an insect sting and have a positive venom skin test response will have an allergic reaction to the next sting, further medical advice seems rational, at least a recommendation to carry epinephrine.

On the other hand, I do not believe that the data support the authors' conclusions regarding prediction of initial reactions and loss of sensitivity, but I do agree with the final conclusion that routine testing of individuals who have tolerated an insect sting without reaction is not indicated.

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