

Fatal insect allergy after discontinuation of venom immunotherapy

To the Editor:

There are few reports of fatal and near-fatal reactions after discontinuation of venom immunotherapy (VIT),^{1,2} and the case reported by Dr Light is a timely and harsh reminder that pitfalls abound in the management of insect sting allergy. Although early studies suggested that VIT could be stopped after 3 to 5 years, the cited Committee Report³ describes studies suggesting caveats to the previous guidelines, which are also reflected in recent practice parameters.⁴ Significant risk factors include honeybee (versus vespid) allergy, less than 5 years of therapy, patient age, severity of the pre-VIT sting reaction, and any systemic reaction during therapy (either to a sting or a venom injection). The patient described by Dr Light had 4 of those 5 risk factors, which were, unfortunately, not yet recognized in 1991 when he discontinued VIT. However, because they now exist in the literature, these reports should promote informed decisions by allergists and patients. We have stressed that the passage of time and the development of negative venom skin tests do not guarantee that a sting will not cause a dangerous reaction.

This case also illustrates 2 important principles. The first is the existence of epinephrine-resistant anaphylaxis⁵ such that carrying an epinephrine self-injector (EpiPen) is still not a guarantee of safety. Some patients experience rapid and abrupt hypotensive shock unresponsive to epinephrine or intravenous fluids, and such patients often have very low (or even undetectable) venom skin test sensitivity.

The second principle is the difference in relative risk between the frequency of potential reactions and the severity of the reaction. Even when there is a low chance of having a reaction, that reaction could still be severe or fatal, particularly in high-risk patients.

Of secondary interest are factors that could affect the outcome of similar cases, even though no information is available in this case. Was he receiving β -blockers or angiotensin-converting enzyme inhibitors at the time of the event? Had his maintenance dose been 50 or 100 μ g? Did he get injections regularly for the full 4 years? Do we know the number of insects that stung him at his final reaction? Patients with severe insect allergy should have intermittent review by the allergist to assess the many factors that determine the outcome of a sting. Patients should be reminded to inform the allergist of any changes in their medical condition or treatment during or after VIT. There is no specific recommendation for re-testing after discontinuing VIT if the patient is stung but has no systemic reaction.

Dr Light poses very reasonable questions about the potential need for indefinite VIT. The greatest risk exists in patients with the most severe history of reaction before VIT, and we

have advised such patients to continue VIT indefinitely.² It is less clear whether indefinite therapy should be considered simply because of other risk factors, but once again, the severity of the pre-VIT reaction will often determine the preferred choice. Most patients are still eligible to discontinue VIT after 5 years. Our approach is to inform patients who are considering discontinuing VIT (1) that the chance of a systemic reaction will be about 10% per sting, even 10 to 20 years later, and even with negative venom skin test results; (2) that although most such reactions are mild, there is a small chance of a life-threatening reaction; and (3) that the only way to maintain the lowest risk (2%) is to continue to receive VIT. Finally, I must agree with Dr Light that patients should be fully informed of the potential risks and alternatives and should participate in the clinical decision to the best of their abilities. Clearly, further research is needed to define the factors that will most accurately predict which patients will have severe reactions to a sting, before or after VIT.

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