

Ongoing Concerns With Honeybee Venom Immunotherapy

Khan S

Department of Immunology and Allergy, Castle Hill Hospital, Cottingham, UK

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To the Editor:

The article by Carballada González et al [1] on component-based assessment of the main allergens in honeybee venom (HBV) raises 2 important questions. First, should Api m 10 be included in component testing routinely? And second, should manufacturers provide an assurance that all clinically relevant HBV allergens (Api m 1, Api m 2, Api m 3, Api m 4, Api m 5, Api m 6, and Api m 10) are adequately represented in their preparations?

A previous article by Vega-Castro et al [2] showed that while HBV allergy can be diagnosed in 82.6% of cases using rApi m 1, the diagnosis rate increased to 96.1% when the allergen was combined with Api m 10. They also demonstrated that Api m 6 was positive in 85.4% of the patients studied, in contrast with previous studies, which showed sensitization rates between 26% to 42% (despite Api m 6 representing only 1%-2% of the whole venom, as is the case with Api m 10). However, Carballada González et al [1] did not measure Api m 6 owing to lack of availability in the specific platforms used in their study. Fortunately, monosensitization to these allergens (Api m 6 or Api m 10) does not appear to be an issue.

Previous studies have noted that clinically relevant HBV allergens may not be represented in commercially available immunotherapy preparations [3-5]. This is an ongoing concern not only in terms of treatment failure, but also when reassuring patients that the choice of products is not inferior, providing product information, and obtaining consent. The article offers optimism, since human serum albumin has a stabilizing effect on the dilution of freeze-dried whole venom extracts (for Api m 10). Until then, therefore, it would be prudent

to acknowledge this limitation with regards to information available from manufacturers, although we also risk preventing some patients from receiving immunotherapy while leaving others anxious over the benefits of immunotherapy.

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Conflicts of Interest

The author declares that he has no conflicts of interest.

References

1. Carballada González F, Abel-Fernández E, González Guzmán LA, Pineda de la Losa F. Component-Based Assessment of the Main Allergens in Honeybee Venom in a Spanish Allergic Population. *J Investig Allergol Clin Immunol*. 2024 Dec 11:0. doi: 10.18176/jiaci.1050. Epub ahead of print
2. Vega-Castro A, Rodríguez-Gil D, Martínez-Gomariz M, Gallego R, Peña MI, Palacios R. Api m 6 and Api m 10 as Major Allergens in Patients With Honeybee Venom Allergy. *J Investig Allergol Clin Immunol*. 2022;32:116-23.
3. Frick M, Fischer J, Helbling A, Rüeff F, Wiecek D, Ollert M, et al. Predominant Api m 10 sensitization as risk factor for treatment failure in honey bee venom immunotherapy. *J Allergy Clin Immunol*. 2016;138:1663-71.e9.
4. Blank S, Etzold S, Darsow U, Schiener M, Eberlein B, Russkamp D, et al. Component-resolved evaluation of the content of major allergens in therapeutic extracts for specific immunotherapy of honeybee venom allergy. *Hum Vaccin Immunother*. 2017;13:2482-9.
5. Blank S, Seismann H, Michel Y, McIntyre M, Cifuentes L, Braren I, et al. Api m 10, a genuine *A. mellifera* venom allergen, is clinically relevant but underrepresented in therapeutic extracts. *Allergy*. 2011;66:1322-9.

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Sujoy Khan

Department of Immunology and Allergy
Castle Hill Hospital
Cottingham
HU16 5JQ
UK

E-mail: sujoykhan@gmail.com