

Correspondence

Reply

To the Editor:

Detection of IgE to a panel of species specific allergens further improves discrimination of bee and wasp venom allergy. In this sense, we acknowledge the correspondence from Sturm et al,¹ which confirms our finding that the sensitivity of the novel recombinant (r)Api m 1 (phospholipase A2) ImmunoCAP assay (Phadia, Uppsala, Sweden) is about 80% in patients with bee venom (BV) allergy and positive skin tests.² However, in a cohort of unselected patients with systemic insect sting reactions, Sturm et al¹ describe an even lower sensitivity (62%) and raise the issue of whether testing patients sera for IgE to rApi m 1 and rVes v 5 (antigen 5) is sufficient to discriminate between bee and wasp venom allergy. Unfortunately, the authors do not provide information on how the diagnosis of BV allergy was established, except that in contrast to our study, a positive skin test was not used as an inclusion criterion. For sensitivity testing of the rApi m 1 ImmunoCAP, it is important to make sure that the analyzed population indeed consists of patients with confirmed BV allergy. In our view, the most stringent way to obtain this is the combination of patient's history, serology, and skin testing. As discussed in our article, the moderate sensitivity of rApi m 1 probably reflects the fact that a certain percentage of patients with BV allergy reacts with BV allergens other than Api m 1 such as Api m 2 (BV hyaluronidase), Api m 3 (acid phosphatase), Api m 4 (melittin), and Api m 10 (icarapin).² The additional use of research prototype ImmunoCAP assays for detection of IgE to rApi m 2 and natural (n)Api m 4 allowed Sturm et al¹ to diagnose BV allergy in 33 of 40 (82.5%) patients, compared with only 27 of 40 (67.5%) patients when only rApi m 1 was used. Sturm et al¹ emphasize that testing patients with Hymenoptera allergy with rApi m 1 and rVes v 5 alone may not be sufficient because patients at risk may be left undiagnosed. We agree that additional diagnostic precision can be obtained by using a panel of species-specific allergens and in the meantime have analyzed larger patient populations for the prevalence of sIgE to crossreactive carbohydrate determinat (CCD)-free rApi m 2 and nApi m 4 using the same research prototype ImmunoCAP as Sturm et al,¹ and in addition specific IgE to rVes v 1 (phospholipase A1) by a new commercially available ImmunoCAP that will be released shortly. The diagnosis of insect venom allergy was based on history, skin test, and serology as previously described.² Among patients with BV allergy, IgE reactivity was detected in 62 of 82 (75.6%) to rApi m 1, 38 of 82 (46.3%) to rApi m 2, and 22 of 82 (26.8%) to nApi m 4. In contrast, none of 40 patients with wasp venom allergy displayed IgE reactivity to rApi m 1, rApi m 2, or nApi m 4. The combination of rApi m 1 and rApi m 2 led to a positive test result in 72 of 82 (87.8%) patients with BV allergy, and the combination of rApi m 1, rApi m 2, and nApi m 4 in 73 of 82 (89%). Differences in prevalence of sensitizations to rApi m 1, rApi m 2, and nApi m 4 compared with previous studies^{1,3} may be a result of differences in the size of the study populations or may reflect regional differences in

sensitization patterns. Among patients with wasp venom allergy, IgE reactivity was detected in 98 of 109 (89.9%) to rVes v 5 and in 63 of 109 (57.8%) to rVes v 1. In contrast, none of 40 patients with BV allergy displayed IgE reactivity to rVes v 1 and only 2 of 40 to rVes v 5. The combination of rVes v 5 and rVes v 1 led to a positive test result in 105 of 109 (96.3%) patients with wasp venom allergy, confirming a previous report on the additional benefit of rVes v 1 in the detection of wasp venom allergy,⁴ albeit in a larger study population. In conclusion, we agree with Sturm et al¹ that analyzing IgE to a panel of Hymenoptera venom allergens such as rApi m 1, rApi m 2, nApi m 4, rVes v 1, and rVes v 5 increases the sensitivity and leads to a better discrimination of bee and wasp venom allergy. Additional allergens such as Api m 3⁵ and Api m 10⁶ are interesting candidates that may allow an even higher sensitivity and broadening component resolution.

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