

Correspondence

Reply

To the Editor:

Jakob and Spillner¹ commented on our comparison of 2 different diagnostic assays for insect venom allergy, namely ImmunoCAP and Immulite.² Their sophisticated and partially ambiguous arguments are well taken. However, we disagree on some quite critical aspects.

First of all, the low sensitivity of the CAP rApi m 1 is not a matter of debate but rather a matter of fact. A low sensitivity of the CAP rApi m 1 (56.7% to 61.8%) was repeatedly reported from different groups.³⁻⁵ A low positive predictive value for the CAP rApi m 1 has been observed even in Korea.⁶ The highest reported sensitivity of the CAP rApi m 1 was 82%.³ Therefore contrary to the claims of the test-producing company, CAP rApi m 1 alone is never appropriate to diagnose or exclude bee venom allergy.

Jakob and Spillner¹ call it comparing apples and oranges when the sensitivities of the 2 tests are matched. By this statement, they question the validity of hundreds of publications comparing different test methods and many comparisons of different IgE determinations. When the new CAP method replaced the old RAST system in 1989, both the quantitative levels and sensitivity of the new CAP system were greater than in the old system.⁷ It is common knowledge that quantitative sIgE levels cannot be compared between different systems. It is also well known that sIgE levels do not correlate with the severity of systemic sting reactions. Therefore, according to the US and European guidelines, the sIgE level is irrelevant for diagnosis and risk assessment in the setting of Hymenoptera venom allergy.^{8,9} Consequently, we compared the sensitivity and specificity of the tests and not the quantitative levels. In patients with food allergy, quantitative sIgE levels might be more important for individual risk assessment. In the cited study from Wood et al,¹⁰ different methods for sIgE determination to food allergens, such as soy and peanut, were evaluated. Hence comparing their data with our data is

literally comparing apples and oranges. Reading the article carefully, Immulite and CAP had a comparable sensitivity at a cutoff of 0.35 kU/L and almost identical sensitivity cutoff of 0.10 kU/L.

Even more, we now provide quantitative data. In brief, median sIgE levels to rApi m 1 were approximately 2.8-fold higher when obtained with Immulite, but most importantly, specificity with the recommended cutoff was still 100%. Interestingly, sIgE levels to the bee venom extract were almost identical in both systems. Setting the cutoff to 0.1 kU/L increased sensitivity of the CAP rApi m 1 from 68.4% to 88.0%, and specificity remained at 100%. Sensitivity of the CAP bee venom extract also increased from 94.4% to 99.3% at this cutoff; however, specificity decreased from 100% to 78.8%. The same is true in vespid venom allergy, where specificity markedly decreased with the extracts and components at the lower cutoff in both systems (Table I). Therefore it appears that a general cutoff of 0.1 kU/L is not justified.

In conclusion, it is important for the clinician to know about the sensitivity and specificity of different test methods for IgE determination in Hymenoptera venom allergy. Sensitivity of the CAP rApi m 1 is low when the recommended cutoff of 0.36 kU/L is used; finding the reason for that is the task of the producer company. The clinician does not ask for apples or oranges, he or she expects a correct result independent from the method used in the laboratory where the sample is tested.

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TABLE I. Serologic data

Bee venom	Center	IgE levels			
		ImmunoCAP		Immulite	
		Bee venom	rApi m 1	Bee venom	rApi m 1
Median range (kU/L)	Graz (n = 111)	2.08	0.50	3.42	1.38
	Salzburg (n = 55)	5.93	1.34	7.58	3.35
	Vienna (n = 100)	16.00	2.85	13.25	6.16
	All centers (n = 266)	6.45	0.96	6.49	2.54
Positive at 0.10 kU/L (%)	All centers (n = 266)	99.3	88.0	98.9	91.0
Positive (%)	All centers (n = 266)	94.4	68.4	97.7	83.1
Positive at 0.10 kU/L (%)	Control group (n = 66)	21.2%	0%	12.1%	6.1%
Positive (%)	Control group (n = 66)	0%	0%	0%	0%

Wasp venom	Center	ImmunoCAP		Immulite	
		Wasp venom	rVes v 5	Wasp venom	rVes v 5
Median range (kU/L)	Graz (n = 111)	3.10	2.25	5.17	10.10
Positive at 0.10 kU/L (%)	Graz (n = 111)	100	93.7	100	96.4
Positive (%)	Graz (n = 111)	100	86.5	98.2	91.9
Positive at 0.10 kU/L (%)	Control group (n = 66)	31.8	12.1	24.2	18.2
Positive (%)	Control group (n = 66)	0	0	11	8

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