

THE DILEMMA OF THE NEGATIVE SKIN TEST REACTORS WITH A HISTORY OF VENOM ANAPHYLAXIS: WILL THIS ALWAYS BE THE CASE?

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SUMMARY: The loss of sensitization over time, the involvement of a different pathogenetic mechanism and the poor sensitivity of diagnostic tests have been included among the causes of a non IgE-mediated anaphylaxis triggered by an insect sting. To provide further insight into this topic we describe the case of a patient suffering from urticaria pigmentosa, anaphylactic shock due to a Vespid sting and monosensitive to *Polistes dominulus* venom, who was previous diagnosed with non-IgE mediated insect sting anaphylaxis in subjects with urticaria pigmentosa.

Therefore ultra-rush specific immunotherapy using an aqueous *Polistes dominulus* venom extract was performed over two mornings until a total dose of 100mcg was reached without any side effects. Presently the patient is undergoing maintenance therapy with a depot *Polistes dominulus* venom extract at 4-weekly intervals and is free of side effects.

In conclusion, despite the high cross-reactivity among the venoms of the various species of *Polistes*, recent evidence of a selective specificity unique to European *Polistes* allergens raises the problem of the need to make the American *Polistes* venom as well as that of *Polistes dominulus* (a very common insect in Europe) available both for diagnostic and therapeutic purposes. Besides the fact that the presence of urticaria pigmentosa alone could have explained the anaphylactic reaction to the aspecific stimulation triggered by the venom, this case history also demonstrates that omitting to perform skin tests for *Polistes dominulus* venom would have led to the same misdiagnosis of non IgE-mediated anaphylaxis and served only to further delay commencing specific immunotherapy.

Key-words: Diagnosis - Immunotherapy - Non IgE-mediated anaphylaxis - *Polistes dominulus* venom extract.

The loss of sensitization over time, the involvement of a different pathogenetic mechanism and the poor sensitivity of diagnostic tests (serological and/or skin tests) have been included among the causes of a non IgE-mediated anaphylaxis triggered by an insect sting. To provide further insight into this topic we describe the case of a patient monosensitive to *Polistes dominulus* venom.

The patient is a 38-year-old man who works in the building trade, with urticaria pigmentosa diagnosed after a biopsy performed in 1980, a history of anaphylactic shock to a Vespid sting in 1997 (positively identified as *Polistes*). In another Allergy Unit in 2000, tests for specific serum IgE (CAP-System - Pharmacia S.p.A) for *Vespula germanica*, *Polistes sp.*, *Vespa crabro* and *Apis mellifera* venoms were negative. As a result, the patient was diagnosed with "non-IgE mediated insect sting anaphylaxis in subjects with urticaria pigmentosa". A self-administration emergency kit was prescribed (self-injectable epinephrine) and

standard patient guidelines provided on how to avoid a further sting. The patient came to our notice in 2003 and prick and intradermal tests with *Vespula sp.*, *Polistes sp.*, *Apis mellifera* venoms were negative. The tryptase serum level was 27 mcg/L (v.n. < 11,5 mcg/L). Since cross-reactivity between the European species of *Polistes* (*P. gallicus*, *P. dominulus*) is very high, but weaker between the American and European species (1, 2), and the patient positively identified the stinging insect as a *Polistes*, serum specific IgE (CAP-System Pharmacia S.p.A.) to *Polistes dominulus* venom was tested for and yielded negative results. The intradermal test with *Polistes dominulus* venom (Anallergo, Florence) was positive at a concentration of 0.1 mcg/ml. "Ultra-rush" specific immunotherapy using an aqueous *Polistes dominulus* venom extract (Anallergo - Florence) was, therefore, performed over two mornings until a total dose of 100mcg was reached without any side effects. Presently the patient is undergoing maintenance therapy with a depot *Polistes dominulus* venom extract (Anallergo, Florence) at 4-weekly intervals, is free of side effects and has not been re-stung.

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In conclusion, despite the high cross-reactivity among the venoms of the various species of *Polistes*, recent evidence of a selective specificity unique to European *Polistes* allergens (2) raises the problem of the need to make the American *Polistes* venom as well as that of *Polistes dominulus* (a very common insect in Europe) available both for diagnostic and therapeutic purposes. Besides the fact that the presence of urticaria pigmentosa alone could have explained the anaphylactic reaction to the aspecific stimulation triggered by the venom, this case history also demonstrates that omitting to perform skin tests for *Polistes dominulus*

venom would have led to the same misdiagnosis of non IgE-mediated anaphylaxis and served only to further delay commencing specific immunotherapy.

References

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PRESS RELEASES

EARLY JACI RELEASE:

NEW RESEARCH SHOWS BENEFIT OF ALLERGY SPECIALTY CARE

Asthma patients report better asthma control when seeing an allergist, from the Journal of Allergy & Clinical Immunology

Compared to patients receiving care from primary care physicians, asthma patients who are under the care of an allergist report fewer asthma control problems and less severe asthma symptoms, according to new research in the December 2005 Journal of Allergy & Clinical Immunology (JACI). The JACI is the peer-reviewed, scientific journal of the American Academy of Allergy, Asthma & Immunology (AAAAI).

Michael Schatz, MD, MS, from Kaiser-Permanente in San Diego and colleagues surveyed a random sample of 3,568 patients with persistent asthma enrolled in an integrated health care system, to compare asthma care in patients seen by allergists vs. those seen by primary care providers. Of the patients who completed the assessment, 1,679 (47.1%) identified a primary care provider as their regular source of asthma care, 884 (24.8%) identified an allergist, 693 (19.4%) reported no regular source of asthma care, and 195 (5.5%) identified a pulmonologist. Patients under the care of an allergist were less likely to have required hospitalization or have unscheduled physician visits during the past year, compared to those seeing a primary care physician, and were also less likely to have overused Beta-agonists, a rescue medication, in the past year. They also were more likely to receive inhaled steroids, the preferred medication for the prophylactic treatment of chronic, persistent asthma. Inhaled steroids are effective in reducing airway inflammation, hypersensitivity, swelling and mucous production.

"These are important data that can be used by patients, payers, insurance companies and providers to improve outcomes for asthma patients," said Schatz, who is a past President of the AAAAI.

Compared to asthma patients who received care from a primary care physician, those seeing an allergist reported:

- Fewer asthma control problems
- Less severe asthma symptoms
- Significantly higher scores for asthma-specific quality of life and for overall general health.
- Significantly better understanding of how to manage their asthma and greater overall satisfaction with care.

Asthma is a chronic disease that affects approximately 20 million Americans, and is responsible for nearly 5,000 deaths a year. In addition, there are nearly 2 million asthma-related visits to the emergency department each year.

"Patients with asthma should not have to miss school, work or recreational activities because of their symptoms," Schatz said. "This research shows that patients under the care of an allergist have better quality of life, fewer hospitalizations, need less rescue medication and generally report higher satisfaction with their quality of care."

Allergists are pediatric or internal medicine physicians who have elected an additional two years of training to become specialized in the treatment of asthma, allergy and immunologic disease. To assist patients and health-care professionals in determining when referral to an allergist could be beneficial, the AAAAI has recently developed How the Allergist/Immunologist Can Help: Consultation and Referral Guidelines Citing the Evidence, which offers specific referral guidelines for 15 categories of allergic diseases. The new guidelines can be found on the AAAAI Web site, www.aaaai.org.