

The possible concomitant use of aeroallergen and food panels for skin prick testing might enhance the risk of generalized allergic reactions in children

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To the Editor,

We read with interest the article of Yazici et al.¹ that reported the high level of allergic sensitization to house dust mite in 220 pre-school children examined for suspected allergic diseases. The findings of the study are relevant considering the very young age of children. However, we would like to discuss some concerns about the method used to perform the skin prick tests (SPTs) in the examined children. In fact, the authors did not specify whether the panel of aero/food allergens was tested in the same session of SPTs or at different times.

By a general point of view SPTs are a safe procedure when inhalant allergens are used, in comparison to the use of food extracts/fresh foods or drugs. However, literature data and our clinical experience suggest that even SPTs (for inhalant allergens) might induce generalized allergic reactions (GARs) in some subjects, and children are at higher risk than adults.²⁻⁶ Some studies have also shown that inappropriate modalities of performing SPTs and/or inadequate selection of patients for SPTs may increase the risk of GARs leading to anaphylaxis, especially in low age individuals.⁷⁻⁹ Although the occurrence or severity of systemic or anaphylactic reactions is, at least in part, unpredictable because of the presence of several factors and cofactors¹⁰, asthma itself (especially if severe) should be considered as a relevant risk.^{11,12} Moreover, also the number/type of allergenic extracts used in the SPTs as

well as a high degree of allergic sensitization (such as that found in polysensitized individuals) might have detrimental effects.⁷ In fact, we have previously found that in polysensitized individuals concomitant exposure to several allergens, assessed via SPT method, induced additive histamine release from cutaneous mast cells, compared with the exposure to a single allergen.¹³ In other words, the interaction between several allergens is likely to be involved in the development of GARs.

Therefore, children whose anamnestic data suggest a potential high degree of airway allergic sensitization (i.e. polysensitization or previous systemic/anaphylactic reactions) should be considered at higher risk of GARs during SPTs. In these particular conditions, we suggest to avoid performing SPTs with food and inhalant allergens at the same time. In addition, we suggest to avoid the use of intradermal skin testing, to minimize the number of allergens to be tested during the SPTs procedure, and check the subjects for at least 20 min after the end of SPTs.⁸ In some cases it should be useful to consider the possibility of diluting allergenic extracts before their use.¹⁴ In conclusion, SPTs are usually a safe procedure. Nevertheless, allergists should be aware that some particular conditions (pointed out during collection of anamnestic data and clinical examination) as well as the preschool age, might enhance the risk of GARs. In these conditions, SPTs should be performed with extreme caution to minimize the risk.

Key words: *allergic rhinitis, anaphylaxis, bronchial asthma, hypersensitivity, skin prick tests*

Summary statement: The use of several allergens when performing skin prick tests may be an important risk factor for development of generalized allergic reactions especially in children.

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