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Timing Of Testing For IgE-mediated Food Allergy After Systemic Reaction

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Timing of Testing For IgE-mediated Food Allergy After Systemic Reaction

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IRB Number: STUDY00001719

Describe role of Submitting/Presenting Trainee in this project (limit 150 words):

I designed the project, obtained IRB (exemption) approval, worked with the clinical data analyst to collect the data, worked with the statistician to analyze the data, and wrote the abstract.

Background, Objectives/Goal, Methods/Design, Results, Conclusions limited to 500 words

Background:

A refractory period of falsely negative testing can occur following a systemic allergic reaction to Hymenoptera sting. As a result, blood specific IgE and/or skin prick tests (SPT) for other allergens are often delayed.

Objectives/Goal:

This study aims to identify the proportion of patients with falsely negative test results in the 6 weeks following an allergic reaction to food, and factors that may affect it.

Methods/Design:

This is a retrospective chart review study. One hundred fourteen pediatric subjects met inclusion criteria. Each had a convincing history of food allergy with a systemic allergic reaction and was tested to the culprit food within 6 weeks. The proportion of negative tests for each testing modality was compared. Subjects testing negative were also compared to those testing positive. Chi-square and Fisher's exact tests identified differences between groups.

Results:

Seventeen of 79 blood IgE tests (21.5%) and 6 of 35 SPT (17.1%) were negative, with no significant difference between the two tests (p-value 0.591). The distribution of trigger foods was significantly different in subjects with negative versus positive tests. Importantly, there were no subjects who tested falsely negative to tree nuts out of the 38 blood IgE tests and 13 SPT for tree nut allergy.

Conclusions:

The proportion of falsely negative tests in the 6 weeks following systemic allergic reactions to food is similarly low in both testing modalities. This proportion was even lower in subjects with tree nut allergy. Thus, testing can be considered to confirm food allergy in most patients with a convincing history during the weeks following a systemic reaction.