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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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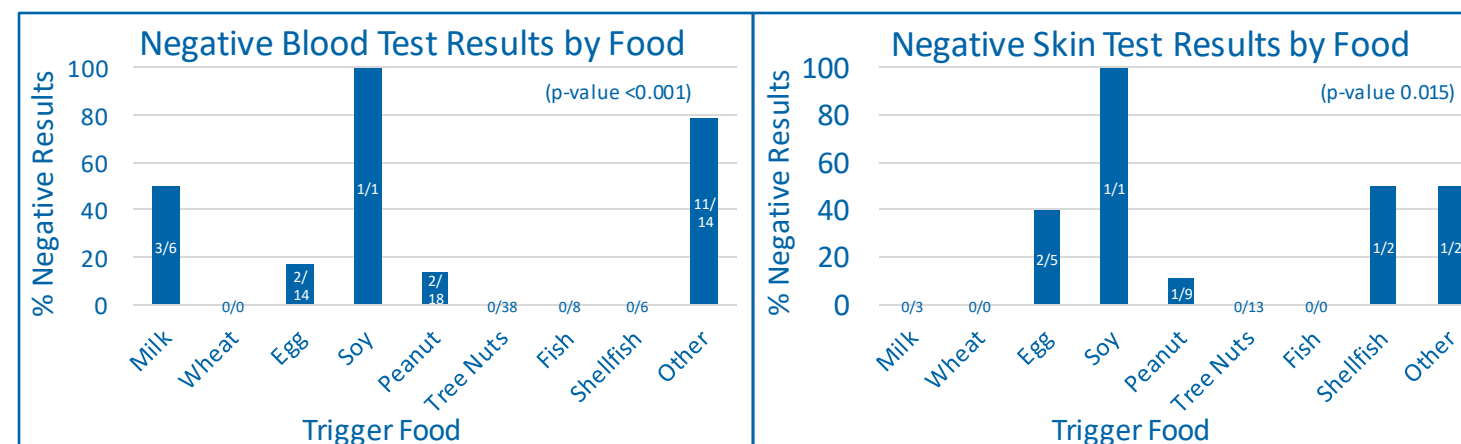
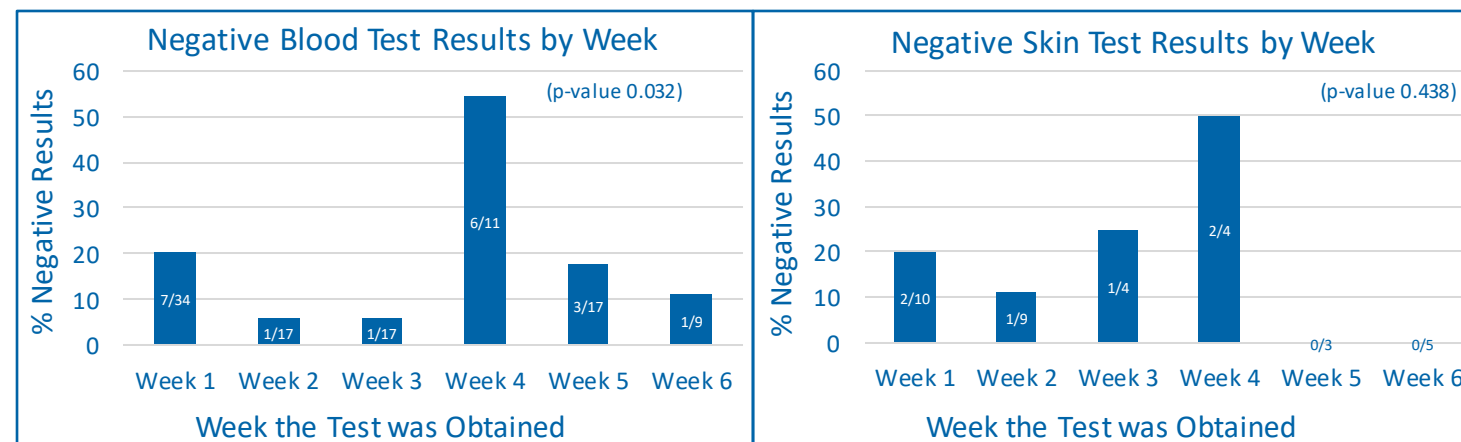
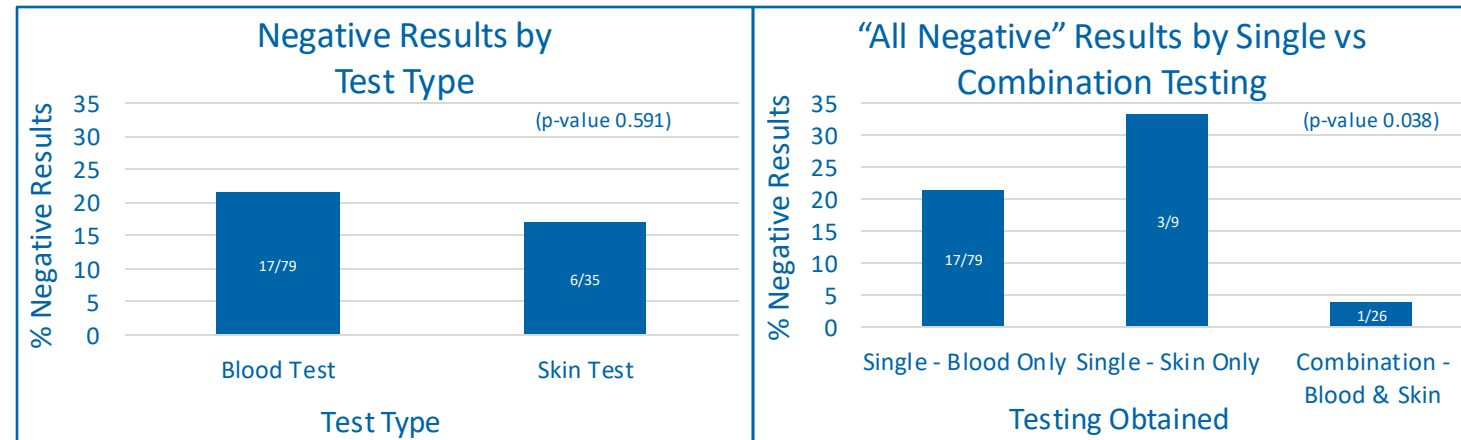
Rationale & Aims

- A refractory period of falsely negative skin and/or blood specific IgE testing can occur in the weeks following a systemic allergic reaction to Hymenoptera sting or drug exposure.
- As a result, testing for food allergens after systemic reaction is often delayed up to 6 weeks.
- The primary aim of this study was to identify the proportion of patients with falsely negative skin and/or blood tests in the 6 weeks following a likely allergic reaction to food.
- The secondary aim was to identify factors that may affect the proportion of falsely negative testing including the type of test utilized.

Population & Methods

- This was a retrospective chart review of 114 pediatric subjects who met the following inclusion criteria:
 - Evaluated in an emergency room or urgent care where the diagnosis of allergic reaction or anaphylaxis was considered.
 - The reaction included at least one symptom of anaphylaxis as outlined in the NIAID/FAAN anaphylaxis criteria.
 - Food specific blood IgE and/or skin prick test was obtained within 6 weeks to evaluate the event.
 - At least one food tested was known to be ingested within the 2 hours prior to the event and was not known to be subsequently tolerated in the following 6 months.
- The proportions of negative tests for each testing modality and for patients who had only blood, only skin, or both tests performed were calculated and compared.
- The proportions of negative tests during each week and for each food were calculated and compared.
- Chi-square and Fisher's exact tests were utilized.

Results



Conclusions & Limitations

- This study found the proportion of negative tests in the 6 weeks following systemic allergic reactions to food to be low, at about 20%, for both blood specific IgE and skin prick tests.
- The proportion of negative test results was similar for both types of testing during this time period.
- There are factors that may affect the proportion of negative tests such as the specific food trigger.
- Patients with suspected tree nut allergy likely have an even lower proportion of negative test results during this time period.
- Testing can be considered to confirm food allergy in most patients with a convincing history during the first 6 weeks after systemic allergic reaction.
- Due to very few repeat tests and oral food challenges, we were unable to confirm if negative tests were true or false negative.
- Given the retrospective nature of the study, the numbers of tests in each category varied.

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