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

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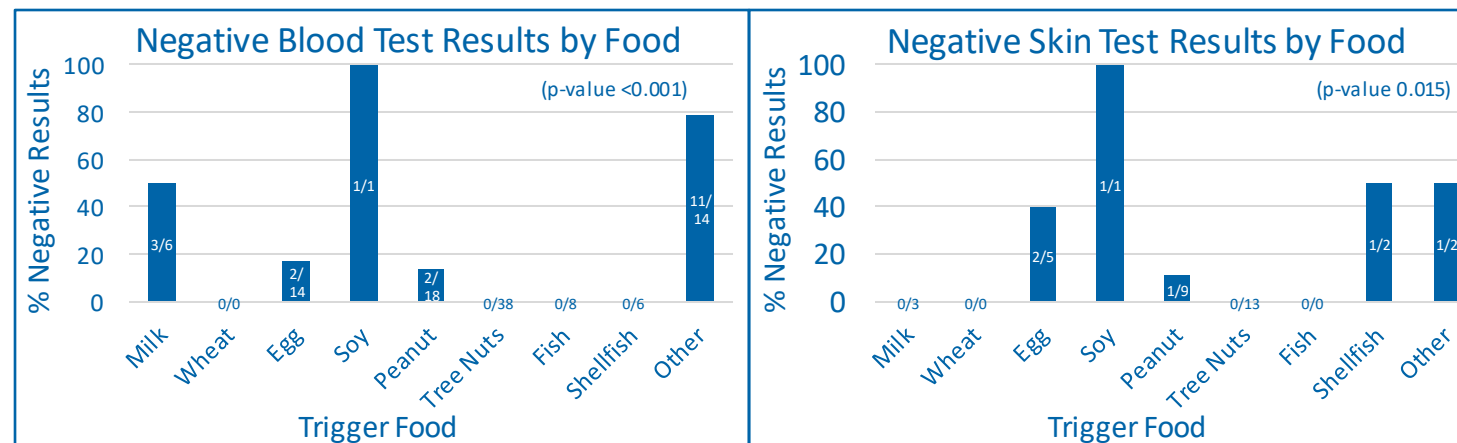
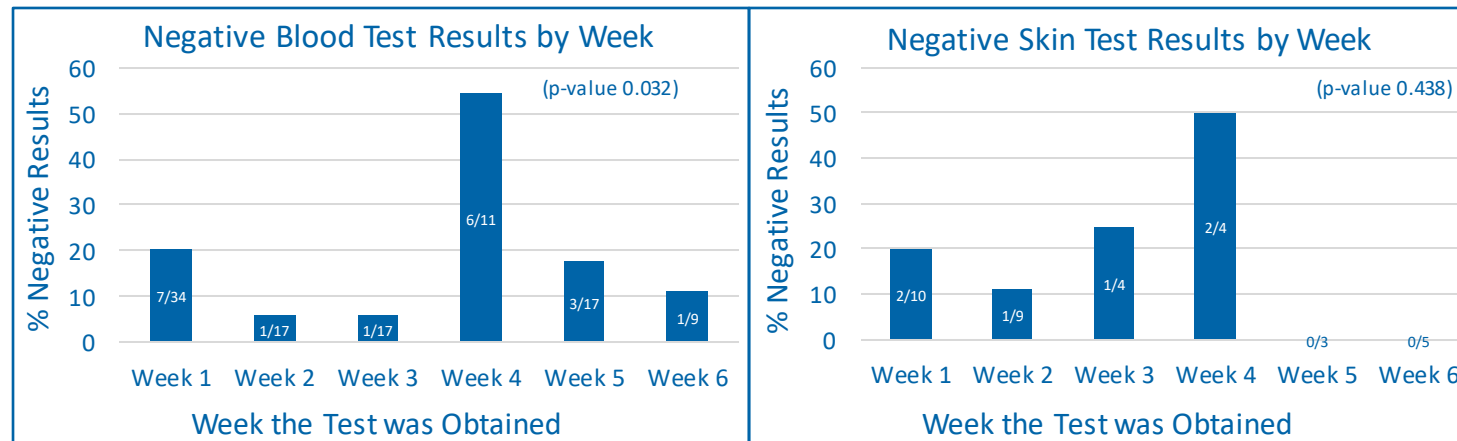
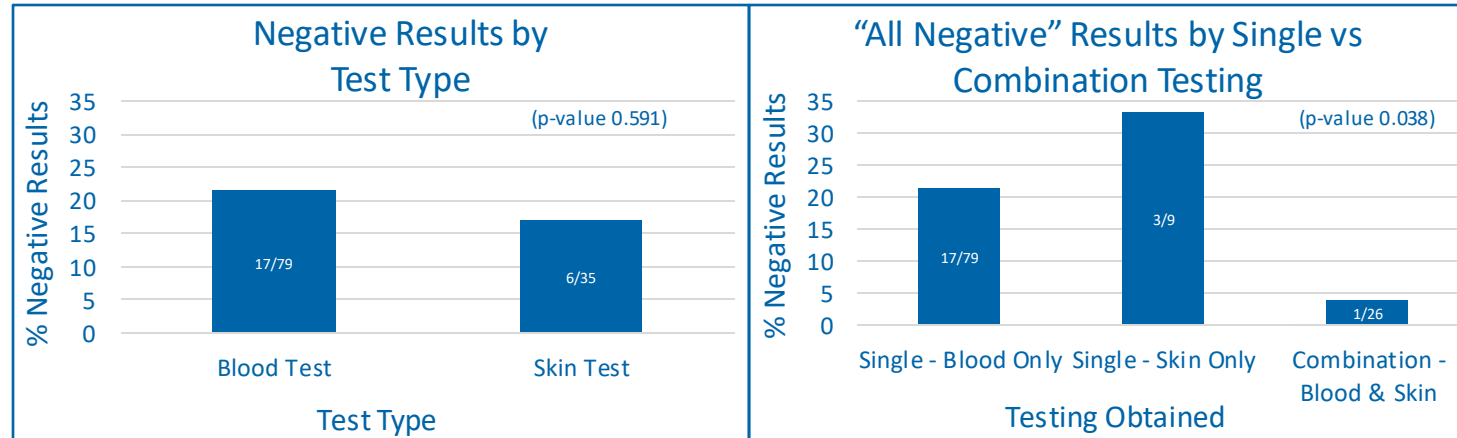
Rationale & Aims

- 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:
 1. Evaluated in an emergency room or urgent care where the diagnosis of allergic reaction or anaphylaxis was considered.
 2. The reaction included at least one symptom of anaphylaxis as outlined in the NIAID/FAAN anaphylaxis criteria.
 3. Food specific blood IgE and/or skin prick test was obtained within 6 weeks to evaluate the event.
 4. 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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