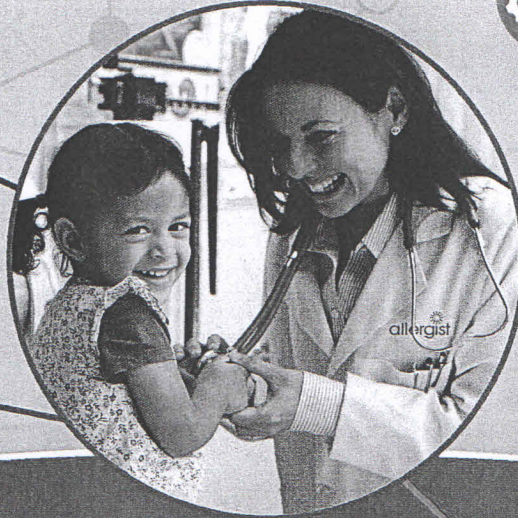
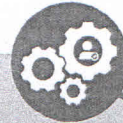


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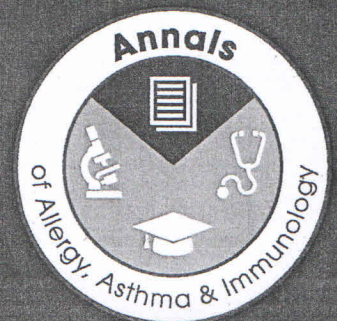
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≥ 0.015 mg/kg, 46.7% required more than one dose. Patients receiving PAE received more overall epinephrine, mean 0.019 mg/kg (range 0.008–0.114), versus 103 who did not, mean 0.01 mg/kg (range 0.07200.033). PAE was associated with vomiting after the initial epinephrine dose ($p < 0.05$) and an average length-of-stay (LOS) 60 minutes shorter in the ED or UC ($p < 0.05$). The patients did not differ in mean weight, age, inpatient admission, or LOS for admitted patients. Lastly, there was no difference in other epinephrine-related symptoms such as tremor, pallor, or delayed capillary refill at time of initial presentation.

Conclusions: Patients who received PAE do not present to ED or UC with epinephrine-related symptoms despite many receiving doses exceeding recommendations. Patients weighing < 15 kg appear to tolerate intramuscular-epinephrine doses higher than 0.01 mg/kg, which supports the use of 0.15 mg epinephrine auto-injectors in this population when lower-dose auto-injectors are unavailable.

Aerobiology, Allergens, Allergen Extracts

P050

CHARACTERISTICS OF VENOM ALLERGY AT INITIAL EVALUATION

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Introduction: This study sought to characterize the initial presentation of hymenoptera venom allergic (HVA) patients and examine differences between patients with imported fire ant (IFA) and flying hymenoptera (FH) reactions.

Methods: A multi-year, observational, single-institution analysis of patients referred for evaluation of HVA was performed. Data was obtained via physician interview and chart review including baseline characteristics, comorbid conditions, medications, culprit stinging insect, reaction severity, treatments, emergency department (ED) interventions and specific IgE results.

Results: 175 patients were enrolled (mean age 28yrs \pm 14yrs; 44% males, 77/175). Of these, 21.7% (38/175) reacted to FH, 70.9% (124/175) to IFA and 7.4% (13/175) to both. There was no difference between FH and IFA patients when analyzing mean age, sex or likelihood to seek ED care. Asthma was similar in all groups and noted in 20.6% (36/175). The most common presentation was cutaneous plus another system and was similar in all groups; 114/175 (65%). ED treatments were similar in all groups and included epinephrine (32/150, 21%), antihistamines (141/155, 91%) and corticosteroids (67/148, 45.3%). Reaction severity correlated with likelihood of ED visit ($p = 0.0005$), use of epinephrine ($p = 0.0002$) and corticosteroid use ($p = 0.03$). Patients presenting to the ED with anaphylaxis received epinephrine in 37% (27/73) of cases. Patients seen in ED whose venom allergy was confirmed was 68.3% (71/104), 91.5% of whom went on to initiate life-saving immunotherapy.

Conclusions: IFA and FH patients have many, now confirmed, similarities. The severity of HVA reactions correlated with ED visits, use of epinephrine and corticosteroids; however only 37% of patients with anaphylaxis received epinephrine.

P052

LATE SUMMER/FALL GRASS POLLEN SEASON: RETROSPECTIVE ANALYSIS OVER A 6 YEAR PERIOD

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Introduction: Retrospective analysis of cumulative grass pollen data was performed to confirm a grass pollen season in late summer/fall in metropolitan Philadelphia.

Methods: A review of pollen data collected over 6 years from Burkard air samplers was done at 2 sites. Qualitative and quantitative pollen analysis was performed according to National Allergy Bureau

standards. Grass counts were reported in grains per cubic meter per 24 hours ($\text{gr}/\text{m}^3/24\text{hr}$).

Results: In addition to spring grass pollination, a second grass pollen season was identified yearly at 2 locations, Philadelphia/urban and Mount Laurel, New Jersey/suburban. Combined station data revealed that the second grass season started mid-late August (range August 15th–28th), peaked September 9th (range August 19th–September 15th) and ended mid September/early October (range September 17th to October 6th). The mean peak grass count was $28.93 \text{ gr}/\text{m}^3/24\text{hr}$ in Philadelphia/urban and $30.93 \text{ gr}/\text{m}^3/24\text{hr}$ in Mount Laurel/suburban. There was no statistically significant difference in mean peak counts (mean difference 2.0, CI -16.29 to 20.29).

Conclusions: Our results confirm a second, clinically relevant grass pollen season in both Philadelphia and southern New Jersey. This later season may reflect growth of warm season grasses (big bluestem and indian grass), native to Pennsylvania and southern New Jersey. Pollen levels were sufficient to provoke a significant allergic response in sensitive individuals. Knowledge of this late summer/fall grass season may help identify individuals who may benefit from grass immunotherapy for those with late summer/fall grass pollinosis.

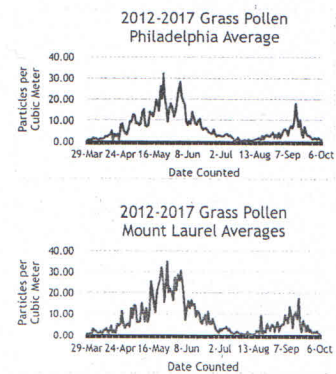


Figure. Composite average grass pollen values 2012–2017

P053

THE RELATIONSHIP OF MOLDS SPECIFIC IGE TO TOTAL IGE AND AGE IN MIDWEST PEDIATRIC POPULATION

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Introduction: Exposures to certain molds can cause disease in human. IgE to common inhalant molds is seen in 10% of population. 50% of those are predicted to have allergic symptoms as a result of exposure to fungal allergens. Relation between mold exposure and increase in total IgE is reported. The aim is to assess whether there is relationship between fungi specific IgE level and age.

Methods: Laboratory results of 11,073 specific IgE to fungi including Alternaria, Aspergillus, Penicillium, and Cladosporium and 6001 total IgE evaluations were reviewed. Subjects with specific IgE results > 0.1 and/or total IgE results > 2.0 but < 1001 were included in the study. Subject ages ranged from 0.1 to 17 years. IgE determinations were performed using a TermoFisher ImmunoCap instrument and all values are in kIU/L.

Results: Mean specific IgE values for Alternaria ranged from 2.6 in under 1 year old children to 15.9 in 14–15 year old children. Mean specific IgE to Aspergillus ranged from 0.8 in 1–2 year old children to 11 in 10–11 year old children. Total IgE values ranged from 15.6 in 3–4 year old children to 39.2 in 14–15 year old children. Both specific IgE to fungus and total IgE trend upward with age with specific IgE rising more sharply during early development. Mean specific IgE appeared to peak at puberty but mean total IgE continued to rise slowly throughout the pediatric period.

Conclusions: Both mean total and specific IgE against fungi rise as a pediatric population ages with total IgE having a lower rate of increase.