

characteristics of FD in children with eosinophilic gastrointestinal diseases (EGIDs).

STUDY POPULATION. The study included children previously evaluated in the multidisciplinary EGID program at Children's Hospital National Jewish Health (Aurora, CO) between January and December 2008.

METHODS. Retrospective analysis of medical records ($N = 200$) assessed patients for EGID and FD (determined by feeding therapists using a feeding assessment that addressed symptoms, observation of functional skills, learned behaviors, mealtime dynamics with caregivers, and developmental skills).

RESULTS. Thirty-three (16.5%) patients (age range: 14–113 months) were identified as having both EGID and FD. Food sensitivity was noted in 88% of the patients, and 52% of them had clinical evidence of other allergic disease. Twenty-five of the 33 patients (76%) had eosinophilic esophagitis, defined by ≥ 15 eosinophils per high-powered field. Learned maladaptive feeding behaviors were the predominant form of FD and were noted in 93.9% of the children; gagging or vomiting was seen in 84.8% of them. Twenty-one percent were diagnosed with failure to thrive, and nearly 70% required individual or group feeding therapy.

CONCLUSIONS. Feeding difficulties are prevalent in children with EGIDs and might persist even after eosinophilic inflammation is treated.

REVIEWER COMMENTS. This study highlights the importance of assessing for FD in children with EGIDs and vice versa, because appropriate management of both disease states might enhance outcomes. The authors were able to examine the records of a relatively large number of patients. Potential limitations of the study were its retrospective design, lack of a universally accepted feeding-assessment protocol, and possible referral bias.

URL: www.pediatrics.org/cgi/doi/10.1542/peds.2011-2107EE

Erin M. Cannington, MD
William K. Dolen, MD
Augusta, GA

Incidental Gastric Eosinophils in Patients With Eosinophilic Esophagitis: Do They Matter?

Ammoury RF, Rosenman MB, Roettcher D, Gupta SK. *J Pediatr Gastroenterol Nutr.* 2010;51(6):723–726

PURPOSE OF THE STUDY. Some patients with eosinophilic esophagitis (EoE) demonstrate an increased number of eosinophils in gastric mucosa. These researchers sought to assess clinical and therapeutic differences in children with EoE and either no gastric eosinophils (EE-N) or an increased number of gastric eosinophils (EE-A).

STUDY POPULATION. Children aged 1 to 18 years who had had an esophagogastroduodenoscopy (EGD) over an 8-year period (1999–2007) were assessed. The study was conducted at a children's hospital in Indianapolis, Indiana.

METHODS. A retrospective chart review was performed to identify children with EE-A, defined as EoE with ≥ 10 eosinophils per high-powered field in a gastric biopsy. Clinical characteristics and response to swallowed fluticasone between children with EE-A and children with EE-N were compared by using 2-sample t and χ^2 tests.

RESULTS. A total of 356 children with EoE were identified: 41 (12%) met criteria for EE-A. When compared to a randomly selected group of 50 children with EE-N, there was no difference regarding gender, age, presenting symptoms, atopy history, or esophageal histology. Both groups had similar responses to swallowed fluticasone (significant reductions in the number of esophageal eosinophils). In 11 children with EE-A treated with swallowed fluticasone, 9 (82%) had a reduction in the number of gastric eosinophils (to < 5 eosinophils per high-powered field). No differences were observed between responders and nonresponders.

CONCLUSIONS. Twelve percent of the children with EoE had an increased number of gastric eosinophils; however, the presence of increased numbers of gastric eosinophils does not portend a worse clinical presentation or result in a reduced response to swallowed fluticasone.

REVIEWER COMMENTS. Just when we thought we were starting to understand EoE, gastroenterologists are now identifying children with clinical symptoms and an increased number of eosinophils in areas distal to the gastroesophageal junction. Although the authors admitted that they did not have a study group of patients with only eosinophilic gastritis, the lack of differences between EE-N and EE-A was reassuring. This study's results offer another twist in the continuing story of eosinophilic gastrointestinal disorders.

URL: www.pediatrics.org/cgi/doi/10.1542/peds.2011-2107FF

Kirk H. Waibel, MD
Fort Sam Houston, TX

Safe Vaccination of Patients With Egg Allergy With an Adjuvanted Pandemic H1N1 Vaccine

Gagnon R, Primeau MN, Des Roches A, et al; PHAC-CIHR Influenza Research Network. *J Allergy Clin Immunol.* 2010;126(2):317–323

PURPOSE OF THE STUDY. Influenza vaccines are produced from embryonated hens' eggs and contain residual, variable amounts of egg protein. This study attempted to better characterize reaction risk in a large population of egg-allergic persons.

STUDY POPULATION. Patients with egg allergy were recruited from consulting allergists for the purpose of being vaccinated against pandemic H1N1 influenza virus in the fall of 2009. A minority of them had previously been vaccinated for seasonal influenza without reaction. Egg allergy was defined as a minimum of 1 sign or symptom occurring within 60 minutes of ingesting egg, confirmed by either a positive skin-test result or an egg-specific immunoglobulin E (IgE) level of ≥ 0.35 kU/L. Also included in this group were persons who had no history of egg protein ingestion but who had both a positive egg skin-test result and positive serology results (specific IgE ≥ 2 kU/L if < 2 years of age and ≥ 7 kU/L if ≥ 2 years). A control group with egg tolerance was included.

METHODS. This study involved 2 stages, the first of which was conducted by allergists in the population described above. Because the results suggested minimal risk, an expanded program of vaccination was undertaken for patients who self-reported egg allergy. Vaccine was administered in the study population in a single dose to patients deemed at low risk (mild gastrointestinal/skin reactions) and in 2 doses (10% and 90%) at 30-minute intervals for those deemed at higher risk (asthma or cardiovascular reactions). Patients were observed for 60 minutes after vaccination. After the first stage revealed limited risk of anaphylaxis in the first 900 egg-allergic patients, special clinics began a rapid vaccination program with a mandatory surveillance protocol.

RESULTS. Among 830 patients with confirmed egg allergy, 9% had vaccine administered in divided doses. No patient had an anaphylactic reaction. Nine patients had minor allergic symptoms. The proportion of patients who presented with signs/symptoms compatible with an allergic reaction was similar (3.1%) in the control group and the group of patients with egg allergy. In the second stage of expanded vaccination of 3640 additional patients, 2 were treated with epinephrine, although neither of them fulfilled study criteria for anaphylaxis.

CONCLUSIONS. Vaccination of patients with egg allergy with adjuvanted pandemic H1N1 vaccine seems to be safe, and the results of this study are in line with those of previous studies performed with seasonal influenza vaccine. Vaccines in this study had low levels of ovalbumin. Further studies might assess the risk after administering vaccine with the higher ovalbumin levels found in seasonal vaccine.

REVIEWER COMMENTS. The authors pointed out that patients with the most severe egg-allergy histories might have avoided vaccination altogether. There is still no published study of this much smaller, highest-risk group. However, these results add to others that indicate that vaccination can safely proceed in most children with egg

allergy, particularly with vaccines that now have lower egg content.

URL: www.pediatrics.org/cgi/doi/10.1542/peds.2011-2107GG

James R. Banks, MD
Timothy Andrews, MD
Arnold, MD

Variations in Quality of Life Among Caregivers of Food Allergic Children

Springston EE, Smith B, Shulruff J, et al. *Ann Allergy Asthma Immunol.* 2010;105(4):287-294

PURPOSE OF THE STUDY. To better understand the relationship between pediatric food allergy and caregiver quality of life.

STUDY POPULATION. Caregivers of food-allergic children were recruited through targeted Web pages on food-allergy resource and social media sites to complete an anonymous Web-based Food Allergy Quality of Life-Parental Burden (FAQL-PB) questionnaire.

METHODS. Caregivers completed the validated FAQL-PB questionnaire to measure the effect of food allergy on caregiver health-related quality of life. This focused on areas most affected including family/social activities, health, and emotional concerns. To assess caregiver knowledge and the child's history of food allergy, they also completed the validated Chicago Food Allergy Research Survey for Parents. Descriptive statistics were used to evaluate how troublesome different aspects of quality of life were for them (minimally, moderately, or extremely troubled).

RESULTS. Data were compiled from 1126 caregivers across the United States. Of these caregivers, 90.1% were white, 95.0% were female, and 75.3% had a 4-year college degree or more. There was wide variation in the impact of food allergy on caregiver quality of life with the exception of consistency of caregivers feeling troubled with regard to social limitations resulting from their child's food allergy. Poor quality of life was associated with caregivers being more knowledgeable about food allergies and being familiar with epinephrine administration and the child having had food-allergy-related emergency department visits in the previous year, having multiple food allergies, and having milk or wheat allergy (versus not).

CONCLUSIONS. Caregiver quality of life varies greatly; however, severity, the number of food allergies, and specific food allergies to milk or wheat were associated with lower caregiver quality of life.

REVIEWER COMMENTS. Although this study had limitations including the uniform, educated, upper-income population and the lack of information regarding the time since

Safe Vaccination of Patients With Egg Allergy With an Adjuvanted Pandemic H1N1 Vaccine

James R. Banks and Timothy Andrews

Pediatrics 2011;128;S111

DOI: 10.1542/peds.2011-2107GG

Updated Information & Services

including high resolution figures, can be found at:
http://pediatrics.aappublications.org/content/128/Supplement_3/S111.2

Subspecialty Collections

This article, along with others on similar topics, appears in the following collection(s):
Allergy/Immunology
http://www.aappublications.org/cgi/collection/allergy:immunology_sub

Permissions & Licensing

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
<http://www.aappublications.org/site/misc/Permissions.xhtml>

Reprints

Information about ordering reprints can be found online:
<http://www.aappublications.org/site/misc/reprints.xhtml>

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Safe Vaccination of Patients With Egg Allergy With an Adjuvanted Pandemic H1N1 Vaccine

James R. Banks and Timothy Andrews

Pediatrics 2011;128;S111

DOI: 10.1542/peds.2011-2107GG

The online version of this article, along with updated information and services, is located on the World Wide Web at:

http://pediatrics.aappublications.org/content/128/Supplement_3/S111.2

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2011 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

