

because it was shown in this study to terminate vomiting episodes and resolve and lethargy.

URL: [www.pediatrics.org/cgi/doi/10.1542/peds.2017-2475B8B](http://www.pediatrics.org/cgi/doi/10.1542/peds.2017-2475B8B)

Joan H. Dunlop, MD  
Corinne A. Keet, MD  
Baltimore, MD

### Correlation Between Aeroallergen Levels and New Diagnosis of Eosinophilic Esophagitis in New York City

Fahey L, Robinson G, Weinberger K, Giambrone AE, Solomon AB. *J Pediatr Gastroenterol Nutr.* 2017;64(1):22–25

**PURPOSE OF THE STUDY.** Eosinophilic esophagitis (EoE) is often associated with atopic/allergic disorders. Seasonality has been established in the diagnosis of eosinophilic esophagitis, but there are limited data to support the contribution of aeroallergens to the development of EoE. This pilot study was designed to determine whether there is a seasonal variation in the onset of symptoms and/or diagnosis of EoE and whether these variations correlate with a specific pollen concentration within New York City.

**STUDY POPULATION.** All pediatric patients ages 0 to 21 years old diagnosed with EoE by histologic diagnosis between 2002 and 2012 at New York-Presbyterian/Weill Cornell Medical Center. Histologic diagnosis was defined as >15 eosinophils per high-powered field on esophageal biopsies after treatment for 6–8 weeks with a proton pump inhibitor.

**METHODS.** Retrospective chart review of EoE pediatric patients assessed for date of initial symptoms as identified by the pediatric patient and parental recall and date of histologic diagnosis. Demographic data, including sex, ethnicity, concomitant atopic disorders, and residential county, were obtained. Atmospheric pollen was collected using a Burkard volumetric spore trap from 2009 to 2012, and the data were examined for 11 taxa: *Acer* (maple), *Betula* (birch), *Populus* (poplar), *Ulmus* (elm), *Quercus* (oak), *Carya* (hickory), *Fraxinus* (ash), *Platanus* (sycamore, London planetree), *Fagus* (beech), *Poaceae* (grass pollen family), and *Ambrosia* (ragweed). To assess seasonal deviations in the distribution of observed EoE patients diagnosed, the binomial test was used to compare observed results with a theoretically expected distribution. Spearman rank correlation coefficient was used to assess the correlation between peak allergen count and onset of EoE.

**RESULTS.** Sixty-six patients were identified and classified by the date of initial symptoms and date of histologic diagnosis. There was a seasonal variation in the onset of symptoms and diagnosis of EoE, with the highest number of patients reporting onset of symptoms of EoE from July to September and with diagnosis being made in the next season (October to December). There was a seasonal correlation between peak levels of grass pollen and peak onset of EoE symptoms, which were both highest from July to September.

**CONCLUSIONS.** The data suggest that there is a correlation between specific aeroallergen levels and both the onset of symptoms and time of diagnosis of patients with EoE in New York City.

**REVIEWER COMMENTS.** The strength of this study is that it identifies a correlation between aeroallergen exposure with symptoms and diagnosis in pediatric EoE. The limitations of this study include the significant variability in the length of time between the initial onset of symptoms of EoE and the date of diagnosis of EoE as well as the retrospective nature of the data collection. The possibility of inaccurate patient recall of month or season of symptom onset is likely. In addition, the pollen counts were collected in 2009, a full 7 years after some of the patient samples were collected. The pollen counts may have changed over this decade.

URL: [www.pediatrics.org/cgi/doi/10.1542/peds.2017-2475CCC](http://www.pediatrics.org/cgi/doi/10.1542/peds.2017-2475CCC)

Carla M. Davis, MD  
Houston, TX

### Increased Prevalence of Airway Reactivity in Children With Eosinophilic Esophagitis

Krupp NL, Sehra S, Slaven JE, Kaplan MH, Gupta S, Tepper RS. *Pediatr Pulmonol.* 2016;51(5):478–483

**PURPOSE OF THE STUDY.** To assess the prevalence and determine clinical factors, biomarkers, or allergic sensitization that may be predictive of airway hyperresponsiveness (AHR) in children with eosinophilic esophagitis (EoE).

**STUDY POPULATION.** The study group included children ages 7 to 18 years ( $n = 33$ ), with biopsy-diagnosed EoE, on stable medications (excluding systemic antibiotics or corticosteroids) for at least 4 weeks, and no other lung disease aside from asthma or allergies. Age-matched healthy controls ( $n = 37$ ) without EoE, asthma, other lung disease, or atopic disease in the preceding year were enrolled from the general population.

**METHODS.** Cross-sectional analysis included a retrospective chart review, an assessment of most recent EoE control, and the presence and severity of comorbid asthma and atopic dermatitis. Pulmonary function testing with methacholine challenge and exhaled nitric oxide (eNO) were prospectively measured. AHR was defined as a provocative concentration necessary to affect an FEV<sub>1</sub> decrease of 20% (PC<sub>20</sub>) <8 mg/mL. Peripheral blood was analyzed for complete blood count with differential, total serum IgE, IL-4, IL-5, IL-13, eotaxin, EGF, and FGF-2. Specific IgE to house dust mite, ragweed, *Alternaria*, timothy grass, Bermuda grass, cedar, and cat were measured by using ELISA (positive >0.70 IU/mL).

**RESULTS.** Children with EoE had a higher frequency of allergic rhinitis, atopic diagnosis, physician-diagnosed asthma, food allergy, prior wheeze and respiratory symptoms, eczema, total serum IgE, peripheral eosinophilia, and more frequent sensitization to at least 1 aeroallergen

**Correlation Between Aeroallergen Levels and New Diagnosis of Eosinophilic Esophagitis in New York City**

Carla M. Davis

*Pediatrics* 2017;140;S204

DOI: 10.1542/peds.2017-2475CCC

**Updated Information & Services**

including high resolution figures, can be found at:  
[http://pediatrics.aappublications.org/content/140/Supplement\\_3/S204.1](http://pediatrics.aappublications.org/content/140/Supplement_3/S204.1)

**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

## **Correlation Between Aeroallergen Levels and New Diagnosis of Eosinophilic Esophagitis in New York City**

Carla M. Davis

*Pediatrics* 2017;140;S204

DOI: 10.1542/peds.2017-2475CCC

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/140/Supplement\\_3/S204.1](http://pediatrics.aappublications.org/content/140/Supplement_3/S204.1)

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 © 2017 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

