METHODS. An extensive baseline survey was administered to the child’s caregiver. Asthma morbidity outcomes included clinical symptoms, the effect on activities of daily living, resource utilization, and lung function measurements. Food allergy history included symptoms experienced within 1 hour of ingestion of reported allergenic foods. Pulmonary function testing was performed according to American Thoracic Society guidelines.

RESULTS. Twenty-four percent of the study population had physician-diagnosed food allergy, with peanut and then tree nuts being the most prevalent foods involved. Multiple food allergies were present in 49% of the subjects with food allergy. Subjects with any food allergy had almost double the increased risk of daytime symptoms and more than twice the risk of lifetime hospitalization but no increase in missed school days due to asthma or unscheduled asthma visits to a health care provider. The percent predicted forced expiratory volume in 1 second (FEV1) scores were significantly lower in the food allergy group. Subjects with multiple food allergies had >3 times the increased risk of daytime asthma symptoms and >5 times the risk of lifetime hospitalization, as well as significantly higher number of unscheduled health care visits. Lung function was also lower, including percent predicted FEV1 and FEV1/forced vital capacity scores.

CONCLUSIONS. This study found an increased risk of asthma morbidity in children with any food allergy and even more so in children with multiple food allergies. There was also an increased prevalence of food allergy in children with asthma compared with the national prevalence rates, consistent with previous findings.

REVIEWER COMMENTS. The association between food allergy and several measures of asthma morbidity was clearly demonstrated in the current study population. Whether these same findings would apply to a population with different demographic characteristics remains to be studied. It is also not clear whether asthma exacerbations were triggered by exposure to the food allergen. Nonetheless, increased monitoring of children with concomitant asthma and food allergy seems appropriate.

Remission and Persistence of Asthma Followed From 7 to 19 Years of Age

PERSISTENCE OF ASTHMA. A total of 205 subjects with asthma studied from age 7 to 8 years up until the study end-point age of 19 years.

METHODS. Subjects with asthma were identified by distributing an extended International Study of Asthma and Allergies in Childhood questionnaire to the families of all children in the first and second grade in 3 municipalities in northern Sweden. The diagnosis of asthma was confirmed in 248 of the subjects identified according to the questionnaire by using structured interviews and clinical assessments. These subjects were then assessed for their status of asthma, family history of asthma, asthma medication use (including inhaled corticosteroids), asthma severity score, presence of physician-diagnosed rhinitis or eczema, and traffic exposure and home exposure to dampness by using annual questionnaires until 19 years of age. In addition, some patients underwent skin prick testing for 10 common allergens. Positive skin prick test results were validated in relation to serum-specific immunoglobulin E levels. Lung function testing was also performed in all patients in the asthma cohort, and some patients received methacholine bronchial challenge tests.

RESULTS. A total of 205 subjects remained in the study until the end-point age of 19 years. Of these patients, 21% had asthma that was in remission, 38% had periodic asthma, and 41% had persistent asthma. Remission was more common in boys. Sensitization to furred animals at baseline as identified by skin prick testing and serum-specific immunoglobulin E levels was inversely associated with remission (odds ratio: 0.14 [95% confidence interval: 0.04–0.55]), as was severe asthma (odds ratio: 0.19 [95% confidence interval: 0.07–0.54]). Eighty-two percent of children with these characteristics had persistence of asthma in adolescence.

CONCLUSIONS. Remission of asthma during adolescence is common. Female gender, sensitization to furred animals, and more severe asthma all inversely correlate with the chance of asthma going into remission.

REVIEWER COMMENTS. The take-home message from this article is the importance of long-term clinical follow-up of patients with asthma, as large numbers of patients have persistent disease. Furthermore, the identification of the risk factors for disease persistence will allow better identification of at-risk patients and allow patient-specific care with medical interventions that are appropriate in intensity, well timed, and improve the long-term outcomes of patients without overburdening the system.

URL: www.pediatrics.org/cgi/doi/10.1542/peds.2014-1817EEE
Anne-Marie Irani, MD
Richmond, VA

STUDY POPULATION. The study population included 205 subjects with asthma studied from age 7 to 8 years up until the study end-point age of 19 years.

METHODS. Subjects with asthma were identified by distributing an extended International Study of Asthma and Allergies in Childhood questionnaire to the families of all children in the first and second grade in 3 municipalities in northern Sweden. The diagnosis of asthma was confirmed in 248 of the subjects identified according to the questionnaire by using structured interviews and clinical assessments. These subjects were then assessed for their status of asthma, family history of asthma, asthma medication use (including inhaled corticosteroids), asthma severity score, presence of physician-diagnosed rhinitis or eczema, and traffic exposure and home exposure to dampness by using annual questionnaires until 19 years of age. In addition, some patients underwent skin prick testing for 10 common allergens. Positive skin prick test results were validated in relation to serum-specific immunoglobulin E levels. Lung function testing was also performed in all patients in the asthma cohort, and some patients received methacholine bronchial challenge tests.

RESULTS. A total of 205 subjects remained in the study until the end-point age of 19 years. Of these patients, 21% had asthma that was in remission, 38% had periodic asthma, and 41% had persistent asthma. Remission was more common in boys. Sensitization to furred animals at baseline as identified by skin prick testing and serum-specific immunoglobulin E levels was inversely associated with remission (odds ratio: 0.14 [95% confidence interval: 0.04–0.55]), as was severe asthma (odds ratio: 0.19 [95% confidence interval: 0.07–0.54]). Eighty-two percent of children with these characteristics had persistence of asthma in adolescence.

CONCLUSIONS. Remission of asthma during adolescence is common. Female gender, sensitization to furred animals, and more severe asthma all inversely correlate with the chance of asthma going into remission.

REVIEWER COMMENTS. The take-home message from this article is the importance of long-term clinical follow-up of patients with asthma, as large numbers of patients have persistent disease. Furthermore, the identification of the risk factors for disease persistence will allow better identification of at-risk patients and allow patient-specific care with medical interventions that are appropriate in intensity, well timed, and improve the long-term outcomes of patients without overburdening the system.

URL: www.pediatrics.org/cgi/doi/10.1542/peds.2014-1817FFF
Amir H. Shahlaee, MD
William K. Dolan, MD
Augusta, GA
Remission and Persistence of Asthma Followed From 7 to 19 Years of Age
Amir H. Shahlaee and William K. Dolen
Pediatrics 2014;134;S167
DOI: 10.1542/peds.2014-1817FFF

The online version of this article, along with updated information and services, is located on the World Wide Web at:
/content/134/Supplement_3/S167.full.html