IMMUNOTHERAPY

PREVENTION OF NEW SENSITIZATIONS IN ASTHMATIC CHILDREN MONOSENSITIZED TO HOUSE DUST MITE BY SPECIFIC IMMUNOTHERAPY: A 6-YEAR FOLLOW-UP STUDY


Purpose of the Study. Prevalence of atopic diseases has increased in westernized countries despite current prevention strategies. The objective of this study was to determine whether specific immunotherapy (IT) can stop progression of sensitization to additional environmental allergens in children monosensitized to house dust mites.

Study Population. One hundred thirty-four children ages 5 to 8 years, with intermittent asthma, with or without rhinitis, sensitized to house dust mites.

Methods. Children were evaluated by prick skin testing and measurement of serum allergen-specific immunoglobulin E (IgE). Parents of 75 children accepted IT and these children were received IT with dust mite extract for 3 years. The remaining 63 children were treated with medications and were considered a control group. All children were skin tested and had serum allergen-IgE measured every year for 6 years.

Results. Both groups were comparable in regard to age, sex, and presence of rhinitis. At the end of the 6-year study period, 25% of patients in the IT group showed new sensitization(s), compared with 66% in the control group (P < .0002). The most frequent new sensitizations were pollens, animal danders, and Alternaria mold. The IT was well-tolerated.

Conclusion. Specific IT may prevent the development of new sensitzations in children with asthma, with or without rhinitis, monosensitized to house dust mites.

Reviewer’s Comments. This nonrandomized clinical trial highlights the renewed interest in immunotherapy because of its potential to modify the natural history of atopic sensitization. If subsequent studies confirm the results of this trial, our standard of care may change to include early introduction of IT in atopic children, as opposed to current symptomatic management with medication with the use of immunotherapy as a second- or third-line treatment.

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THE UPPER AIRWAY

SUPERIORITY OF AN INTRANASAL CORTICOSTEROID COMPARED WITH AN ORAL ANTIHISTAMINE IN THE AS-NEEDED TREATMENT OF SEASONAL ALLERGIC RHINITIS


Purpose. The daily use of either intranasal corticosteroids or histamine 1 (H1) receptor antagonists has proved to be efficacious in the treatment of seasonal allergic rhinitis. Most patients, however, use these medications as needed. Our objective was to compare the effectiveness of as-needed use of H1 receptor antagonists with that of intranasal corticosteroids in the treatment of seasonal allergic rhinitis.

Study Population and Methods. We performed a randomized, open-label, parallel-group study comparing the as-needed use of an H1 receptor antagonist (loratadine) that of an intranasal corticosteroid (fluticasone propionate) in the management of fall seasonal allergic rhinitis in the fall of 1999. Subjects kept a diary of their daily symptoms and were examined at enrollment into the study and biweekly for 4 weeks during treatment. Outcome measures were the Rhinoconjunctivitis Quality of Life Questionnaire score, daily symptom diary scores, and the number of eosinophils and the levels of eosinophilic cationic protein in nasal lavage samples.

Results. Patients in the fluticasone-treated group reported significantly better scores in the activity, sleep, practical, nasal, and overall domains (P < .05) of the Rhinoconjunctivitis Quality of Life Questionnaire. The median total symptom score in the fluticasone-treated group was significantly lower than that in the loratadine-treated group (4.0 vs 7.0; P < .01). After treatment, the number of eosinophils was significantly smaller in the fluticasone-treated group compared with the loratadine-treated group (P = .001). Eosinophilic cationic protein levels followed the same pattern, with a significant correlation between the levels of eosinophilic cationic protein and the number of eosinophils (R = 0.70; P < .01).

Conclusion. As-needed intranasal corticosteroids reduce allergic inflammation and are more effective than as-needed H1 receptor antagonists in the treatment of seasonal allergic rhinitis.

Reviewer’s Comments. What would a study from this group be without nasal wash data? Everybody knows that most patients don’t use their allergy medicines just the way we tell them to. The results of this study are reassuring that patients can do well just by using their nasal corticosteroids as needed. I usually count on the fact that by instructing daily use of medications, most folks will use them every 2 or 3 days. If we suggest that patients use medications less frequently than that, they may not use them at all.

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RISK OF ADENOID HYPERTROPHY IN CHILDREN WITH ALLERGIC RHINITIS


Purpose of the Study. To determine the risk factor of adenoidal hypertrophy in patients with known allergic rhinitis (AR).

Study Population. Three hundred fifteen consecutive patients between the age of 1 and 18 years with a diagnosis of AR who were also found to have adenoid hypertrophy (AH). A control group of 315 similarly aged patients with AR and no evidence of AH were randomly selected.

Methods. This was a retrospective study reviewing patients seen in the allergy clinic at a University Medical Center in Florida over a 10-year period. AR was diagnosed by history, physical findings, and positive skin test results. AH was determined radiographically defined as a narrowing of the airway attributable to adenoid mass by as much...
as two thirds of the airway caliber (the distance between the posterior and anterior pharyngeal wall). Patients were divided into 4 groups by age—1 to 3 years, 4 to 6 years, 7 to 12 years, and 13 to 18 years. The frequency of the following clinical symptoms was compared between the groups with and without AH: 1) otitis media (>6 episodes per year defined clinically); 2) lower respiratory infections (>3 episodes a year defined clinically as bronchitis, croup, or pneumonia); 3) sinusitis (>5 episodes per year defined radiographically as complete opacity, air fluid level or >4 mm mucosal thickening); 4) exposure to cigarette smoking (>2 weeks per month); 5) sleep disorders (positive history confirmed by doctors); 6) use of antihistamines/decongestants (>2 weeks per month over the last 3 years); and 7) percutaneous allergy testing to dust mites, molds, animal danders, cockroach, and seasonal pollens.

Results. The frequency of otitis media was statistically significantly more frequent in patients with AH aged 1 to 4 and the 4 to 6 years. The frequency of lower respiratory tract infections was statistically significantly higher in all age groups. The frequency of sinusitis was higher in AH patients for ages 4 to 6 and 7 to 12. Exposure to cigarette smoking was higher in all age groups with AH, but only statistically significant for ages 4 to 6 years. Frequency of sleep disorders was higher in AH patients for all age groups studied. Use of antihistamines/decongestants was statistically significantly greater in all AH patients except for the youngest ones measured at 1 to 3 years. Allergy skin testing was similar in both groups for measurements to dust mites, animal danders, and seasonal allergens. All AH patients had highly statistically significantly greater skin test reactivity to molds.

Conclusions. In this study population, children with allergic rhinitis along with adenoidal hypertrophy had a greater frequency of lower respiratory tract infections, sleep disorders, and skin test reactivity to molds. Otitis media occurred more frequently in younger-aged children, sinusitis more frequently in children between the ages of 4 to 12. Antihistamine/decongestants were used more frequently in all children except the youngest age group.

Reviewer’s Comments. Although there are a number of weaknesses in this retrospective study, the association of AR and adenoid hypertrophy in children has not been well-characterized. This was a retrospective study of a large number of consecutively seen patients with AH, but the control patients were apparently selected randomly. AH was defined radiographically rather than by fiberoptic examination. The definition of the clinical parameters was apparently clinically arbitrary, ie, otitis media clinically defined, lower respiratory infection defined as bronchitis, croup, and pneumonia but no criteria were given, sleep disorders defined by history without polysomnogram and parameter of use of antihistamine/decongestants was not specified. Despite these critical problems, the study has some interesting findings. The frequency of lower respiratory infections was greater in the AH patients in addition to the expected increased frequency of sinusitis and otitis. Skin test reactivity was significantly greater only to molds. This may be representative of the geographic location of the study (Florida) with greater humidity and mold exposure, yet dust mite sensitivity was similar in both groups. Hopefully, additional prospective studies looking at this association will be forthcoming from other areas of the country looking at allergen sensitivity in children with AH.

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CHRONIC NASAL CONGESTION AT NIGHT IS A RISK FACTOR FOR SNORING IN A POPULATION-BASED COHORT STUDY

Young T, Finn L, Palta M. Arch Intern Med. 2001;161:1514–1519

Purpose. Nasal congestion at night is thought to have a role in snoring and sleep apnea, but this hypothesis has not previously been tested in a population-based study.

Study Population and Methods. Baseline and 5-year follow-up data on self-reported nocturnal nasal congestion and snoring frequency were collected from a population-based sample of 4916 men and women (age range: 30–60 years at baseline) enrolled in the ongoing Wisconsin Sleep Cohort Study. In-laboratory polysomnography was performed on a subset (n = 1032) of the study population to determine the frequency of apnea and hypopnea episodes during sleep. Logistic regression was used to estimate odds ratios for snoring with chronic nasal congestion at night.

Results. Nocturnal nasal congestion frequency was independently associated with snoring frequency in cross-sectional analyses. The odds ratios (adjusted for sex, age, body habitus, and smoking) for habitual snoring with severe (always or almost always) nasal congestion versus none was 3.0 (95% confidence interval: 2.2–4.0). This association was not explained by habitual snorers with frank sleep apnea (ie, ≥5 apnea and hypopnea episodes per hour of sleep). Prospective analyses showed that persons with chronic severe nasal congestion had a high risk of habitual snoring according to the data from the 5-year follow-up survey: the odds ratio for habitual snoring and reporting congestion always or almost always at both baseline and follow-up was 4.9 (95% confidence interval: 2.8–8.8).

Conclusions. Nocturnal nasal congestion is a strong independent risk factor for habitual snoring, including snoring without frank sleep apnea. Intervention studies are needed to determine if snoring can be reduced with treatment of nasal congestion.

Reviewer’s Comments. This is the first study to identify chronic nasal congestion as a risk factor for simple (ie, without hypopneas or apnea) snoring. Previously, it had been my understanding that nasal congestion was not felt to be an important single independent risk factor for snoring or other sleep-disturbed breathing (SDB) syndromes. Because simple snoring may be an early manifestation of SDB, implications for diagnosis and therapy are apparent. Nasal congestion attributable to allergic causes was not a stronger prediction of snoring than other causes of nasal congestion.

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COGNITIVE AND OTHER ADVERSE EFFECTS OF DIPHENHYDRAMINE USE IN HOSPITALIZED OLDER PATIENTS


Purpose of the Study. Diphenhydramine hydrochloride is a commonly prescribed medicine in hospitalized patients, but its adverse effects on older patients remain unclear.

Study Population and Methods. A total of 426 hospitalized medical patients aged 70 years or older were enrolled in a prospective cohort study in a university hospital. Measurements included baseline and daily assessments including Mini-Mental State Examination scores, Confu-
## References

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**Risk of Adenoid Hypertrophy in Children with Allergic Rhinitis**

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