



AMERICAN ACADEMY OF FAMILY PHYSICIANS

News & Publications

SEARCH

GO

Advanced Search

MEMBERS

[Log In](#)[ABOUT US](#)[NEWS & PUBLICATIONS](#)[MEMBERS](#)[CME CENTER](#)[CLINICAL & RESEARCH](#)[PRACTICE MGMT](#)[POLICY & ADVOCACY](#)[CAREERS](#)
[AAFP Home Page](#) > [News & Publications](#) > [Journals](#) > [American Family Physician®](#) > Vol. 67/No. 4 (February 15, 2003)

American Family Physician™

A peer-reviewed journal of the American Academy of Family Physicians February 15, 2003

- [Email This Link](#)
- [Search AFP](#)
- [Browse by Topic](#)

Editorials

Chronic Rhinitis: Allergic or Nonallergic?

JOSEPH LAU, M.D.

*Tufts-New England Medical Center
Boston, Massachusetts*

AIDAN LONG, M.D.

*Massachusetts General Hospital
Boston, Massachusetts*

The prevalence of atopic diseases, including allergic rhinitis, is increasing rapidly in westernized societies, with some studies suggesting an increase in prevalence of 25 percent or more over the course of one or two generations. This has resulted in a large increase in the health care burden attributable to allergic rhinitis and related conditions. During this time, the range of medications available to treat allergic rhinitis has been increasing. These include new nonsedating (second-generation) antihistamines, topical nasal steroids, mast cell stabilizers, topical nasal antihistamines, antihistamine/decongestant combinations, and antileukotriene agents. Many of these newer treatments are being marketed aggressively to patients via the mass media, further increasing the pressures on primary care physicians to treat and prescribe medication for allergic rhinitis. These circumstances, together with formulary-driven prescribing restrictions, create a compelling need for a clear understanding of appropriate therapies for allergic rhinitis and related conditions.

Two important questions arise: how is allergic rhinitis distinguished from nonallergic rhinitis in terms of diagnostic steps and complications/co-morbidities--and, unless treatments are significantly different, is it necessary to distinguish between these two entities? At the request of the American Academy of Family Physicians, the Agency for Healthcare Research and Quality (AHRQ), through its Evidence-based Practice Center program, commissioned an evidence-based report to address these questions. The evidence report¹ was based on a systematic review of 88 studies that met inclusion criteria for these key questions.

While the clinical history provides clues to differentiate between allergic and nonallergic rhinitis (positive family history, pollen-related seasonality, animal or dust exposure-related induction of symptoms in the former--and relative absence of nasal or ocular itching, and an association of symptoms with nonspecific irritants such as odors, fumes, and changes in air temperature in the latter), these features have not been validated by rigorous study. Nonallergic rhinitis remains a diagnosis that can be determined accurately only by exclusion of relevant inhalant allergen sensitization. The term nonallergic rhinitis includes a diverse group of syndromes united by their common symptoms. When other entities that can cause nonallergic rhinitis are excluded, vasomotor rhinitis is the likely diagnosis.

Documenting sensitization to specific allergens requires either allergy skin testing or radioallergosorbent testing (RAST) for allergen-specific IgE in serum. As documented in the evidence report,¹ the published literature does not support the notion that there is a simple surrogate for allergy testing, such as increased peripheral blood eosinophil count or elevated serum IgE. While RAST testing and allergy skin testing are believed to give roughly equivalent information, RAST is more costly, perhaps less sensitive, and generally is not viewed favorably from a cost-reimbursement perspective.

The therapeutic implications of making the correct diagnosis are notable, because different modalities of pharmacotherapy for each of the diseases are supported by the literature. This has potentially important effects on comorbid conditions associated with allergic rhinitis, such as asthma and sinusitis. For example, a large body of literature supports the superior role of intranasal steroids over antihistamines in the long-term management of allergic rhinitis. An increasing amount of literature describes a link between allergic rhinitis and allergic asthma in terms of epidemiology, temporal relationships, disease severity, risk factors, and pathophysiologic mechanisms.²

Importantly, evidence for a therapeutic link between allergic inflammatory diseases of the upper and lower airways also is observed. Watson and colleagues,³ demonstrated decreased methacholine responsiveness in patients with perennial allergic rhinitis and asthma who were treated with intranasal beclomethasone. In a cat-exposure study,⁴ symptoms of allergic rhinitis and asthma could be ameliorated by pretreatment with intranasal triamcinolone. Results from these studies^{3,4} suggest that treatment of the upper airway with intranasal corticosteroids improves upper and lower airway disease, including indexes of airway obstruction.

Use of antihistamines alone to treat allergic rhinitis has not been demonstrated to have the same effects on the lower airway, although some data suggest that the newer antihistamines (e.g., cetirizine) can have some features of anti-asthma activity.⁵ Conversely, antileukotriene agents, which have a significant role in the treatment of asthma, also are now being actively studied in the treatment of allergic rhinitis and sinusitis.⁶

While data support the efficacy of oral antihistamines in allergic rhinitis, there is no evidence to suggest they help in nonallergic rhinitis. Oral antihistamines are the most widely prescribed category of drug for nasal symptoms and are frequently cited as a major cost to pharmacy benefit programs of managed care organizations. The National Classification of Rhinitis Task Force estimates that 17 million people have chronic nonallergic rhinitis.⁷ Clearly, lack of efficacy notwithstanding, the pharmacoeconomic implications of inappropriate prescription of oral antihistamines in nonallergic rhinitis are significant. Similarly, anti-leukotriene agents, which may have a therapeutic role in the treatment of nasal polyposis (and possibly other types of nasal allergic inflammation⁶), have no documented role in the treatment of vasomotor rhinitis.

With these efficacy data, the AHRQ evidence report on allergic and nonallergic rhinitis intends to provide practitioners, medical and professional associations, and consumers with information to determine the most appropriate diagnostic and therapeutic options. In addition, it may give health plans and payers information needed to make informed decisions about coverage policies.

REFERENCES

1. Long A, McFadden C, DeVine D, et al. Management of allergic and nonallergic rhinitis. (Evidence Report/Technology Assessment No. 54. By New England Medical Center Evidence-based Practice Center, contract No. 290-97-0019). AHRQ Pub. No. 02-E024. Rockville, Md: Agency for Healthcare Research and Quality. May 2002. Available at www.ahrq.gov/clinic/rhininv.htm.
2. Storms W. Rethinking our approach to allergic rhinitis management. *Ann Allergy Asthma Immunol* 2002;88(suppl):30-5.
3. Watson WT, Becker AB, Simons FE. Treatment of allergic rhinitis with intranasal corticosteroids in patients with mild asthma: effects on the lower airways 1993;91:97-101.
4. Wood RA, Eggleston PA. The effects of intranasal steroids on nasal and pulmonary responses to cat exposure. *Am J Resp Crit Care Med* 1995;151:315-20.
5. Grant JA, Nicodemus CF, Findlay SR, et al. Cetirizine in patients with seasonal rhinitis and concomitant asthma: prospective, randomized, placebo-controlled trial. *J Allergy Clin Immunol* 1995;95:923-32.
6. Borish L. The role of leukotrienes in upper and lower airway inflammation and the implications for treatment. *Ann Allergy Asthma Immunol* 2002; 88(suppl):16-22.
7. Settipane R, Lieberman PL. Update on non-allergic rhinitis. *Ann Allergy Asthma Immunol* 2001;86: 494-507.

Joseph Lau, M.D., is an internist and professor of medicine at the Tufts-New England Medical Center. He also directs the New England Cochrane Center (Boston) and one of the evidence-based practice centers designated by the Agency for Healthcare Research and Quality.

Aidan Long, M.D., is the clinical director of allergy at Massachusetts General Hospital and assistant professor of medicine at Harvard Medical School. His broad interest in allergic and immunologic diseases includes the application of evidence-based clinical decision-making.

Address correspondence to Joseph Lau, M.D., Division of Clinical Care Research, Tufts-New England Medical Center, 750 Washington St., Box 63, Boston, MA 02111. Reprints are not available from the authors.

Copyright © 2003 by the American Academy of Family Physicians.

This content is owned by the AAFP. A person viewing it online may make one printout of the material and may use that printout only for his or her personal, non-commercial reference. This material may not otherwise be downloaded, copied, printed, stored, transmitted or reproduced in any medium, whether now known or later invented, except as authorized in writing by the AAFP. Contact afpserv@aafp.org for copyright questions and/or permission requests.

[February 15, 2003 Contents](#) | [AFP Home Page](#) | [AAFP Home](#) | [Search](#)
