

Searching for predictors of asthma attacks

August 10 2009

A new study of persistent asthma in inner-city adolescents and young adults finds that an extensive set of clinical tests cannot successfully predict the future risk of asthma attacks in participants who both receive care based on current guidelines and adhere to treatment recommendations. This finding differs from previous reports suggesting that certain clinical findings and laboratory tests could help predict future asthma attacks. These earlier conclusions, however, were based on observations of patients with poorly controlled asthma who had not received care based on current guidelines.

The study was conducted by the Inner City Asthma Consortium (ICAC), a nationwide network of clinical researchers supported by the National Institute of Allergy and Infectious Diseases, part of the National Institutes of Health. ICAC member Rebecca Gruchalla, M.D., Ph.D., from the University of Texas Southwestern Medical Center in Dallas, led the study. Additional support for the research was provided by the NIH National Center for Research Resources.

The 46-week study included 546 adolescents and young adults (ages 12 to 20 years old) in 10 cities across the United States. At the start of the study, ICAC investigators gathered baseline data by conducting standard tests to assess asthma symptoms. An additional battery of tests evaluated lung inflammation, lung function and allergic status. The participants were then seen every 6 to 8 weeks at their respective ICAC centers, where they were they were treated for asthma based on NIH guidelines developed by the National Asthma Education and Prevention Program. During the study, the participants carefully adhered to their treatment

regimens.

After the study was completed, the investigators analyzed the baseline measurements to determine if any of these assessments, alone or in combination, could predict future asthma symptoms or asthma attacks. The investigators observed no significant clinical correlations between these common laboratory test measurements and asthma exacerbations among the study participants.

This large, longitudinal study provides the most comprehensive analysis to date of a number of factors previously thought to be useful in predicting future asthma attacks. Based on a population of patients who followed their treatment and had well-controlled asthma, the results indicate clearly that there are no known common biological markers that can predict the course of the disease in such individuals. Further studies will be needed to identify possible predictive markers.

More information: R Gruchalla et al. [Asthma](#) morbidity among inner-city adolescents receiving guidelines-based therapy: role of predictors in the setting of high adherence. *Journal of Allergy and Clinical Immunology*. [DOI: 10.1016/j.jaci.2009.05.036e](#) (2009).

Source: NIH/National Institute of Allergy and Infectious Diseases

Citation: Searching for predictors of asthma attacks (2009, August 10) retrieved 23 April 2024 from <https://medicalxpress.com/news/2009-08-predictors-asthma.html>

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