Long-Acting Beta-Agonists Shown to be Most Effective Step-Up Therapy for Children with Poorly Contro

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Denver, CO — For children whose asthma is not well controlled and on low doses of inhaled corticosteroids, a long-acting beta-agonist (LABA) may be the most effective of three possible step-up treatments. National Jewish clinician-scientists Stanley Szefler, Joseph Spahn, Ronina Covar Gary Larsen and Lynn Taussig, and colleagues in the NIH-funded Childhood Asthma Research and Education Network published their findings March 2, 2010, online in the New England Journal of Medicine.

"This study gives physicians confidence in using long-acting beta-agonists if a patient is not responding to steroid treatment alone," said said Dr. Szefler, Professor of Pediatrics and Pharmacology at National Jewish Health. "It also shows that children respond quite differently to different step-up therapies. Doctors need to monitor their patients closely and consider switching to a higher dose of inhaled corticosteroids or a leukotriene receptor antagonist if the long-acting beta agonist does not improve asthma control."

Approximately 7 million children in the United States have asthma. The prevalence has more than doubled in the past several decades. Asthma in the United States accounts for 500,000 hospitalizations, 10.5 million physician-office visits, and 3,500 deaths as well as millions of missed school days.

Almost all the children responded differently to the three step-up therapies. About 45 percent of the children responded best to the long-acting beta agonist salmeterol, 28 percent responded best to the leukotriene receptor antagonist montelukast, and 27 responded best to doubling the dose of the inhaled corticoteroid fluticasone.

The study, called Best Add on Therapy Giving Effective Responses (BADGER), compared the effectiveness of three different step-up treatments in 182 children ages 6 to 18. Participants had mild to moderate persistent asthma that was not controlled on low-dose inhaled corticosteroids.

Researchers also found that certain patient characteristics indentified which step-up treatment would be most effective. African-Americans were equally likely to respond best to LABA step-up or corticosteroid step-up, but not the montelukast. The addition of LABA step-up therapy was most likely to give the best response to white patients, with inhaled corticosteroid step-up the least favorable. The long-acting beta agonist especially likely to help asthma patients who did not have eczema.

The results of the study were also presented March 2, 2010, at the American Academy of Asthma, Allergy and Immunology Annual Meeting.

National Jewish Health is known worldwide for treatment of patients with respiratory, cardiac, immune and related disorders, and for groundbreaking medical research. Founded in 1899 as a nonprofit hospital, National Jewish remains the only facility in the world dedicated exclusively to these disorders. For 12 consecutive years, U.S. News & World Report has ranked National Jewish the #1 respiratory hospital in the nation.

National Jewish Health is the leading respiratory hospital in the nation. Founded 123 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and treatment of patients with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit the media resources page.

Media Contacts

Our team is available to arrange interviews, discuss events and story ideas.

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