

Baseline characteristics of children with mild persistent asthma predict response to inhaled corticosteroid

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A further analysis of a previously published National Heart, Lung, and Blood Institute (NHLBI) funded study of children with mild persistent asthma reports the relative benefits of inhaled corticosteroid (ICS) treatment varies among children with differing demographic and clinical characteristics.

"We performed post-hoc data analysis on 288 children enrolled in the TReating Children to Prevent [Exacerbations](#) of Asthma (TREXA) study performed by the NHLBI funded [Childhood Asthma](#) Research and Education (CARE) Network," said Lynn Gerald, PhD, MSPH, professor in the Department of Health Promotion Sciences and associate dean of research in the College of Public Health at the University of Arizona.

"Our findings suggest that all children with mild [persistent asthma](#) benefit from ICS treatment, but some groups benefit more than others."

The TREXA trial compared four ICS [treatment strategies](#): daily treatment (daily), daily treatment plus symptom-targeted treatment (combined), symptom-targeted only treatment (rescue), and placebo. Daily treatment, but not combined or rescue treatment, reduced the time to first exacerbation compared with placebo, and all three strategies reduced treatment failures. Time to treatment failure was defined as time to an oral corticosteroid-requiring exacerbation and treatment failure was defined as experiencing two or more oral corticosteroid-requiring exacerbations.

In post-hoc subgroup analyses using either time to first exacerbation or time to treatment failure as an outcome, children in the daily and combined groups who were younger (6-11 yrs versus 12-17 years), were non-Hispanic, had eczema, were [skin test](#) positive, and who had IgE levels >185K/uL experienced treatment benefit as compared to those assigned to placebo. Among children assigned to the rescue group, the results were similar to those above when using time to [treatment failure](#) as an outcome; however, when using time to first exacerbation as an outcome, only those with eczema, high IgE levels, and less than perfect asthma control during the run-in period were demonstrated to benefit when compared to placebo.

"Our study indicates that some groups of children with mild persistent asthma have greater exacerbation risk than others and therefore have more to gain from ICS treatment for reducing this risk," said Dr. Gerald. "These findings need to be validated in future studies."

More information: "Predictors Of Response To Inhaled Corticosteroids: Stratified Results From The TREXA Trial" (Session C27, Tuesday, May 22, 2012, Room 2010-2012, Moscone Center; Abstract 26378)

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