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LUNG ALERT

Inhaled corticosteroid use in young children at high risk of asthma

▲ Guilbert WT, Morgan WJ, Zeiger RS, et al. Long-term inhaled corticosteroids in preschool children at high risk for asthma. *N Engl J Med* 2006;**354**:1985–7

The PEAK (Prevention of Early Asthma in Kids) clinical trial tested the hypothesis that the natural history of wheezing in early life may be altered by the continuous administration of inhaled corticosteroids. This multicentre, double blind, placebo controlled trial randomised 285 preschool children (aged 2–3 years) with a positive asthma predictive index to inhaled fluticasone or masked placebo for 2 years, followed by a 1 year observation period without study medication. The primary outcome was the difference between study groups in the proportion of episode-free days during the observation period.

During the observation year no significant differences were seen between the two groups in the proportion of episode-free days, exacerbation frequency, or lung function. Whilst on treatment, children receiving fluticasone had a greater proportion of episode-free days (93.2% v 88.4%, $p = 0.006$) and a lower rate of exacerbations (57.4 v 89.4 events per 100 child/years, $p < 0.001$) and the supplementary use of various additional medications (all $p < 0.001$).

Decreased growth velocity was observed in the inhaled corticosteroid group during the first year. The growth rate was similar during the second year and, although growth accelerated in the corticosteroid group during the observation year, the height difference at the trial end was 0.7 cm ($p = 0.008$).

The authors conclude that the natural course of asthma in young children at high risk for subsequent asthma is not modified by 2 years of treatment with inhaled corticosteroid. However, the treatment did reduce the burden of illness. This study shows that inhaled corticosteroid can be used to control active disease but not to prevent asthma in high risk preschool children.

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