

Montelukast as add-on therapy to beta-agonists and late airway response.

Rosewich M, Rose MA, Eickmeier O, Travaci M, Kitz R, Zielen S.

Dept of Paediatrics, Frankfurt University, Frankfurt, Germany.

The present study investigated whether single-dose oral leukotriene receptor antagonists as add-on therapy to short-acting beta-agonists, immediately after allergen challenge, block the late-phase airway response. In total, 35 mild asthmatics (mean age 24 yrs, 19 males) sensitised for house dust mites underwent two courses of bronchial allergen challenge. After the early allergic response (EAR), subjects received salbutamol once and were randomly assigned to either 10 mg of montelukast or placebo (double-blind crossover). To identify a late allergic response, forced expiratory volume in one second (FEV(1)) was monitored over the following 8 h. Baseline exhaled nitric oxide (NO) was determined ahead of each allergen challenge. Baseline NO levels differed significantly depending on the reaction to allergen challenge. In total, 12 subjects showed no significant response, 11 only showed an EAR, and 12 had a dual response and underwent further analysis. The area under the FEV(1) time-response curve 3-8 h after bronchial allergen challenge was -0.77 ± 1.68 from the pre-challenge values on montelukast compared with -2.47 ± 1.32 on placebo. The baseline exhaled NO fraction of subjects without an EAR was significantly lower than of those presenting a dual response. The results of the present study demonstrate that single-dose leukotriene receptor antagonists given orally right after the early allergic response can significantly inhibit the late allergic response after bronchial allergen challenge.

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