

Publication

Atopy modifies the association between inhaled corticosteroid use and lung function decline in patients with asthma

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Inhaled corticosteroids (ICSs) are the mainstay of asthma treatment, but response to medication is variable. Patients with allergic inflammation generally show a better short-term response to ICSs; however, studies on predictors of long-term response are few.; To assess whether allergic sensitization can modify the association between ICS use and lung function decline over 20 years in adult asthma.; We used data from the 3 clinical examinations of the European Community Respiratory Health Survey. We measured ICS use (no use, and use for 8 years) and FEV₁; decline among subjects with asthma over the 2 periods between consecutive examinations. We conducted a cohort study combining data of the 2 periods (906 observations from 745 subjects) to assess whether the association between ICS use and FEV₁; decline was modified by allergic sensitization (IgE > 0.35 kU/L for any of house-dust mite, timothy grass, cat, or Cladosporium).; FEV₁; decline was similar for non-ICS users, as well as ICS users for less than 1.3 years, with and without allergic sensitization. However, among subjects on ICSs for a longer period, sensitization was associated with an attenuated decline (P; interaction; = .006): in the group treated for more than 8 years, FEV₁; decline was on average 27 mL/y (95% CI; Bonferroni-adjusted; , 11-42) lower for subjects with sensitization compared with nonsensitized subjects.; Our study suggests that biomarkers of atopy can predict a more favorable long-term response to ICSs. Randomized controlled studies are needed to confirm these findings.

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