

Abstract

Asthma and allergic rhinitis (AR) are thought to be a reflection of the same disease process occurring in varying degrees along *one continuous airway*, and are often coexistent in the same individual. The evidence supporting this 'one airway' hypothesis is reviewed. Cohort and case-control studies of adults and children reviewed show that AR frequently precedes asthma, conferring a 3-7-fold increased risk for incident asthma. Cross-sectional studies reveal that rhinitis is highly prevalent among asthmatics ranging from 55% to 79%, and severity of rhinitis is positively associated with asthma severity. Pathophysiological interactions between upper and lower airways are appreciated from studies that demonstrate that following exposure to allergens or other triggers (such as histamine, cold dry air) in the nasal mucosa and bronchiolar airways, symptoms may manifest in both upper and lower airways in some individuals, or in only one site in others, despite the presence of pathological reactions along the whole airway. Treatments for AR such as topical corticosteroids and leukotriene modifiers result in improvement of asthma. Randomized trials of immunotherapy for AR have demonstrated a reduction in asthma incidence sustained at 10-year follow-up, and immunotherapy for concurrent asthma/AR has resulted in marked reduction in asthma as well as AR exacerbations. Epidemiological, pathophysiological and therapeutic evidence supports the hypothesis that AR and asthma actually represent a spectrum of the same disease affecting one continuous airway.