Chronic rhinosinusitis exacerbation frequency predicts asthma exacerbation frequency but not emergency department usage

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Abstract

Introduction: There exists a strong association between chronic rhinosinusitis (CRS) disease burden and the severity of asthma (AECRS) patients. Objective: To determine the association between acute exacerbations of CRS (AECRS) and asthma exacerbations of varying severity. Material and Methods: For this cross-sectional study 105 asthmatic patients with CRS were prospectively recruited. AECRS burden was measured using the 22-item Sinonasal Outcome Test (SNOT-22), and metrics of AECRS including patient-reported sinus infections and CRS-related antibiotic usage over the preceding year. Results: The frequency of asthma-related oral corticosteroids was associated with the frequency of patient-reported sinus infections (adjusted relative risk [RR]=1.23, 95%CI: 1.06–1.43, p=0.007), and CRS-related antibiotics usage (adjusted RR=1.20, 95%CI: 1.02–1.43, p=0.031) but not associated with SNOT-22 score (p>0.050). The frequency of asthma-related ED visits was not associated with any metric of CRS burden. Discussion: Association between CRS disease burden and asthma exacerbation driven by AECRS.

Material and Methods

• Prospective cross-sectional study with 105 patients with CRS
• CRS burden: measured using the 22-item Sinonasal Outcome Test (SNOT-22)
• Metrics of AECRS: patient-reported sinus infections and CRS-related antibiotic usage over the preceding year
• Asthma exacerbation frequency: measured using frequency of asthma-related oral corticosteroids and asthma-related emergency department visits over prior year

Discussion

Association between CRS disease burden and asthma exacerbations largely driven by AECRS. This association did not carry over to asthma-related ED usage, perhaps due to low frequency of ED usage.

References