

Association between Laryngopharyngeal Reflux, Gastroesophageal Reflux and Recalcitrant Chronic Rhinosinusitis: A Systematic Review.

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Abstract

Objective: To investigate the association between laryngopharyngeal reflux (LPR), gastroesophageal reflux disease (GERD) and recalcitrant chronic rhinosinusitis (CRS). **Data sources:** PubMed, Cochrane Library, and Scopus. **Review methods:** Three investigators search database for studies investigating the relationship between LPR, GERD and recalcitrant CRS with or without polyposis. The following outcomes were investigated with PRISMA criteria: age; gender; reflux and CRS diagnosis; association outcomes and potential treatment outcomes. Authors performed a bias analysis of papers and provided recommendations for future studies. **Results:** A total of 17 studies investigated the association between reflux and recalcitrant CRS. According to pharyngeal pH monitoring, 54% of patients with recalcitrant CRS reported hypo or nasopharyngeal acid reflux events. The numbers of hypo- and nasopharyngeal acid reflux events were significantly higher in patients compared to healthy individuals in 4 and 2 studies, respectively. Only one report did not find group differences. The proportion of GERD was significantly higher in CRS patients compared to controls, with a prevalence ranging from 32% to 91% of cases. No author considered nonacid reflux events. There was an important heterogeneity in the inclusion criteria; definition of reflux and association outcomes, limiting the draw of clear conclusion. Pepsin was found in sinonasal secretions more frequently in CRS patients than controls. **Conclusion:** Laryngopharyngeal reflux and GERD may be a contributing factors of CRS therapeutic resistance, but future studies are still needed to confirm the association considering nonacid reflux event.

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