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MetroHealth Medical Center

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Abstract Submission Form

Poster Title: **Co-prevalence of Chronic Rhinosinusitis and Inflammatory Bowel Disease: A Large Comparative Database Analysis**

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Location of Laboratory: **TriNetX database, access through MetroHealth**

Category: **Clinical Research**

Introduction: Chronic Sinusitis (CS) is a prolonged inflammation of the sinus or nasal passages, with potential risk association to Inflammatory Bowel Disease (IBD). This study aimed to investigate CS prevalence in IBD patients, compare Ulcerative Colitis (UC) and Crohn's Disease (CD), and explore the impact of nasal polyps on the IBD-CS association.

Methods: A retrospective cohort study using a comprehensive dataset from the TriNetX Analytics network, encompassing 94,940,088 patients across 57 healthcare organizations in the United States. The study included six patient groups: adults with and without IBD, adults with and without UC, and adults with and without CD. The diagnosis of IBD, UC, and CD was based on encounter diagnosis. The prevalence of CS and its different forms were determined using ICD-10 criteria. Relative risks with 95% confidence intervals (CI) were calculated to assess the association between IBD and CS, as well as the differences between UC and CD.

Results: Out of the 79,222,976 patients included in the study, 478,879 had a diagnosis of IBD, resulting in a prevalence of 0.60%. Patients with IBD were 2.99 times more likely to have a diagnosis of CS (95% CI: 2.92-3.06). When comparing UC and CD patients separately to those without IBD, UC patients had a higher relative risk for CS (RR: 3.31, 95% CI: 3.20-3.42) compared to CD patients (RR: 2.83, 95% CI: 2.75-2.91). Compared to IBD patients, UC patients were slightly more likely to have a CS diagnosis with nasal polyps (RR: 1.10, 95% CI: 1.03-1.19), and less likely to have a diagnosis of CS without nasal polyps (RR: 0.994, 95% CI: 0.990-0.999). CD patients were slightly less likely to have CS with polyps (RR: 0.90, 95% CI: 0.83-0.97).

Conclusions: We found a significant association between IBD and CS. Patients with IBD were more likely to have a diagnosis of CS compared to those without IBD. Additionally, patients with UC had a higher risk of CS with nasal polyps while patients with CD had a higher risk of CS without nasal polyps.