

Title: Global airway disease in patients with primary ciliary dyskinesia and chronic obstructive pulmonary disease - paranasal sinuses meet lungs.

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Abstract:

Paper I: genotypic and phenotypic analyses of 38 *Pseudomonas aeruginosa* (PA) isolates from the sinuses and lungs of chronically infected PCD patients. Patients have the same geno/phenotypic PA clone type in their global airways. Their sinuses can act as a bacterial reservoir and enabling lung reinfection.

Paper II: prevalence of chronic rhinosinusitis (CRS) and health related quality of life (HRQoL) in 222 COPD patients. Patients were evaluated by both a pulmonologist and an otorhinolaryngologist and diagnosed according to international guidelines (GOLD2019 and EPOS2020). 22.5 % (n=50) of COPD patients have CRS, 82 % of whom (n=41) were undiagnosed and untreated prior to our study. The predominant phenotype was without nasal polyps (CRSsNP) (96%). COPD patients with CRS have a significantly worse HRQoL, SNOT22 and COPD assessment test compared to COPD patients without CRS and healthy controls. The SNOT22_nasal symptom subscore (including only nasal questions) is better than the total SNOT22 score at identifying COPD patients at risk of having CRS.

Paper III: screening of the olfactory function in 135 COPD patients revealed a significantly higher prevalence of anosmia (14.1 %) than healthy controls (1.4 %) regardless of age, CRS, smoking status, and GOLD status. These results were poorly associated with patients' reply to the EPOS criteria about affected olfactory function, their grading of their smell and taste function in the SNOT22 and their olfactory (SIT16) test score.