Simultaneous sinus and lung infections in patients with primary ciliary dyskinesia

Conclusion: The sinuses should be considered as a bacterial reservoir and a target for surgery and antibiotic treatment in patients with primary ciliary dyskinesia (PCD). The observed decrease in serum precipitating antibodies (precipitins) against Pseudomonas aeruginosa may indicate a beneficial effect of combined endoscopic sinus surgery (ESS) and concomitant medical treatment. Objectives: The purpose of this research, which is the first study addressing bacteriology in the sinuses of patients with PCD, was to examine the association between sinus and lung infections. Methods: We reviewed findings of bacterial pathogens from the sinuses obtained during ESS and the lung infection status in eight PCD patients over a 6 year period. Precipitins against P. aeruginosa were used as a marker of severity of chronic infection and effect of treatment. Results: Preoperatively, seven of the eight patients (88%) exhibited intermittent or chronic pulmonary infection with P. aeruginosa. Sinus cultures were obtained during ESS in seven patients. The sinuses were colonized with P. aeruginosa in four of seven patients (57%). Bacterial sinusitis was found in five of seven patients (71%) and the same bacterium was found in the sinuses and lungs in all cases. Decreasing precipitins against P. aeruginosa were observed postoperatively in three of four evaluable patients.