Management of Chronic Sinus Disease In Paediatric Cystic Fibrosis

Afroze Khan1, Steven Frampton1, Philip Harries1, Rami Salib1, Andrea Burgess1, Hasnnaa Ismail-Koch1, Gary Connett1

1University Hospital Southampton NHS Foundation Trust, Southampton, UK

CONCLUSIONS
Early medical treatment of microbial infection of the sinuses might usefully reduce the microbial load of the upper airway and its impact upon lower airways infection. Definitive surgical treatment achieves significant benefit in those with more advanced symptomatic disease. Good multi-disciplinary care with support to patients performing daily nasal hygiene procedures such as saline douches would appear to be of additional benefit in achieving more prolonged symptomatic relief.

METHODS
A non-systemic review of the available literature was conducted.

DIAGNOSIS
Nasal polyps in the younger patients should raise suspicion of underlying CF. Viscid upper airway secretions that overwhelm the normal mucociliary clearance mechanism, lead to stasis and a persisting cycle of sinus infection and polyposis.

IMAGING
Computed Tomography (CT) is the imaging modality of choice. Frontal sinus agenesis and maxillary-ethmoid sinus opacification greater than 75% have been proposed as pathognomonic for CF.

MICROBIOLOGY
Pseudomonas aeruginosa, Haemophilus influenza and Staphylococcus aureus are the most common pathogens from sinuses. Genotyping indicates that these are often the same clonal species as those found in the lower airway.

MANAGEMENT
Nasal irrigation (NI), oral antibiotics and nasal steroids. NI with warmed saline is well tolerated amongst the young. There is evidence that P. aeruginosa biofilms in the sinuses can seed the lower airway and that aggressive surgery delays lower airways infection and improves symptoms.

Afroze Khan
Ear, Nose & Throat Department
University Hospital Southampton
afroze.khan@nhs.net