*primary studies - published RCT*

# Sino nasal inhalation of isotonic versus hypertonic saline (6.0%) in CF patients with chronic rhinosinusitis - Results of a multicenter, prospective, randomized, double-blind, controlled trial.

**Code:** PM27267518 **Year:** 2016 **Date:** 2016 **Author:** Mainz JG

### Study design (if review, criteria of inclusion for studies)

RCT, crossover design

### Participants

Sixty nine CF patients with chronic rhinosinusitis in eleven German CF centers

### Interventions

Patients were randomized to receive sinonasal vibrating inhalation of either NaCl 6.0% or NaCl 0.9% for 28days. After 28days of wash-out, patients crossed over to the alternative treatment.

### Outcome measures

The primary outcome parameter was symptom score in the disease-specific quality of life Sino-Nasal Outcome Test-20 (SNOT-20). Additionally, pulmonary function was assessed, as well as rhinomanometry and inflammatory markers in nasal lavage (neutrophil elastase, interleukin (IL)-1beta, IL-6, and IL-8) in a subgroup.

### Main results

Both therapeutic arms were well tolerated and showed slight improvements in SNOT-20 total scores (NaCl 6.0%: -3.1+/-6.5 points, NaCl 0.9%: -5.1+/-8.3 points, ns). In both treatment groups, changes of inflammatory parameters in nasal lavage from day 1 to day 29 were not significant. Authors suppose that the irritating properties of NaCl 6.0% reduced the suitability of the SNOT-20 scores as an outcome parameter. Alternative primary outcome parameters such as MR-imaging or the quantity of sinonasal secretions mobilized with both saline concentrations were, however, not feasible.

### Authors' conclusions

Sinonasal inhalation with NaCl 6.0% did not lead to superior results vs. NaCl 0.9%, whereas dornase alfa had been significantly more effective than NaCl 0.9%.

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### See also

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### Keywords

hydration; Hypertonic Solutions; Inhalation OR nebulised; pharmacological_intervention; Airway clearance drugs -expectorants-mucolytic- mucociliary-; Respiratory System Agents; Bacterial Infections; Isotonic Solutions; Respiratory Tract Infections; Sinusitis; Respiratory Tract Diseases;