

primary studies - published RCT

## **Efficacy and tolerability of a new nasal spray formulation containing hyaluronate and tobramycin in cystic fibrosis patients with bacterial rhinosinusitis.**

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**Author:** Di Cicco M

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

RCT. Prospective two-group controlled pre/post pilot study

### **Participants**

Setting: A 622-bed nonprofit pediatric hospital in Ohio in the United States. Participants: Convenience sample of 24 patients 8 to 21 years old with CF

### **Interventions**

Massage therapy (MT) 12 patients randomly assigned to treatment and control groups, respectively.

### **Outcome measures**

Pediatric Quality of Life Inventory (Peds QL 4.0); Cystic Fibrosis Questionnaire-Revised (CFQ-R); numeric rating scales (NRS) for pain, muscle tightness, ease of breathing, relaxation; pulmonary function (PFT); single breath count; thoracic excursion (TE).

### **Main results**

All participants were Caucasian; mean age 15.7 (SD = 3.5) years; 16 (66.6%) female. No significant differences were found in terms of age, gender, baseline pain between MT and control groups. At the final visit, compared to the control group, the children in MT group showed statistically significantly reduced muscle tightness ( $p = .048$ ) with a large effect size ( $\omega^2 = 0.163$ ) and marginally statistically significantly higher levels of relaxation ( $p = .052$ ), less pain ( $p = .076$ ), and improved upper TE ( $p = .078$ ) and lower TE ( $p = .056$ ) scores with large and moderate effect sizes ( $\omega^2 = 0.156$ ,  $\omega^2 = 0.095$ ,  $\omega^2 = 0.083$ , and  $\omega^2 = 0.073$ ). No statistically significant differences in children's and caregivers' QOL scores between the two groups were found.

### **Authors' conclusions**

Massage therapy was found to significantly reduce muscle tightness, marginally significantly help pain, relaxation, and thoracic excursion in participants with CF.

<http://dx.doi.org/10.1016/j.jcf.2014.02.006>

### **See also**

J Cyst Fibros. 2014 Mar 18. pii: S1569-1993(14)00046-0. doi: 10.1016/j.jcf.2014.02.006.

### **Keywords**

Adolescent; Child; non pharmacological intervention - psycho-soc-edu-org; non pharmacological intervention - devices OR physiotherapy; massage;