primary studies - published RCT

Effects of inhaled hypertonic (7%) saline on lung function test in preschool children with cystic fibrosis: results of a crossover, randomized clinical trial.

Code: PM28709466 **Year:** 2017 **Date:** 2017 **Author:** Nenna R

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

Crossover, randomized, double-blind study

Participants

12 Clinically stable Cystic fibrosis (CF) preschool children (6M, mean age +/- SD: 5.7 +/- 0.8 yrs)

Interventions

Patients were randomly assigned to receive hypertonic saline (HS-4 ml 7% sodium chloride), or normal saline (NS-0.9% sodium chloride) twice a day. After a 16 weeks period, therapy was exchanged to allow all the patients enrolled in the study to carry out both treatments.

Outcome measures

Monitoring visits, spirometry (COSMED Quark PFT4 ergo) and Rint were scheduled at 0,4,16,20,32 weeks. At T0, spirometric measurements and Rint were performed immediately before and 30 min after the inhalation therapy. Salbutamol (400 mcg) was administered before the drug at each visit.

Main results

After a 16-weeks treatment with HS an improvement of FVC (p = 0.02) and a favorable trend of FEV1 were registered. A worsening of FEV1 (p

Authors' conclusions

Seven percent hypertonic saline therapy proved to be a useful and safe treatment in young CF children with clinically stable conditions.

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See also

Ital J Pediatr. 2017 Jul 15;43(1):60. doi: 10.1186/s13052-017-0376-6.

Keywords

Child; hydration; Hypertonic Solutions; Inhalation OR nebulised; pharmacological_intervention; Airway clearance drugs -expectorants-mucolytic- mucociliary-; Respiratory System Agents;