primary studies - published RCT

Comparison of effects of 3 and 7% hypertonic saline nebulization on lung function in children with cystic fibrosis: a double-blind randomized, controlled trial.

Code: PM22374985 **Year:** 2012 **Date:** 2012 **Author:** Gupta S

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

double-blind randomized controlled trial

Participants

31 children with cystic fibrosis

Interventions

children were randomized to receive either 3% saline or 7% saline nebulization twice daily for 28 days.

Outcome measures

Spirometry was performed and functional status was measured on Day 14 and 28.

Main results

Of 31 children enrolled in the study, 30 completed the 28 days follow up (15 in each group). Percentage change in Forced Expiratory Volume during first second (FEV(1)) from baseline to Day 14 and on Day 28 was significantly higher in the group receiving 3% saline as compared with those receiving 7% saline inhalation. There was some decrease in FEV(1) (percentage predicted) immediately after 7% saline inhalation unlike 3% saline. The functional status remained comparable between the two groups.

Authors' conclusions

The results suggest that 3% hypertonic saline nebulization was better than 7% saline inhalation. There is a need for studies with larger sample size and longer duration to confirm our results.

http://dx.doi.org/10.1093/tropej/fms004

See also

J Trop Pediatr. 2012 Oct;58(5):375-81. doi: 10.1093/tropej/fms004. Epub 2012 Feb 28.

Keywords

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