primary studies - published RCT

Short-term efficacy of ultrasonically nebulized hypertonic saline in cystic fibrosis.

Code: PM8882210 **Year:** 1996 **Date:** 1996 **Author:** Eng PA

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

Randomised, double-blind, parallel group trial

Participants

Males = 93 Females = 71 n = 164

Interventions

HS 7% bd vs isotonic saline 0.09% bd for 48 weeks

Outcome measures

Mean change in FEV1 and FVC at 4, 12, 36 and 48 weeks. QOL and pulmonary exacerbations

Main results

Fifty-two patients (32 males), with a mean age of 16.2 (range 7-36) years completed the study. There was no difference in baseline characteristics between the two groups. Following 2 weeks of treatment, there was a significant improvement from baseline in FEV1 of 15.0 +/- 16.0% (mean +/- SD) in patients treated with HS, compared with a change of 2.8 +/- 13% in those on IS therapy (P = 0.004). Furthermore, there was a subjective improvement in the effectiveness of chest physiotherapy as reported by those using HS (P = 0.02). The treatment was well tolerated.

Authors' conclusions

in patients with CF, ultrasonically nebulized hypertonic saline improves lung function in a way similar to that reported for human recombinant DNase when inhaled over a 2 week period. Nebulized saline also enhances the perception of effectiveness of chest physiotherapy.

3.0.CO;2-M" target="_blank">http://dx.doi.org/10.1002/(SICI)1099-0496(199602)21:2<77::AID-PPUL3>3.0.CO;2-M

See also

Pediatr Pulmonol. 1996 Feb;21(2):77-83.

Keywords

Adolescent; Adult; Child; hydration; Hypertonic Solutions; Inhalation OR nebulised; nebuliser; non pharmacological intervention - devices OR physiotherapy; pharmacological_intervention; Respiratory System Agents;