primary studies - published RCT

Hyaluronic acid improves "pleasantness" and tolerability of nebulized hypertonic saline in a cohort of patients with cystic fibrosis.

Code: PM20953746 **Year:** 2010 **Date:** 2010 **Author:** Buonpensiero P

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

open crossover study

Participants

A total of 20 patients with cystic fibrosis (9 males, 11 females, mean age 13 years, range 8.9-17.7)

Interventions

a single treatment regimen of 7% hypertonic saline solution or hypertonic solution with 0.1% hyaluronate for 2 days nonconsecutively after a washout period in an open crossover study

Outcome measures

Cough, throat irritation, and salty taste were evaluated by a modified ordinal score for assessing tolerability; "pleasantness" was evaluated by a five-level, Likert-type scale. Forced expiratory volume in 1 second was registered before and after the end of the saline inhalations.

Main results

All 20 patients completed the study. The inhaled solution of 0.1% hyaluronic acid and hypertonic saline significantly improved tolerability and pleasantness compared to hypertonic saline alone. No major adverse effects were observed. No difference was documented in pulmonary function tests between the two treatments.

Authors' conclusions

Hyaluronic acid combined with hypertonic saline solution may contribute to improved adherence to hypertonic saline therapy. Further clinical trials are needed to confirm our findings. Considering the extraordinary versatility of hyaluronic acid in biological reactions, perspective studies could define its applicability to halting progression of lung disease in cystic fibrosis.

http://dx.doi.org/10.1007/s12325-010-0076-8

See also

Adv Ther. 2010 Nov;27(11):870-8. Epub 2010 Oct 14.

Keywords

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