

primary studies - published RCT

Pilot Randomized Controlled Trial Evaluating the Effect of Hypertonic Saline With and Without Hyaluronic Acid in Reducing Inflammation in Cystic Fibrosis.

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

Pilot, double-blind, randomized controlled, parallel-group, 1:1 trial

Participants

Stable CF patients older than 6 years of age and with a FEV1pred. >40%

Interventions

Patients were randomized to one of the treatment arms, Hypertonic saline (HS) or HS+hyaluronic acid (HA), to be administered twice a day at home.

Outcome measures

Clinical data, inflammatory markers (IL-1beta, IL-6, IL-8, IL-10, TNF-alpha, VEGF) in sputum, and judgments on the tolerability and pleasantness were collected at the beginning and after 28 days.

Main results

HA+HS had no significant effect on inflammatory markers versus HS alone, as shown by broad confidence intervals. In the HS+HA group, the highest decrement from baseline values was observed for IL-1beta (-58.8%) followed by VEGF (-49.9%), whereas in the HS group a significant increment of IL-10 levels (+83.0%; $p = 0.011$) was the only significant finding. Prevalence of unfavorable scores was 36.8% in HA+HS versus 55% in HS group ($p = 0.207$); no significant differences were detected in the prevalence of moderate/severe symptoms of cough, saltiness, and throat irritation in pulmonary functions tests after 28 days.

Authors' conclusions

HS+HA administration in CF patients does not show any significant effects on lung inflammation and function as compared to HS alone.

<http://dx.doi.org/10.1089/jamp.2015.1256>

See also

J Aerosol Med Pulm Drug Deliv. 2016 May 5.

Keywords

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