primary studies - published RCT

Saline at lower tonicity in cystic fibrosis (SALTI-CF) trial comparing 0.9% versus 3% versus 6% nebulised saline.

Code: PM37343977 **Year:** 2023 **Date:** **Author:** Dwyer TJ

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

Randomised, blinded, placebo-controlled, parallel-group, multicentre study

Participants

140 CF patients

Interventions

Participants were randomised to 0.9% (n=47), 3% (n=48) or 6% (n=45) saline

Outcome measures

The primary outcome was forced expiratory volume in 1â€…s. The secondary outcomes were: forced vital capacity (FVC) and forced expiratory flow at 25-75% of FVC; quality of life; exercise capacity; acquisition or loss of bacterial organisms in expectorated sputum; tolerability of nebulised saline; pulmonary exacerbations; and adverse events.

Main results

3% saline significantly improved lung function and increased the time to first pulmonary exacerbation compared with 0.9% saline but did not improve quality of life. 6% saline had similar benefits to 3% saline but also significantly improved quality of life compared with 3% saline. Only 6% saline delayed the time to intravenous antibiotics for pulmonary exacerbation. Tolerability and adherence were similar.

Authors' conclusions

Dilution of 6% saline to 3% maintains the benefits for lung function and exacerbation prevention; however, the positive impacts of 6% saline on quality of life and time to i.v. antibiotics for pulmonary exacerbations are lost.

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See also

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Keywords

hydration; Hypertonic Solutions; Inhalation OR nebulised; nebuliser; non pharmacological intervention - devices OR physiotherapy; pharmacological_intervention; Airway clearance drugs -expectorants- mucolytic- mucociliary-; Respiratory System Agents;