primary studies - published RCT

A randomised trial of hypertonic saline during hospitalisation for exacerbation of cystic fibrosis.

Code: PM26769016 **Year:** 2016 **Date:** 2016 **Author:** Dentice RL

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

RCT

Participants

132 adults with an exacerbation of CF

Interventions

Patients were randomised to inhale three nebulised doses a day of either 4 mL 7% saline or a taste-masked control of 0.12% saline, throughout the hospital admission.

Outcome measures

The primary outcome measure was length of hospital stay.

Main results

All participants tolerated their allocated saline solution. There was no significant difference in length of stay, which was 12 days in the hypertonic saline group and 13 days in controls, with a mean between-group difference (MD) of 1 day (95% CI 0 to 2). The likelihood of regaining pre-exacerbation FEV1 by discharge was significantly higher in the hypertonic saline group (75% vs 57%), and the number needed to treat was 6 (95% CI 3 to 65). On a 0-100 scale, the hypertonic saline group had significantly greater reduction in symptom severity than the control group at discharge in sleep (MD=13, 95% CI 4 to 23), congestion (MD=10, 95% CI 3 to 18) and dyspnoea (MD=8, 95% CI 1 to 16). No significant difference in time to next hospitalisation for a pulmonary exacerbation was detected between groups (HR=0.86 (CI 0.57 to 1.30), p=0.13). Other outcomes did not significantly differ.

Authors' conclusions

Addition of hypertonic saline to the management of a CF exacerbation did not reduce the length of hospital stay. Hypertonic saline speeds the resolution of exacerbation symptoms and allows patients to leave hospital with greater symptom resolution.

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See also

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Keywords

hydration; Hypertonic Solutions; Inhalation OR nebulised; non pharmacological intervention - devices OR physiotherapy; Respiratory Tract Diseases; Airway clearance drugs -expectorants- mucolytic- mucociliary-; Respiratory System Agents; nebuliser; Hospital Care; Exacerbation; Respiratory Tract Infections; Infection; Bacterial Infections;