primary studies - published RCT

Inhaled mannitol in patients with cystic fibrosis: A randomised open-label dose response trial.

Code: PM20888307 **Year:** 2011 **Date:** 2011 **Author:** Teper A

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

This was a randomised, open-label, crossover, dose response study.

Participants

48 CF patients with a mean (SD) FEV(1) % predicted of 64 (13.2)

Interventions

Following a 2-week treatment with mannitol 400mg b.i.d., patients received a further 3 treatments with 40mg, 120mg or 240mg b.i.d. for 2weeks each, in random order.

Outcome measures

FEV(1) and FVC.

Main results

The study demonstrated a dose dependent increase in FEV(1) and FVC. The 400mg dose showed the greatest improvement and the 40mg dose had no discernible effect. The mean percent change in FEV(1) was -1.57%, 3.61%, 3.87% and 8.75% respectively for the 40mg, 120mg, 240mg and 400mg treatments. There was a statistically significant change in FEV(1) for 400mg compared to 40mg (p

Authors' conclusions

Based on these results the 400mg b.i.d. dose has been further studied in phase III trials.

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See also

J Cyst Fibros. 2011 Jan;10(1):1-8.

Keywords

Adolescent; Adult; Aged; Bacterial Infections; Child; Infection; Inhalation OR nebulised; Mannitol; pharmacological_intervention; Pneumonia; Powders; Respiratory Tract Infections; Airway clearance drugs -expectorants- mucolytic- mucociliary-; Respiratory System Agents; Respiratory Tract Diseases;