primary studies - published RCT

A controlled trial of long-term bronchodilator therapy in cystic fibrosis.

Code: PM2019162 **Year:** 1991 **Date:** 1991 **Author:** Eggleston PA

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

Placebo-controlled cross-over trial over 2 months

Participants

SK scores 62 - 90 14/16 responders, 8/11 non-responders completed trial 27 participants (13 males), data from 22 participants only, age range 6 - 25 years

Interventions

Randomised to either albuterol 90 microgram qds compared to placebo by MDI for 4 weeks Subdivided into responders or non-responders by methacholine challenge.

Outcome measures

Daily PEFR measurements Symptom diaries Changes in spirometry (FEV1, FVC, PEFR, FEF25-75) measured at baseline, 2 and 4 weeks

Main results

Among the responders, daily PEFR measures improved significantly more during treatment with albuterol (12 +/- 32 L/min) than with placebo (-0.4 +/- 19 L/min; p less than 0.05). In addition, a clinically important level of improvement in PEFR (15 percent increase) was reached significantly more frequently in the responders. Methacholine nonresponders had no change in PEFR on either albuterol or placebo. Daily symptom scores as well as spirometry measurements at biweekly visits did not show significant changes.

Authors' conclusions

long-term therapy with inhaled albuterol improves lung function in CF patients, but only in those with bronchial hyperresponsiveness as demonstrated by methacholine challenge.

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See also

Chest. 1991 May;99(5):1088-92.

Keywords

Adolescent; Albuterol; Bronchodilator Agents; Inhalation OR nebulised; Methacholine; pharmacological_intervention; Adrenergic beta-Agonists; Respiratory System Agents;