primary studies - published RCT

A pilot study of aerosolized amiloride for the treatment of lung disease in cystic fibrosis.

Code: PM2157983 **Year:** 1990 **Date:** 1990 **Author:** Knowles MR

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

double-blind, crossover trial

Participants

14 of the 18 adult CF patients initially enrolled in the study completed the one-year trial

Interventions

aerosolized amiloride (5 mmol per liter; 3.5 ml four times daily), a sodium-channel blocker, with vehicle alone. 25 weeks for each treatment

Outcome measures

pulmonary function, sputum viscosity and elasticity, indexes of mucociliary and cough clearance. systemic, respiratory, or subjective toxic effects

Main results

The mean (+/- SEM) loss of forced vital capacity (FVC) was reduced from 3.39 +/- 1.13 ml per day during treatment with vehicle alone to 1.44 +/- 0.67 ml per day during treatment with amiloride (P less than 0.04). A measured index of sputum viscosity and elasticity was abnormal during treatment with vehicle alone and improved during treatment with amiloride. Calculated indexes of mucociliary and cough clearance also improved during amiloride treatment. No systemic, respiratory, or subjective toxic effects of amiloride were noted.

Authors' conclusions

Aerosolized amiloride can be safely administered to adults with cystic fibrosis. The slowing of the loss of FVC and the improvement in sputum viscosity and elasticity suggest a beneficial clinical effect. Aerosolized amiloride deserves further evaluation in the treatment of lung disease in patients with cystic fibrosis.

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See also

N Engl J Med. 1990 Apr 26;322(17):1189-94.

Keywords

Adolescent; Adult; Amiloride; Inhalation OR nebulised; pharmacological_intervention; Airway clearance drugs -expectorants- mucolytic-mucociliary-; ENaC antagonists - Sodium Channel Blockers; Respiratory System Agents; Respiratory Tract Diseases;