primary studies - published RCT

Nebulised amiloride in respiratory exacerbations of cystic fibrosis: a randomised controlled trial.

Code: PM8554360 **Year:** 1995 **Date:** 1995 **Author:** Bowler IM

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

RCT. Parallel design.

Participants

27 young people with CF. CF diagnosed with 2 sweat sodium and chloride concentrations >60 mmol/L. 11 males and 16 females; mean age 12.8 years, range 6.0 - 27.7 years. Stratified randomisation: up to and including 12 years of age; older than 12 years; FVC up to and including 75% of predicted; FVC greater than 75% of predicted.

Interventions

Treatment group: nebulised amiloride hydrochloride solution 5x 10-3M (0.15% w/v) in 0.3% saline, 4 ml 3x daily for duration of admission. Control group: nebulised 0.3% saline, 4ml 3x daily for duration of admission.

Outcome measures

FEV1; FVC; time to peak FEV1 and FVC; sputum viscoelasticity.

Main results

Both forced expiratory volume in one second (FEV1) and forced vital capacity (FVC) showed improvements over the course of treatment, although there was no difference in respiratory function between the two groups at any of three time periods during the study. The time to reach peak FVC was significantly reduced in the amiloride group (4.2 v 7.6 days; 95% CI 0.4 to 6.4 days), but not in the time to reach peak FEV1 (5.7 v 7.9 days; 95% CI -1.2 to 5.6 days).

Authors' conclusions

Amiloride did not result in a greater overall improvement in respiratory function. There was a suggestion that it may have an effect on the rate of improvement, and thus may possibly influence the duration of treatment. This hypothesis deserves further evaluation.

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See also

Arch Dis Child. 1995 Nov;73(5):427-30.

Keywords

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