primary studies - published RCT

Immediate effect of various treatments on lung function in infants with cystic fibrosis.

Code: PM2682864 **Year:** 1989 **Date:** 1989 **Author:** Maayan C

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

randomized trial

Participants

19 infants with cystic fibrosis (CF) during the first year of life

Interventions

aerosol inhalation of salbutamol (n = 8; SAL), aerosol inhalation of N-acetyl cysteine (n = 5; AC), chest physiotherapy (n = 6; CPT), and combined treatment with aerosol inhalation of SAL and AC followed by CPT (n = 6; COMB).

Outcome measures

Pulmonary function was measured before and shortly after therapy with each mode of treatment. Thoracic gas volume (Vtg) and specific airway conductance (SGaw) were measured by an infant whole body plethysmograph, and forced expiratory flow at resting lung volume (VmaxFRC) was determined with a thoraco-abdominal squeeze jacket.

Main results

There was no correlation between baseline lung function and changes in any parameter due to treatment. Overall group comparison showed that the combined therapy resulted in a significant improvement in lung function when compared to any of the three treatments applied separately. There was no significant change in lung volumes in any individual group, but SGaw and VmaxFRC showed a small but significant improvement following the COMB treatment when compared with AC or CPT.

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See also

Respiration. 1989;55(3):144-51.

Keywords

Acetylcysteine; Albuterol; Bronchodilator Agents; Combined Modality Therapy; Airway clearance drugs -expectorants- mucolytic-mucociliary-; Infant; Inhalation OR nebulised; non pharmacological intervention - devices OR physiotherapy; pharmacological_intervention; Salbutamol; thiols; Respiratory System Agents; Adrenergic beta-Agonists;