primary studies - published RCT

Microbiological and immunologic considerations with aerosolized drug delivery.

Code: PM11555566 **Year:** 2001 **Date:** 2005 **Author:** LiPuma JJ

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

Parallel design. Treatment for 13 months. Randomised trial.

Participants

42 participants (24 males). PEP Group: 21 participants (15 male); mean age 28, SD 8.1 years; mean FEV1 2.5, SD 1.2 litres; mean FEV1 66, SD 19.9% predicted. Flutter Group: 21 participants (9 males); mean age 31, SD 8.7 years; mean FEV1 2.2, SD 0.7 litres; mean FEV1 69, SD 18.5% predicted. Participants were excluded if they had been hospitalised within the past month for a pulmonary exacerbation, had changed their medication within the past month, or did not have a daily cough or daily sputum. CF diagnosed by St Michael's Hospital CF Clinic, Toronto.

Interventions

1. PEP treatment. Pressure 10 - 20 cm H2O using an Astra Meditec PEP mask. Seated participants breathed 10 - 15 times through the mask, followed by huffing, coughing and relaxed breathing. This was repeated 5 - 6 times, over a 20-minute session, twice dai 2. Oscillating PEP. Participants exhaled through the Flutter device (Axcan Scandipharm). The device was angled to maximise the sensation of vibration in the chest. In sitting, subjects inhaled deeply through the nose, followed by a breath hold for 2 - 3 s

Outcome measures

Slope of change in FEV1, FVC, and FEF25-75 (absolute and % predicted). Number of hospitalisations. Adherence.

http://dx.doi.org/10.1378/chest.120.3_suppl.118S

See also

Chest. 2001 Sep;120(3 Suppl):118S-123S.

Keywords

Adult; Airway clearance technique; flutter; non pharmacological intervention - devices OR physiotherapy; Positive-Pressure Respiration-PEP- pep mask; Inhalation OR nebulised; oscillating devices; Chest physiotherapy;