primary studies - published RCT

Comparison of Flutter device and chest physical therapy in the treatment of cystic fibrosis pulmonary exacerbation.

Code: PM10497374 **Year:** 1999 **Date:** 1999 **Author:** Gondor M

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

RCT parallel design. Single centre

Participants

23 participants enrolled, 3 excluded. Data from 20 participants (11 male, 9 female) with CF, enrolled on admission to hospital. Age 5 - 21 years.

Interventions

2-week intervention of either Flutter or CPT. Frequency during the day was not specified.

Outcome measures

SaO2, exercise tolerance (as measured by the 6MWD) and FEF, FVC and FEV1 were measured at entry, day 7 and day 14.

Main results

Data analysis indicated no significant differences between the two groups on admission. Both groups showed improvement in pulmonary function test results, but the Flutter group had a higher mean forced vital capacity (FVC) and forced expiratory volume in 1 sec (FEV(1)) compared to the CPT group after 1 week of intervention. Both groups continued to improve during the 2-week intervention, with no significant difference in FVC or FEV(1) between groups by the end of 2 weeks. Mean forced expiratory flow rate between 25-75% of vital capacity (FEF(25-75)), 6-min walk distance, and resting arterial oxyhemoglobin saturation (SaO(2)) showed little change by day 7, but improved significantly (P

Authors' conclusions

This study demonstrated that patients using the Flutter device had better pulmonary function after 1 week of therapy and similar improvement in pulmonary function and exercise tolerance compared to CPT after 2 weeks of therapy, suggesting that Flutter valve therapy is an acceptable alternative to standard CPT during in-hospital care of patients with CF.

3.0.CO;2-K" target="_blank">http://dx.doi.org/10.1002/(SICI)1099-0496(199910)28:4<255::AID-PPUL4>3.0.CO;2-K

See also

Pediatr Pulmonol. 1999 Oct;28(4):255-60.

Keywords

Adolescent; Adult; Airway clearance technique; Child; Drainage; flutter; non pharmacological intervention - devices OR physiotherapy; pharmacological_intervention; Postural Drainage; Vibration; Exacerbation; Respiratory Tract Infections; Respiratory Tract Diseases; Infection; Bacterial Infections; oscillating devices; Chest physiotherapy;