primary studies - published RCT

Comparison of high-frequency chest wall oscillation and oscillating positive expiratory pressure in the home management of cystic fibrosis: a pilot study.

Code: PM11596162 **Year:** 2001 **Date:** 2001 **Author:** Oermann CM

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

prospective, randomized, multicenter crossover trial

Participants

29 CF patients, 9-39 years of age, participated. 24 subjects completed both therapies. three urban academic CF Care Centers

Interventions

Subjects performed 4 weeks each of high-frequency chest wall oscillation (HFCWO) and oscillating positive expiratory pressure (OPEP) following 2-week lead-in/washout periods.

Outcome measures

Spirometry, lung volumes, National Institutes of Health and Petty Scores, and a satisfaction survey were performed at baseline and after each treatment period. An ACT preference survey was completed at the conclusion of the study.

Main results

There were no statistically significant differences between therapies for spirometry, lung volumes, or clinical scores. No significant safety issues arose during the study period. Compliance between therapies was similar. Significant differences among therapies existed in patient satisfaction. Given a choice of therapy, 50% of subjects chose HFCWO, 37% OPEP, and 13% PDPV.

Authors' conclusions

This study suggests that HFCWO and OPEP are safe and as effective as patients' routine therapies when used for airway clearance in a home setting. Patient satisfaction and preference differ among ACTs and should be considered when prescribing home therapy. A definitive, multi-center, comparative study evaluating long-term efficacy of these techniques is feasible.

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See also

Pediatr Pulmonol. 2001 Nov;32(5):372-7.

Keywords

Adolescent; Adult; Airway clearance technique; Child; High Frequency Chest Wall Oscillation -HFCWO-; Home; non pharmacological intervention - devices OR physiotherapy; Positive-Pressure Respiration- PEP- pep mask; VEST Airway Clearance System; oscillating devices; Chest physiotherapy;