primary studies - published RCT

A possible alternative exercise test for youths with cystic fibrosis: the steep ramp test.

Code: PM25010405 **Year:** 2015 **Date:** 2020 **Author:** Bongers BC

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

Randomized, open-label, crossover pilot study.

Participants

Patients with cystic fibrosis (CF).

Interventions

High-frequency chest wall oscillation (HFCWO). A standard nonmobile HFCWO device (sHFCWO) was used as a comparator

Outcome measures

Sputum was collected during and after each therapy session, while spirometry tests, Brody score assessment and functional respiratory imaging were performed before and after treatments.

Main results

Wet weight of sputum collected during and after treatment was similar for mHFCWO and sHFCWO (6.53â€‰Â±â€‰8.55 vs 5.80â€‰Â±â€‰5.82; Pâ€‰=â€‰.777). Interestingly, the mHFCWO treatment led to a significant decrease in specific airway volume (9.55â€‰Â±â€‰9.96 vs 8.74â€‰Â±â€‰9.70â€‰mL/L; Pâ€‰

Authors' conclusions

The newly developed mobile device provides airway clearance for CF patients comparable to a nonmobile sHFCWO device, yielding a change in airway geometry and patency by the shift of mucus from the more peripheral regions to the central airways.

http://dx.doi.org/10.1249/MSS.0000000000000440

See also

Med Sci Sports Exerc. 2015 Mar;47(3):485-92. doi: 10.1249/MSS.0000000000000440.

Keywords

Adult; Aged; Airway clearance technique; Child; High Frequency Chest Wall Oscillation -HFCWO-; non pharmacological intervention - devices OR physiotherapy; VEST Airway Clearance System; oscillating devices; Chest physiotherapy; Bacterial Infections; Respiratory Tract Infections; Respiratory Tract Diseases; Infection; Exacerbation;