primary studies - published RCT

Airway clearance physiotherapy and health-related quality of life in cystic fibrosis.

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

Randomised, controlled individual trials (N-of-1 RCTs).

Participants

Six CF adults.

Interventions

Airway clearance physiotherapy. As a secondary analysis of a prior study investigating the safety, efficacy, and participants' perceptions of a novel airway clearance technique, specific cough technique (SCT) compared to forced expiration technique (FET). Each trial included eight weeks of treatment, twice a week, using saline inhalation in horizontal positions, one with SCT and one with FET, in random order.

Outcome measures

Efficacy was measured by sputum wet weight (g) after each session. Perceived usefulness and preference were self-reported at the end of the study. Lung function was assessed at baseline and at the end of study. HRQoL was measured using the Cystic Fibrosis Questionnaire-Revised (CFQ-R) at baseline (week 1) and at completion of the study (week 8).

Main results

Patient-reported outcomes were completed by all subjects. Individual CFQ-R-Respiratory Symptoms Scores (CFQ-R-RSS) showed a positive change, meeting the minimal important difference (MID) â‰¥ 4 points in five participants and a negative change in one individual. A strong correlation (r = 0.94 (p

Authors' conclusions

The airway clearance intervention was associated with clinically meaningful changes in patient-reported symptoms on the CFQ-R in the majority of the participants. This finding warrants further investigation regarding treatment, duration and frequency. A long-term study may reveal beneficial effects on other clinically meaningful endpoints, such as pulmonary exacerbations, high-resolution computed tomography scores and HRQoL.

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See also

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Keywords

Active Cycle of Breathing Technique -ACBT-; flutter; Drainage; Positive-Pressure Respiration- PEP- pep mask; Airway clearance technique; Chest physiotherapy; non pharmacological intervention - devices OR physiotherapy; oscillating devices;