

primary studies - published RCT

Continuous alternating inhaled antibiotics for chronic pseudomonal infection in cystic fibrosis.

Code: PM27233377

Year: 2016 Date: 2021

Author: Flume PA

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

Pilot, open-label, randomized crossover trial

Participants

23 participants with CF and severe lung disease.

Interventions

Nasal high-flow therapy (NHFT). Participants completed two treadmill walking test (TWT) with and without NHFT at 24-48 h interval.

Outcome measures

Primary outcome was trial feasibility, and exploratory outcomes were TWT distance (TWTd), SpO₂, transcutaneous CO₂, dyspnoea and comfort.

Main results

Recruitment rate was 2.4 subjects/month with 1.3:1 screening-to-randomization ratio. No adverse events caused by NHFT were observed. Tolerability was good and data completion rate was 100%. Twenty subjects (91%) were included in the exploratory study. Mean difference in TWTd on NHFT was 19 m (95% CI [4.8 - 33.1]). S(p)O₂ was similar, but respiratory rate and mean tcCO₂ were lower on NHFT (mean difference = -3.9 breaths/min 95% CI [-5.9 - -1.9] and -0.22 kPa 95% CI [-0.4 - 0.04]). NHFT reduced exercise-induced dyspnoea and discomfort.

Authors' conclusions

Trials using NHFT in patients with CF during exercise are feasible. NHFT appears to improve walking distance, control respiratory rate, CO₂, dyspnoea and improve comfort. A larger trial with a longer intervention is feasible and warranted to confirm the impact of NHFT in training programmes for patients with CF.

<http://dx.doi.org/10.1016/j.jcf.2016.05.001>

See also

J Cyst Fibros. 2016 Nov;15(6):809-815. doi: 10.1016/j.jcf.2016.05.001. Epub 2016 May 24.

Keywords

non pharmacological intervention - devices OR physiotherapy; Oxygen;