primary studies - published RCT

Effects of inspiratory muscle training on postural stability, pulmonary function and functional capacity in children with cystic fibrosis: A randomised controlled trial.

Code: PM30827470 **Year:** 2019 **Date:** 2023 **Author:** Zeren M

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

Randomized, single-center, open-label, cross-over trial

Participants

Forty pediatric CF patients (8-17 years old) with stable disease

Interventions

Patients randomized 1:1 into two groups: with or without Simeox(®).

Outcome measures

Lung function (impulse oscillometry, spirometry, body plethysmography, multi-breath nitrogen washout) results, health-related quality of life, and safety were assessed during the study after 1 month of therapy at home.

Main results

A significant decrease in proximal airway obstruction (as supported by improvement in airway resistance at 20 Hz (R20Hz) and maximum expiratory flow at 75% of FVC (MEF75)) compared to the control group was observed after 1 month of therapy with the device. Lung-clearance index was stable in the study group, while it worsened in the control group. In addition, the device group demonstrated a significant increase in the Cystic Fibrosis Questionnaire-Revised (CFQ-R) physical score. No side effects were identified during the study.

Authors' conclusions

Simeox(®) may improve drainage of the airways in children with clinically stable CF and could be an option in chronic treatment of the disease.

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See also

Respir Med. 2019 Mar;148:24-30. doi: 10.1016/j.rmed.2019.01.013. Epub 2019 Jan 28.

Keywords

Child; non pharmacological intervention - devices OR physiotherapy; Respiratory Tract Diseases; Airway clearance technique; Chest physiotherapy; Drainage;