primary studies - published, non RCT

Airway clearance therapy in the school environment: Retrospective analysis of a cohort of pediatric patients with cystic fibrosis.

Code: PM36702656 **Year:** 2023 **Date:** **Author:** Byrwa DJ

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

Retrospective case-control study at a single CF care center

Participants

50 CF patients age

Interventions

The case group used high-frequency chest wall oscillation or positive expiratory pressure devices at school for at least 1 year after self-reported or physician identified inadequate use at home. The control group consisted of subjects with self-reported adequate use of airway clearance therapy (ACT) at home who were matched by age and gender

Outcome measures

Lung function and measures of healthcare utilization were collected.

Main results

In the case group (n = 14), paired t-tests showed that after initiation of ACT at school, there were significant reductions in PEx requiring IV or PO abx (P = 0.010), total days of abx (P = 0.032), and visits to the CF care center (P = 0.037). There was no change in these outcomes in the matched control group (n = 36).

Authors' conclusions

This is the first known study to highlight an initiative between a CF care center and schools which utilized airway clearance devices at school to ensure pediatric CF patients completed ACT. Through increased adherence, this relationship was associated with improved health outcomes. Use of alternative strategies may help patients with CF sustain adequate airway clearance.

http://dx.doi.org/10.1016/j.jcf.2023.01.006

See also

J Cyst Fibros. 2023 Jan 24:S1569-1993(23)00007-3. doi: 10.1016/j.jcf.2023.01.006.

Keywords

Child; non pharmacological intervention - devices OR physiotherapy; Respiratory Tract Diseases; Airway clearance technique; Chest physiotherapy; High Frequency Chest Wall Oscillation -HFCWO-; VEST Airway Clearance System; oscillating devices; Acapella; flutter; Intrapulmonary Percussive Ventilation; Vibration; Positive-Pressure Respiration- PEP- pep mask;