primary studies - published RCT

Non-invasive ventilation assists chest physiotherapy in adults with acute exacerbations of cystic fibrosis.

Code: PM14514944 **Year:** 2003 **Date:** 2003 **Author:** Holland AE

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

randomised crossover trial

Participants

26 patients of mean (SD) age 27 (6) years and forced expiratory volume in 1 second (FEV1) 34 (12)% predicted

Interventions

standard treatment (active cycle of breathing technique, ACBT) with ACBT + NIV

Outcome measures

Respiratory muscle strength (PImax, PEmax), spirometric parameters, and dyspnoea were measured before and after treatment. Pulse oximetry (SpO2) was recorded during treatment. Sputum production during treatment and 4 and 24 hours after treatment was evaluated.

Main results

There was a significant reduction in PImax following standard treatment that was correlated with baseline PImax (r=0.73, p

Authors' conclusions

Reduced inspiratory muscle strength and oxygen desaturation during chest physiotherapy are associated with inspiratory muscle weakness and severity of lung disease in adults with exacerbations of CF. Addition of NIV improves inspiratory muscle function, oxygen saturation and small airway function and reduces dyspnoea.

http://dx.doi.org/10.1136/thorax.58.10.880

See also

Thorax. 2003 Oct;58(10):880-4.

Keywords

Adult; Aged; non pharmacological intervention - devices OR physiotherapy; pharmacological_intervention; Ventilators; Exacerbation; Respiratory Tract Infections; Respiratory Tract Diseases; Infection; Bacterial Infections; Active Cycle of Breathing Technique -ACBT-; Airway clearance technique; Chest physiotherapy;