primary studies - published RCT

Immediate changes in blood-gas tensions during chest physiotherapy with positive expiratory pressure and oscillating positive expiratory pressure in patients with cystic fibrosis.

Code: PM17005061 **Year:** 2006 **Date:** 2006 **Author:** Lagerkvist AL

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

RCT

Participants

15 patients (mean age 12.5 y, range 6.9-21.5 y) participated.

Interventions

The treatments were randomized and performed on 2 separate occasions, 8 weeks apart.

Outcome measures

Spirometry was conducted before and after each treatment.Transcutaneous oxygen tension (P(tO2) was measured.

Main results

There were no changes in spirometry values. During PEP, different trends in blood-gas tension were seen, and there were no consistent changes. During oscillating PEP, P(tO2) increased and P(tCO2) decreased. During oscillating PEP, P(tCO2) was lower and the intra-individual change in P(tCO2) was more pronounced than during PEP. The results obtained immediately after oscillating PEP showed a higher P(tO2) and a lower P(tCO2) than with PEP.

Authors' conclusions

PEP and oscillating PEP can both cause transitory effects on blood gases in patients with cystic fibrosis. However, oscillating PEP alters blood-gas tensions more than does PEP, and hyperventilation during oscillating PEP may reduce treatment time.

http://www.rcjournal.com/contents/10.06/10.06.1154.pdf

See also

Respir Care. 2006 Oct;51(10):1154-61.

Keywords

Adolescent; Adult; Airway clearance technique; Chest Wall Oscillation; Child; non pharmacological intervention - devices OR physiotherapy; oscillating devices; Positive-Pressure Respiration- PEP- pep mask; Chest physiotherapy;