

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:** 2010

**Author:** Lagerkvist AL

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

Single centre UK study. RCT of cross-over design.

### **Participants**

Mean age: 29.7 years. Mean FEV1: 37.7 % 30 participants recruited (22 males).

### **Interventions**

4 days duration of study. Participants received either HFCWO on days 1 and 3 and the "usual" ACT on days 2 and 4 or vice versa. ACT sessions were 2x daily for 30 min. 83% of "usual" therapy was described as ACBT.

### **Outcome measures**

Wet weight of expectorated sputum, respiratory function, oxygen saturation monitoring, perceived efficacy and preference were measured.

### **Main results**

29 patients (72% male) of mean (SD) age 29.4 (8.4) years and mean (SD) forced expiratory volume in 1 s (FEV(1)) percentage predicted (FEV(1)%) 38 (16.7) completed the study. Significantly more sputum was expectorated during a single treatment session and over a 24 h period (mean difference 4.4 g and 6.9 g, respectively) with usual ACTs than with HFCWO (p

### **Authors' conclusions**

During both a finite treatment period and over 24 h, less sputum was cleared using HFCWO than usual ACT. HFCWO does not appear to cause any adverse physiological effects and may influence adherence.

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

### **See also**

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

### **Keywords**

Adult; Airway clearance technique; Chest Wall Oscillation; non pharmacological intervention - devices OR physiotherapy; Exacerbation; Respiratory Tract Infections; Respiratory Tract Diseases; Infection; Bacterial Infections; High Frequency Chest Wall Oscillation -HFCWO-; Active Cycle of Breathing Technique -ACBT-; Chest physiotherapy; VEST Airway Clearance System; oscillating devices;