primary studies - published RCT

Effect of chest physiotherapy on the removal of mucus in patients with cystic fibrosis.

Code: PM7091898 **Year:** 1982 **Date:** 1982 **Author:** Rossman CM

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

randomized trial

Participants

6 subjects with cystic fibrosis.

Interventions

On 5 randomized study days, after inhalation of a 99mTc-human serum albumin aerosol to label primarily the large airways, the removal of lung radioactivity was measured during 40 min of (a) spontaneous cough while at rest (control), (b) postural drainage, (c) postural drainage plus mechanical percussion, (d) combined maneuvers (postural drainage, deep breathing with vibrations, and percussion) administered by a physiotherapist, (e) directed vigorous cough.

Outcome measures

effectiveness of some of the components of a physiotherapy regimen on the removal of mucus from the lungs

Main results

Compared with the control day, all forms of intervention significantly improved the removal of mucus: cough (p less than 0.005), physiotherapy maneuvers (0.005 less than or equal to p less than 0.01), postural drainage (p less than 0.05), and postural drainage plus percussion (p less than 0.01). However, there was no significant difference between regimented cough alone and therapist-administered combined maneuvers, nor between postural drainage alone and with mechanical percussion

Authors' conclusions

in cystic fibrosis, vigorous, regimented cough sessions may be as effective as therapist-administered physiotherapy in removing pulmonary secretions. Postural drainage, although better than the control maneuver, was not as effective as cough and was not enhanced by mechanical percussion. Frequent, vigorous self-directed cough sessions are potentially as useful as more complex measures for effective bronchial toilet.

http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/206/CN-00028206/frame.html

See also

Am Rev Respir Dis. 1982 Jul;126(1):131-5.

Keywords

Adolescent; Adult; Airway clearance technique; Drainage; Inhalation OR nebulised; non pharmacological intervention - devices OR physiotherapy; Combined Modality Therapy; Postural Drainage; percussion; Chest physiotherapy;