primary studies - published RCT

A short-term comparison of two methods of sputum expectoration in cystic fibrosis.

Code: PM15065835 **Year:** 2004 **Date:** 2004 **Author:** Chatham K

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

randomized trial

Participants

Twenty adults with CF

Interventions

Receive, on alternate days, either standardised physiotherapy (SP) for 30 min, comprising postural drainage and the active cycle of breathing technique, or a series of resistive inspiratory manoeuvres (RIM) at 80% of their maximum sustained inspiratory pressure developed between residual volume and total lung capacity during the first 4 days of the treatment of an exacerbation of respiratory symptoms

Outcome measures

Expectorated sputum was collected during and for 30 min after each treatment and weighed. Total protein, immunoreactive interleukin (IL)-8 and human neutrophil elastase (HNE) concentrations, and the amount of each component expectorated, were determined.

Main results

Compared with SP, RIM increased sputum weight two-fold, independent of treatment order or day. The concentrations of protein, IL-8 and HNE in sputum were similar for both treatments, while the quantity expectorated was greater with RIM treatment.

Authors' conclusions

Short-term resistive inspiratory manoeuvres treatment was more effective at clearing sputum and inflammatory mediators than standardised physiotherapy.

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See also

Eur Respir J. 2004 Mar;23(3):435-9.

Keywords

Adult; pharmacological_intervention; Postural Drainage; Airway clearance technique; Chest physiotherapy; non pharmacological intervention - devices OR physiotherapy;