primary studies - published RCT

CPAP has no effect on clearance, sputum properties, or expectorated volume in cystic fibrosis.

Code: PM22417659 **Year:** 2012 **Date:** 2012 **Author:** Aquino ES

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

RCT, crossover study

Participants

15 CF subjects (mean age 19 years old)

Interventions

Patients were randomized to interventions, 48 hours apart: directed coughs (control), CPAP at 10 cm H(2)O, HTS 7%, and both CPAP and HTS (CPAP+HTS).

Outcome measures

Sputum expectoration volume and respiratory secretion properties. Expectorated volume was determined and in vitro sputum properties were analyzed for contact angle and cough clearability.

Main results

There were no significant differences between any treatment in arterial blood pressure, heart rate, or pulse oximetry, between the 2 time points. HTS and CPAP+HTS improved cough clearability by 50% (P = .001) and expectorated volume secretion by 530% (P = .001). However, there were no differences between control and CPAP on sputum contact angle, cough clearability, or volume of expectorated secretion.

Authors' conclusions

CPAP alone had no effect on mucus clearance, sputum properties, or expectorated volume, and did not potentiate the effect of HTS alone in CF subjects.

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See also

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Keywords

Adult; Aged; Airway clearance technique; non pharmacological intervention - devices OR physiotherapy; Positive-Pressure Respiration-PEP- pep mask; Chest physiotherapy; hydration; Hypertonic Solutions; Inhalation OR nebulised; nebuliser; pharmacological_intervention; Airway clearance drugs -expectorants- mucolytic- mucociliary-; Respiratory System Agents;