primary studies - published RCT

Is a longer time interval between recombinant human deoxyribonuclease (dornase alfa) and chest physiotherapy better? A multi-center, randomized crossover trial.

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

single-blind randomized cross-over trial

Participants

CF from outpatients of four hospitals. Subjects were in stable health and studied over 6 weeks (utilizing 14-day blocks of morning or evening dornase alfa administration with 14 days washout). 20 subjects aged 7-40 years completed the study.

Interventions

Usual regimens for physiotherapy and exercise were unaltered. Thus changing the times altered the dwell time of dornase alfa prior to physiotherapy. Long interval was defined as dwell time of >6 hr and short as

Outcome measures

Outcomes were measured at pre and post each regimen. FEF(25-75%), CF-specific quality of life, FVC, FEV(1), sputum weights, and adherence

Main results

20 subjects aged 7-40 years completed the study. At the end of long interval regimen, (median interval = 11.1 hr), FEF(25-75%) and CF-specific quality of life significantly improved compared to baseline values and to short interval regimen (median interval = 0.25 hr) outcomes. FVC, FEV(1), sputum weights, and adherence were similar in both regimens.

Authors' conclusions

A longer time interval between dornase alfa and physiotherapy is more efficacious than short interval. Administration timing of dornase alfa based on patient choice to incorporate longer interval time is likely to be the best regimen for patients previously established on dornase alfa nebulization.

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See also

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Keywords

Adolescent; Adult; Child; Deoxyribonuclease; Airway clearance drugs -expectorants- mucolytic- mucociliary-; Inhalation OR nebulised; nebuliser; non pharmacological intervention - devices OR physiotherapy; pharmacological_intervention; Recombinant Proteins; exercise; Respiratory System Agents; Dornase alpha; Pulmozyme;