primary studies - published RCT

Use of computerized tomography and chest x-rays in evaluating efficacy of aerosolized recombinant human DNase in cystic fibrosis patients younger than age 5 years: a preliminary study.

Code: PM11340684 **Year:** 2001 **Date:** 2001 **Author:** Nasr SZ

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

randomized, double-blind, placebo-controlled pilot study

Participants

12 patients with CF younger than 5 years of age. University of Michigan Cystic Fibrosis Center (Ann Arbor, MI)

Interventions

inhaled recombinant human DNase (rhDNase)

Outcome measures

The changes in the HRCT and CXR score from baseline to day 100 of therapy were assessed using a previously validated scoring system.

Main results

The mean changes of HRCT scores between the rhDNase and placebo groups were found to be significant at the 95% level, with mean change +/- SE mean of - 1.00 +/- 0.53 and 0.58 +/- 0.24 for rhDNase and placebo groups, respectively (P = 0.02). The difference in CXR score was not significant between the two groups. An analysis was performed to relate HRCT subscores to CXR score; only thickening of the intra-interlobular septae was significantly correlated with the total CXR score (r = - 0.7, P

Authors' conclusions

the administration of rhDNase was associated with improvement in the HRCT scan in CF patients younger than 5 years of age. Findings indicate that HRCT of the chest is useful and sensitive in studying responses to therapy in patients with CF lung disease. To our knowledge, this is the first report of the use of HRCT to assess the effectiveness of a therapeutic modality in so young a CF patient population.

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See also

Pediatr Pulmonol. 2001 May;31(5):377-82.

Keywords

Child; computed tomography; Deoxyribonuclease; Airway clearance drugs -expectorants- mucolytic- mucociliary-; Infant; Inhalation OR nebulised; non pharmacological intervention - diagn; pharmacological_intervention; Recombinant Proteins; diagnostic procedures; Respiratory System Agents; Dornase alpha; Pulmozyme;