primary studies - published RCT

alpha1-Antitrypsin inhalation reduces airway inflammation in cystic fibrosis patients.

Code: PM17050563 **Year:** 2007 **Date:** 2007 **Author:** Griese M

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

prospective, randomised study

Participants

52 CF patients

Interventions

daily deposition by inhalation of 25 mg AAT for 4 weeks

Outcome measures

The levels of elastase activity, AAT, pro-inflammatory cytokines, neutrophils, immunoglobulin G fragments and the numbers of Pseudomonas aeruginosa were assessed in induced sputum before and after the inhalation period

Main results

Inhalation of AAT increased AAT levels and decreased the levels of elastase activity, neutrophils, pro-inflammatory cytokines and the numbers of P. aeruginosa. However, it had no effect on lung function. No difference was found between the peripheral and bronchial inhalation mode

Authors' conclusions

Although no effect on lung function was observed, the clear reduction of airway inflammation after alpha(1)-antitrypsin treatment may precede pulmonary structural changes. The alpha(1)-antitrypsin deposition region may play a minor role for alpha(1)-antitrypsin inhalation in cystic fibrosis patients.

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See also

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Keywords

Adolescent; Adult; Bacterial Infections; Child; Immunization; Immunoglobulin G; Infection; Inhalation OR nebulised; pharmacological_intervention; Pneumonia; Pseudomonas aeruginosa; Pseudomonas; Respiratory System Agents; Respiratory Tract Infections; alpha1-anti-trypsin; Virus; Anti-Inflammatory Agents; Immunoglobulins; Anti-Inflammatory Agents - excl Steroids; Respiratory Tract Diseases;