primary studies - published RCT

Sequential analysis of surfactant, lung function and inflammation in cystic fibrosis patients.

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

As part of the BEAT trial, this is a longitudinal study

Participants

20 CF patients with normal pulmonary function (median FEV1 94% of predicted)

Interventions

bronchoalveolar lavage fluid at three times over a three year period.

Outcome measures

lung function, surfactant function and endobronchial inflammation

Main results

There was a progressive loss of surfactant function, assessed as minimal surface tension. The decline in surfactant function was negatively correlated to an increase in neutrophilic inflammation and a decrease in lung function, assessed by FEV1, MEF(75/25%VC), and MEF(25%VC). The concentrations of the surfactant specific proteins A, C and D did not change, whereas SP-B increased during this time period.

Authors' conclusions

There may be a link between loss of surfactant function driven by progressive airway inflammation and loss of small airway function in CF patients with limited lung disease.

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See also

Respiratory research YR: 2005 VL: 6

Keywords

Bacterial Infections; Infection; Pneumonia; Respiratory System Agents; Respiratory Tract Infections; surfactant; Virus; Airway clearance drugs -expectorants- mucolytic- mucociliary-; pharmacological_intervention; Respiratory Tract Diseases;