primary studies - published RCT

Comparison of nebulized and intravenous terbutaline during exacerbations of pulmonary infection in patients with cystic fibrosis.

Code: PM1426218 **Year:** 1992 **Date:** 1992 **Author:** Finnegan MJ

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

double-blind study

Participants

23 CF patients

Interventions

intravenous and nebulized terbutaline, during the first four days of a pulmonary exacerbation of cystic fibrosis (CF), with follow-up to day 10. Routine treatment with chest physiotherapy and appropriate intravenous antibiotics was given to all patients.

Outcome measures

pulmonary function

Main results

The best peak flow rate (PF), forced expiratory volume in one second (FEV1) and forced vital capacity (FVC), in the past year and at entry to the study, revealed no significant difference between the groups. However, on day 10, PF, FEV1 and FVC, of the nebulizer group remained significantly reduced compared to best values in the previous year, whereas the PF and FEV1 in the intravenous group were not significantly reduced compared to the best values in the previous year. Comparison of regression lines showing the overall rate of improvement of PF, FEV1 and FVC between the two groups showed that the rate of improvement of each parameter was more rapid in the group receiving intravenous terbutaline. This was statistically significant for PF.

Authors' conclusions

It is possible that during acute exacerbations of infection, sputum retention makes it more difficult for the inhaled bronchodilators to reach the airways and intravenous therapy is, therefore, more beneficial.

http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/337/CN-00088337/frame.html

See also

Eur Respir J. 1992 Oct;5(9):1089-91.

Keywords

Adrenergic beta-Agonists; Adult; Artificial Ventilation; Inhalation OR nebulised; Intranasal; Intravenous; nebuliser; non pharmacological intervention - devices OR physiotherapy; pharmacological_intervention; Terbutaline; Ventilators; Exacerbation; Respiratory Tract Infections; Infection; Bacterial Infections; Bronchodilator Agents; Respiratory System Agents; Respiratory Tract Diseases;