primary studies - published RCT

Bronchial response to nebulized antibiotics in children with cystic fibrosis.

Code: PM2090472 **Year:** 1990 **Date:** 1990 **Author:** Chua HL

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

RCT crossover

Participants

12 children aged 5-15 yrs with cystic fibrosis

Interventions

Baseline forced expiratory volume in one second and (FEV1) was measured, followed by a single nebulization of normal saline (272 mosmol.kg-1), tobramycin (248 mosmol.kg-1), or ticarcillin (3,080 mosmol.kg-1). All children received each of these, administered randomly, one per day.

Outcome measures

FEV1 was remeasured 5, 15 and 30 min after completion of the nebulization.

Main results

Ticarcillin (mean fall 10.7% (SD 8.9)) caused a larger fall in FEV1 than normal saline (4.8% (4.3), p less than 0.05). The fall in FEV1 for ticarcillin was greater than for tobramycin (1.2% (2.0), p less than 0.05). Normal saline did not result in a significantly larger fall in FEV1 than tobramycin (p greater than 0.05). Bronchoconstriction to ticarcillin persisted at 30 min.

Authors' conclusions

nebulized antibiotics can affect lung function in children with cystic fibrosis if the solutions are hypertonic.

http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/980/CN-00074980/frame.html

See also

The European respiratory journal : official journal of the European Society for Clinical Respiratory Physiology YR: 1990 VL: 3 NO: 10

Keywords

Adolescent; Anti-Bacterial Agents; Child; Inhalation OR nebulised; nebuliser; non pharmacological intervention - devices OR physiotherapy; pharmacological_intervention; Ticarcillin; Tobramycin; Bacterial Infections; Respiratory Tract Infections; Respiratory Tract Diseases; Infection; Penicillins; Aminoglycosides;