*primary studies - published RCT*

# Controlled trial of oral N-acetylcysteine in cystic fibrosis.

**Code:** PM7049146 **Year:** 1982 **Date:** 1990 **Author:** Mitchell EA

### 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.

### See also

Aust Paediatr J. 1982 Mar;18(1):40-2.

### 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;