primary studies - published RCT

Mechanisms of action of a web-based intervention with health professional support to increase nebulizer adherence in adults with Cystic Fibrosis: a qualitative interview study.

Code: PM32697197 **Year:** 2020 **Date:** 1986 **Author:** Drabble S

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

crossover - Not double blind

Participants

20 participants (10 male, 10 female), mean age 12.6 years. PsA colonised. 3 drop outs, 17 completed trial.

Interventions

Ceftazidime 150 mg/kg/day, 8-hourly vs ceftazidime plus tobramycin 10 mg/kg/day, 8-hourly, 14-day course.

Outcome measures

Lung function, inflammatory markers, development of resistant strains.

Main results

Both drugs were well tolerated with no serious side effects, but pivampicillin was associated with more pronounced nausea. In steady state the mean serum concentrations of antibiotics 2 and 4 h after medication were 9.7 and 3.7 micrograms/ml for pivampicillin and 19.1 and 7.9 micrograms/ml for amoxycillin (p less than 0.01). Eradication of H. influenzae and clinical improvement was seen in one-third of the courses with both drugs. Betalactamase producing ampicillin-resistant strains emerged during 58% of the amoxycillin courses, but only in 16% of the pivampicillin courses (p less than 0.001). The high number of treatment failures and the development of resistant strains indicate that betalactamase inhibitors may possibly improve the efficacy of these drugs, especially of amoxycillin, in these patients.

http://dx.doi.org/10.2196/16782

See also

J Med Internet Res. 2020 Jun 25. doi: 10.2196/16782.

Keywords

Adolescent; Amoxicillin; Ampicillin; Anti-Bacterial Agents; Bacterial Infections; Child; Gastrointestinal Diseases; Haemophilus influenzae; Infection; pharmacological_intervention; Pivampicillin; Respiratory Tract Diseases; Respiratory Tract Infections; Ceftazidime; Tobramycin; Penicillins; Cephalosporins; Aminoglycosides;