primary studies - published RCT

Antipseudomonal therapy in cystic fibrosis: aztreonam and amikacin versus ceftazidime and amikacin administered intravenously followed by oral ciprofloxacin.

Code: PM2512129 **Year:** 1989 **Date:** 1989 **Author:** Schaad UB

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

RCT

Participants

56 cases of acute pulmonary exacerbation of the disease in 42 patients associated with isolation of Pseudomonas aeruginosa from the sputum. The two therapy groups were comparable in all respects.

Interventions

aztreonam or ceftazidime (300mg/kg/day i.v.; maximum daily dose 12g) in combination with amikacin (36mg/kg/day i.v.; maximum daily dose 1,500mg); two-week hospital regimens were followed by oral ciprofloxacin given for four weeks. Other aspects of the two-week treatment were constant.

Outcome measures

efficacy and safety, clinical, bacteriologic, radiologic and laboratory findings, and pulmonary function, drug toxicity

Main results

Both regimens were well tolerated and resulted in similar improvements in clinical, bacteriologic, radiologic and laboratory findings, and pulmonary function. Fifty patients could be reevaluated after subsequent outpatient therapy consisting of oral ciprofloxacin (30mg/kg/day; maximum daily dose 1,500mg) given for four weeks. During this period, the clinical and laboratory improvements persisted, and the rate of eradication of Pseudomonas aeruginosa from sputum decreased from 62% to 34%. Ciprofloxacin was well tolerated and there was no drug toxicity or serious adverse effect. In the 25 prepubertal patients there was neither subjective nor objective evidence of skeletal drug toxicity

Authors' conclusions

In patients with cystic fibrosis, aztreonam or ceftazidime in combination with amikacin represents an effective and safe systemic anti-pseudomonal therapy. Subsequent oral ciprofloxacin therapy for four weeks prolongs the beneficial effects and is well tolerated.

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See also

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Keywords

Adolescent; Adult; Amikacin; Anti-Bacterial Agents; Aztreonam; Bacterial Infections; Ceftazidime; Child; Ciprofloxacin; Combined Modality Therapy; Infection; Intravenous; Oral; pharmacological_intervention; Pseudomonas aeruginosa; Pseudomonas; Respiratory Tract Diseases; Respiratory Tract Infections; Exacerbation; Aminoglycosides; Monobactams; Cephalosporins; Quinolones;