primary studies - published RCT

Ceftazidime monotherapy vs. combined therapy in Pseudomonas pulmonary infections in cystic fibrosis.

Code: PM3302917 **Year:** 1987 **Date:** 1987 **Author:** Padoan R

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

randomized blind study

Participants

cystic fibrosis patients with acute exacerbations of chronic Pseudomonas lung infections

Interventions

3 schedules: ceftazidime vs. ceftazidime plus sisomicin (C/S) vs. piperacillin plus sisomicin, for a total of 60 courses of 14 days of treatment.

Outcome measures

clinical and radiologic score, adverse events, sputum colture, MIC.

Main results

Each treatment led to clinical and radiologic improvement with marked reduction of signs of acute infection. Statistically there was no significant difference in clinical responses among the schedules. No side effect appeared during treatments with ceftazidime or C/S. Hyperpyrexia was seen in 35% of patients receiving piperacillin. Decrease in Pseudomonas aeruginosa count to less than 10(5) colony-forming units/ml of sputum was achieved in 60% of patients treated with C/S and in 30% of patients who received ceftazidime or piperacillin plus sisomicin (statistically not significant). A transient increase in mean geometric minimal inhibitory concentrations for ceftazidime and piperacillin was observed at the end of the combined therapies. A larger percentage of persistent resistant strains of P. aeruginosa was seen after the combined therapies.

Authors' conclusions

ceftazidime as monotherapy may be an effective alternative in Pseudomonas lung infections in cystic fibrosis patients. Its clinical efficacy seems not to be enhanced by the addition of an aminoglycoside, although reduction of Pseudomonas in the sputum was better achieved by the combination of C/S.

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See also

Pediatr Infect Dis J. 1987 Jul;6(7):648-53.

Keywords

Adolescent; Adult; Anti-Bacterial Agents; Bacterial Infections; Ceftazidime; Child; Combined Modality Therapy; Infection; Monotherapy; pharmacological_intervention; Piperacillin; Pneumonia; Pseudomonas aeruginosa; Pseudomonas; Respiratory Tract Diseases; Respiratory Tract Infections; Sisomicin; Exacerbation; Drug Administration Schedule; Cephalosporins; Penicillins; Aminoglycosides;