primary studies - published RCT

Ceftazidime treatment of chronic Pseudomonas aeruginosa respiratory tract infection in cystic fibrosis.

Code: PM6352636 **Year:** 1983 **Date:** 1983 **Author:** Permin H

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

Two open randomized cross-over studies

Participants

13 and 15 cystic fibrosis (CF) patients, respectively, with chronic bronchopulmonary Pseudomonas aeruginosa infection.

Interventions

ceftazidime to tobramycin and ceftazidime to tobramycin plus carbenicillin

Outcome measures

lung function, antibiotic resistance, antibiotic serum concentration, adverse events

Main results

The difference in lung function improvement was statistically better in terms of FEV1 and FVC for the ceftazidime group in the study versus tobramycin plus carbenicillin. Patients receiving ceftazidime showed a tendency for a greater long-term benefit in lung function as measured at 1 and 2 months after treatment than patients receiving the other antibiotics. Development of resistance against both ceftazidime and carbenicillin was seen regularly and was not prevented by combination therapy with tobramycin. No resistance developed when tobramycin was used as monotherapy. Serum concentration curves for ceftazidime fitted a two compartment first order open model in CF patients and showed a distribution volume of 40% of the body weight and a final serum half-life of 1.8 h. One case of Type III hypersensitivity reaction was seen during ceftazidime treatment

Authors' conclusions

Ceftazidime seems to be an effective and safe antibiotic in the treatment of Ps. aeruginosa bronchopulmonary infection in CF patients, although these bacteria could not be eradicated.

http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/296/CN-00032296/frame.html

See also

J Antimicrob Chemother. 1983 Jul;12 Suppl A:313-23.

Keywords

Adolescent; Adult; Anti-Bacterial Agents; Bacterial Infections; carbenicillin; Ceftazidime; Cephalosporins; Child; Combined Modality Therapy; Infection; pharmacological_intervention; Pseudomonas aeruginosa; Pseudomonas; Respiratory Tract Diseases; Respiratory Tract Infections; Tobramycin; Penicillins; Aminoglycosides;