primary studies - published RCT

Efficacy and safety of intravenous meropenem and tobramycin versus ceftazidime and tobramycin in cystic fibrosis.

Code: PM17766190 **Year:** 2008 **Date:** 2008 **Author:** Latzin P

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

Randomised prospective multicentre open-label.

Participants

127 participants over 2 years of age in three groups:suppression therapy for chronic infection with P. aeruginosa infection;acute exacerbation of chronic pulmonary P. aeruginosa infection and;eradication of P. aeruginosa after its first detection in respiratory secretions.

Interventions

IV meropenem (120mg/kg divided into 3 daily doses, max 2g/day) plus tobramycin (9-12 mg/kg/day in 2 doses) or ceftazidime (200-400mg/kg in 2-3 daily doses) plus tobramycin (dose as above) for 2 or 3 weeks.

Outcome measures

Spirometric lung function, clearance of P. aeruginosa from respiratory secretions, C-reactive protein and circulating leukocyte count.

Main results

118 patients (59/59) were included into the study with the following indications: first infection of P. aeruginosa (n=6), acute pulmonary exacerbation (n=34) and suppression therapy of chronic P. aeruginosa colonization (n=78). Both treatments improved lung function measures, bacterial sputum burden and CRP levels with no differences between treatment groups observed. A significant higher elevation for alkaline phosphatase (p

Authors' conclusions

i.v. antibiotic therapy in CF patients with meropenem/tobramycin is as effective as with ceftazidime/tobramycin regarding lung function, microbiological sputum burden and systemic inflammatory status. Hepato-biliary function should be monitored carefully during i.v. treatment, possibly important in CF patients with pre-existing liver disease.

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See also

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Keywords

Adolescent; Anti-Bacterial Agents; Bacterial Infections; Ceftazidime; Child; Combined Modality Therapy; Infant; Infection; Intravenous; Meropenem; Newborn; pharmacological_intervention; Respiratory Tract Diseases; Respiratory Tract Infections; Thienamycin; Tobramycin; Colonization; Cephalosporins; Carbapenems; Aminoglycosides;