primary studies - published RCT

Aminoglycosides in patients with mucoviscidosis and pulmonary exacerbation. Comparison of once or three times daily administration.

Code: PM8445848 **Year:** 1993 **Date:** 1993 **Author:** Heininger U

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

prospective randomized study

Participants

26 patients with cystic fibrosis and pulmonary exacerbations

Interventions

aminoglycosides (tobramycin or netilmicin) administered once daily (21 episodes, 5 with netilmicin, 16 with tobramycin) and thrice daily (23 episodes, 2 with netilmicin, 21 with tobramycin), respectively. In addition, the patients received an anti-pseudomonal beta-lactam antibiotic. In the single-dose group the total daily dosage was 4.97 +/- 1.12 mg/kg (total dosage per exacerbation: 74.55 mg/kg), compared to 9.60 +/- 2.70 mg/kg in the triple-dose group (total dosage per exacerbation: 165.12 mg/kg).

Outcome measures

serum levels of the aminoglycoside, leucocyte counts, CRP-values, number of days in hospital and interval until next admission to hospital

Main results

The mean peak and trough serum levels of the aminoglycoside were 8.31 +/- 1.76 mg/l and 0.18 +/- 0.10 mg/l, respectively in the single dose group compared to 6.12 +/- 1.30 mg/l and 0.58 +/- 0.31 mg/l in the triple dose group. Success of treatment, defined as decrease in leucocyte counts, normalization of elevated CRP-values, number of days in hospital and interval until next admission to hospital, was not different between both groups

Authors' conclusions

single daily dose of aminoglycosides was as efficacious as triple dose in our patients.

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See also

Klin Padiatr. 1993 Jan-Feb;205(1):18-22.

Keywords

Adolescent; Adult; Aminoglycosides; Anti-Bacterial Agents; Bacterial Infections; Drug Administration Schedule; Infection; Netilmicin; pharmacological_intervention; Pneumonia; Pseudomonas aeruginosa; Pseudomonas; Respiratory Tract Diseases; Respiratory Tract Infections; Tobramycin; Exacerbation;