primary studies - published RCT

Parry MF, Neu HC, Merlino M, Gaerlan PF, Ores CN, Denning CR. Treatment of pulmonary infections in patients with cystic fibrosis: a comparative study of ticarcillin and gentamicin. Journal of Pediatrics 1977;90(1):144â€“8.

Code: PM401521 **Year:** 1977 **Date:** 1977 **Author:** Parry MF

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

Randomised? Not double blind, alternate allocation, no withdrawals, symptomatic regimen. Parallel trial.

Participants

21 male, 21 female, mean age 15.1 years. PsA colonised. 14 participants in each of 3 treatment groups. Group 1 (ticarcillin): 8 male, 6 female; mean (range) age 16.1 (2 - 30) years Group 2 (ticarcillin & gentamicin): 7 males, 7 females: mean (range) age 16.4 (4 - 30) years Group 3 (gentamicin):6 males, 8 females; mean (range) 12.9 (5 - 31) years

Interventions

Ticarcillin 300 mg/kg/day, 4-hourly vs gentamicin 3 - 4 mg/kg/day (adults), 4 - 7 mg/kg/day (children) vs combination. Variable length of course.

Outcome measures

Lung function, bacteriology, adverse events, CBC, sedimentation rate, urinalysis, serum electrolytes, blood urea nitrogen, creatinine, liver function tests, chest radiographs, blood gas determinations, sputum cultures, change in cough, weight.

Main results

The response rate was similar in patients treated with a combination of ticarcillin plus gentamicin or with gentamicin alone. Severity of the underlying disease was the most important determinant of response to treatment. Ticarcillin-resistant organisms were recovered during treatment in 50% of patients who received this drug; recovery of them was not prevented by the inclusion of gentamicin in the therapeutic regimen nor did they interfere with clinical improvement. The ticarcillin-resistant strains persisted at follow-up, two to six months after completion of therapy, in only one of ten patients. No serious toxicity to ticarcillin was noted during the study period.

See also

J Pediatr. 1977 Jan;90(1):144-8.

Keywords

Adolescent; Adult; Anti-Bacterial Agents; Bacterial Infections; Infection; pharmacological_intervention; Pseudomonas aeruginosa; Pseudomonas; Respiratory Tract Diseases; Respiratory Tract Infections; Ticarcillin; Gentamicin; Penicillins; Aminoglycosides;