primary studies - published RCT

Randomized, double-blind evaluation of azlocillin for the treatment of pulmonary exacerbations of cystic fibrosis.

Code: PM6352602 **Year:** 1983 **Date:** 1983 **Author:** McLaughlin FJ

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

randomized trial

Participants

Patients with cystic fibrosis hospitalized because of deterioration in their pulmonary disease

Interventions

ten days of intravenous antibiotic therapy with either ticarcillin plus tobramycin (previously the standard regimen at our hospital), azlocillin plus tobramycin or azlocillin plus placebo

Outcome measures

Pulmonary function, sputum colture, Shwachman score, PO2.

Main results

Pulmonary function and microbiological responses were similar in the three treatment groups, although patients receiving azlocillin and placebo tended to have a smaller reduction in the concentration of bacteria in the sputum and a greater rate of acquisition of antibiotic-resistant organisms. Overall, in-hospital treatment was associated with a significant improvement in Shwachman score, pulmonary function tests, and PO2. Improvement was noted by day 5 of therapy, continued through day 10, and was partially maintained at follow-up clinic visit one month after discharge. There was also a statistically significant reduction in sputum bacterial concentration, but patients cultured at the conclusion of antibiotic therapy still had a mean of 10(7) cfu/ml in sputum. Pseudomonas aeruginosa, the principal pathogen recovered from sputum cultures in this study, was transiently suppressed to sub-detectable levels in only one patient. There was no correlation between microbiological response and change in any parameter of pulmonary function. By follow-up clinic visit, sputum bacteria had returned to pre-treatment levels, and antibiotic-resistant organisms persisted in all patients from whom they had been recovered during hospitalization.

http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/278/CN-00032278/frame.html

See also

J Antimicrob Chemother. 1983 May;11 Suppl B:195-203.

Keywords

Adolescent; Adult; Aged; Anti-Bacterial Agents; Azlocillin; Bacterial Infections; Child; Combined Modality Therapy; Infection; Penicillins; pharmacological_intervention; Respiratory Tract Diseases; Respiratory Tract Infections; Ticarcillin; Tobramycin; Exacerbation; Pseudomonas aeruginosa; Pseudomonas; Intravenous; Aminoglycosides;