

### primary studies - published RCT

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

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# 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;