primary studies - published RCT

Combination antibiotic susceptibility testing to treat exacerbations of cystic fibrosis associated with multiresistant bacteria: a randomised, double-blind, controlled clinical trial.

Code: PM16084254 **Year:** 2005 **Date:** 2005 **Author:** Aaron SD

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

Multicentre, randomised, double-blind controlled trial

Participants

132 participants with acute pulmonary exacerbations of CF who were infected with multiresistant bacteria

Interventions

14-day course of any two intravenous antibiotics

Outcome measures

Lung function, time to next pulmonary exacerbation, length of hospital stay, sputum bacterial density, adverse events, mortality.

Main results

132 patients had a pulmonary exacerbation and were randomised during the 4.5-year study period. The time to next pulmonary exacerbation was not prolonged in the MCBT-treated group (hazard ratio 0.86 in favour of the conventionally-treated group, 95% CI 0.60-1.23, p=0.40). There was no difference between the groups in treatment failure rate. After 14 days of intravenous antibiotic therapy, changes in lung function, dyspnoea, and sputum bacterial density were similar in both groups

Authors' conclusions

Antibiotic therapy directed by combination antibiotic susceptibility testing did not result in better clinical and bacteriological outcomes compared with therapy directed by standard culture and sensitivity techniques. The non-bactericidal effects of antibiotic therapy might play an important part in determining improvement in patients with cystic fibrosis pulmonary exacerbations.

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See also

Lancet. 2005 Aug 6-12;366(9484):463-71.

Keywords

Adult; Anti-Bacterial Agents; Combined Modality Therapy; Infection; pharmacological_intervention; Respiratory Tract Diseases; Respiratory Tract Infections; Bacterial Infections; Exacerbation; Intravenous;