primary studies - published RCT

Once-weekly azithromycin in cystic fibrosis with chronic Pseudomonas aeruginosa infection.

Code: PM18701270 **Year:** 2008 **Date:** 2008 **Author:** Steinkamp G

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

randomised double-blind, placebo-controlled trial

Participants

Thirty-eight patients (21 AZM/17 placebo) (mean age: 23.7 years; mean FEV(1): 62% of predicted) were recruited.

Interventions

patients received AZM or placebo 1 per week for 8 weeks (AZM dosage--20-29 kg: 500 mg, 30-39 kg: 750 mg, 40-49 kg: 1000 mg and > or = 50 kg: 1250 mg) after a course of intravenous antipseudomonal antibiotics.

Outcome measures

Pulmonary function tests, the serum markers LPS-binding protein (LBP), interleukin-8 (IL-8), CRP, P. aeruginosa alginate in sputum samples and quality of life scores were evaluated.

Main results

After treatment (mean dose of 21.2 mg/kg body weight once a week) pulmonary function declined in both groups compared to baseline (i.e. after cessation of i.v. antibiotics). The AZM group was significantly better for mean changes in serum CRP (AZM: +0.9 mg/l, placebo: +21.6 mg/l, p=0.019), lipopolysaccharide binding protein in serum, LBP (AZM: +0.9 microg/ml, placebo: +7.0 microg/ml, p=0.015), serum interleukin-8 (AZM: -3.1 pg/ml, placebo: +2.9 pg/ml, p=0.001) and alginate in sputum (AZM: +85 microg/ml, placebo: +353 microg/ml, p=0.048). Quality of life was significantly better after AZM and there was no increase in treatment-related adverse events.

Authors' conclusions

Once-weekly azithromycin ameliorated inflammatory reactions and improved quality of life. A decline of pulmonary function after cessation of i.v. antibiotics could not be prevented.

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See also

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Keywords

Adult; Anti-Bacterial Agents; Azithromycin; Bacterial Infections; Drug Administration Schedule; Infection; pharmacological_intervention; Pseudomonas aeruginosa; Pseudomonas; Respiratory Tract Diseases; Respiratory Tract Infections; Intravenous; Macrolides; Anti-Inflammatory Agents; Anti-Inflammatory Agents - excl Steroids;