primary studies - published RCT

Higher tobramycin concentration and vibrating mesh technology can shorten antibiotic treatment time in cystic fibrosis.

Code: PM21438171 **Year:** 2011 **Date:** 2011 **Author:** Coates AL

Participants

16 males with stable CF, 8 children and 8 adults, and an FEV(1) > 45% predicted

Interventions

Patients inhaled both preparations (Tobramycin (TOBI(R), 300 mg at 60 mg/ml) inhaled from the PARI LC PLUS(R) nebulizer and 1.5 ml of 100 mg/ml tobramycin solution delivered by an investigational eFlow(R) nebulizer) on two occasions with (99m) Tc-DTPA added to the tobramycin.

Outcome measures

Blood samples were taken for quantification of tobramycin in the serum.

Main results

The PARI LC PLUS(R) delivered 45.4 (39.3-51.6), mean and 95% CI, mg to the lungs in 17.0 +/- 2.5 min (mean +/- SD) with serum levels of 1,089 +/- 388 microg/L. The investigational eFlow(R) delivered 46.3(40.3-51.7) mg in 4.0 +/- 1.0 min with blood levels of 909 +/- 458 microg/L. Only the time of delivery was significantly different with P

Authors' conclusions

These results demonstrate the possibility of delivering equivalent levels of tobramycin much faster into the lungs of CF patients when using eFlow(R), a very efficient electronic nebulizer.

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See also

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Keywords

Adolescent; Anti-Bacterial Agents; Pseudomonas aeruginosa; Pseudomonas; Tobramycin; Bacterial Infections; Infection; Inhalation OR nebulised; nebuliser; non pharmacological intervention - devices OR physiotherapy; pharmacological_intervention; Respiratory Tract Diseases; Respiratory Tract Infections; Airway clearance technique; Vibration; Aminoglycosides; oscillating devices; Chest physiotherapy;