primary studies - published RCT

A randomized controlled trial of inhaled l-Arginine in patients with cystic fibrosis.

Code: PM23333044 **Year:** 2013 **Date:** 2013 **Author:** Grasemann H

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

Double-blind, randomized, placebo-controlled crossover trial

Participants

19 CF patients

Interventions

Twice daily inhalation of 500mg l-arginine for two weeks compared to inhalation of saline

Outcome measures

Safety and efficacy; exhaled NO, FEV(1), sputum concentrations of l-ornithine, the product of arginase activity and inflammatory markers in sputum

Main results

l-Arginine inhalation was well tolerated and resulted in a significant increase in exhaled NO. FEV(1) increased by an average of 56ml compared to -8ml after saline solution; but this difference did not reach statistical significance. Sputum concentrations of l-ornithine, the product of arginase activity, increased significantly while the l-ornithine derived polyamines did not. There was no change in inflammatory markers in sputum

Authors' conclusions

Repeated inhalation of l-arginine in CF patients was safe and well tolerated. Inhaled l-arginine increased NO production without evidence for changes in airway inflammation.

http://dx.doi.org/10.1016/j.jcf.2012.12.008

See also

J Cyst Fibros. 2013 Jan 14. pii: S1569-1993(12)00241-X. doi: 10.1016/j.jcf.2012.12.008.

Keywords

Adult; Aged; Child; Inhalation OR nebulised; pharmacological_intervention; Arginine; Amino Acids; Proteins; Supplementation; non pharmacological intervention - diet;