primary studies - published RCT

Acute effects of aerosolized S-nitrosoglutathione in cystic fibrosis.

Code: PM11934715 **Year:** 2002 **Date:** 2002 **Author:** Snyder AH

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

double-blind, randomized, placebo controlled study

Participants

Subjects 10â€“50 years old were recruited from CF clinic if they had a sweat chloride concentration greater than 60 mEq/L and chronic bronchiectasis with moderate obstructive disease. Subjects were excluded who had a room air oxygen saturation of less than 90%, who were hypotensive, or who had a history of gastrointestinal bleeding, massive hemoptysis, or any hemoptysis within the preceding month. 9 CF patients received GSNO and 11 placebo.

Interventions

0.05 ml/kg of 10 mM S-Nitrosoglutathione (GSNO) or phosphate buffered saline by aerosol

Outcome measures

oxygen saturation, spirometry, respiratory rate, blood pressure, heart rate, and expired nitric oxide (NO).

Main results

GSNO inhalation was associated with a modest but sustained increase in oxygen saturation at all time points. Expired NO increased in the low ppb range with GSNO treatment, peaking at 5 minutes but remaining above baseline at 30 minutes. There were no adverse effects.

Authors' conclusions

GSNO is well tolerated in patients with CF and improves oxygenation through a mechanism that may be independent of free NO. Further, GSNO breakdown increases expired NO. Therapy aimed at restoring endogenous GSNO levels in the CF airway is suggested and may merit study.

http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/590/CN-00395590/frame.html

See also

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Keywords

Adolescent; Adult; Antioxidants; Child; Inhalation OR nebulised; non pharmacological intervention - devices OR physiotherapy; pharmacological_intervention; Glutathione; thiols; S-Nitrosoglutathione; Chest physiotherapy;