primary studies - published RCT

Effects of salmeterol on arterial oxyhemoglobin saturations in patients with cystic fibrosis.

Code: PM12112791 **Year:** 2002 **Date:** 2002 **Author:** Salvatore D

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

Placebo-controlled cross-over trial over 4 days

Participants

23 participants: 14 responders (8 males), mean age 21.4 years, age range 18.5 - 36.6 years; 9 non-responders (5 males), mean age 22.1, range 18.8 - 25.4

Interventions

Day 1: albuterol challenge (200 mcg via MDI) to determine responders Day 2: 45 minutes before bed 4 puffs of inhaled salmeterol (84 mcg) or placebo. Overnight transcutaneous oxygen saturations measured Day 3: morning spirometry Day 4: repeat of Day 2

Outcome measures

Changes in spirometry (FEV1, FEF25-75), changes in oxygen saturation (data not included in analysis)

Main results

Salmeterol administration before sleep resulted in statistically significant increases in mean arterial oxyhemoglobin saturation and in FEV(1) and FEF(25-75) on awakening compared to placebo values, but only in patients responding to daytime albuterol inhalation by showing improvement in lung function.

Authors' conclusions

Salmeterol inhalation at bedtime could prevent or reduce nocturnal hypoxemia in daytime albuterol-responsive CF patients, thus improving the long-term clinical outcome of CF lung disease.

http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/585/CN-00395585/frame.html

See also

Pediatr Pulmonol. 2002 Jul;34(1):11-5.

Keywords

Adrenergic beta-Agonists; Adult; Albuterol; Bronchodilator Agents; Inhalation OR nebulised; pharmacological_intervention; salmeterol; Respiratory System Agents; non pharmacological intervention - devices OR physiotherapy;