primary studies - published RCT

Effect of zinc supplementation on respiratory tract infections in children with cystic fibrosis.

Code: PM18214943 **Year:** 2008 **Date:** 2008 **Author:** Abdulhamid I

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

double blind placebo controlled pilot study

Participants

26 children with CF (ages 7-18 years).

Interventions

daily 30 mg elemental Zn for 1 year vrsus placebo

Outcome measures

Plasma Zn, Cu, inflammatory cytokines and ex vivo generation of IL-2 were measured at baseline and at the end of the study. Rate of respiratory tract infections (RTIs), use of antibiotics and plasma cytokines were measured.

Main results

The number of days of oral antibiotics was lower in Zn treated patients compared to placebo (P = 0.05). However, compared to placebo, the effect of Zn was greater in patients who exhibited low plasma Zn at baseline (P = 0.02) than those who had plasma Zn levels identical to normal subjects (P = 0.55). Zn supplementation was marginally effective in reducing percentage increase in plasma IL-6 and IL-8 while increasing the percentage change in ex vivo generation of IL-2 in isolated mononuclear cell.

Authors' conclusions

Oral intake of 30 mg/day of Zn reduced the number of days of oral antibiotics used to treat RTIs in children with CF. A higher daily Zn dose may be needed to decrease RTIs and modify immune responses

http://dx.doi.org/10.1002/ppul.20771

See also

Pediatr Pulmonol. 2008 Mar;43(3):281-7.

Keywords

Adolescent; Child; Infection; Minerals; Respiratory Tract Diseases; Respiratory Tract Infections; Supplementation; Zinc; pharmacological_intervention;