primary studies - published RCT

Effect of double-blind cross-over selenium supplementation on lipid peroxidation markers in cystic fibrosis patients.

Code: PM7758213 **Year:** 1995 **Date:** 1995 **Author:** Portal B

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

double-blind study, cross-over design

Participants

27 cystic fibrosis children; 17 healthy children living in the same area were also investigated as control subjects.

Interventions

selenium supplementation (2.8 micrograms of sodium selenite per kg per day) or placebo control and inversion of treatment periods.

Outcome measures

selenium status, plasma lipid peroxidation markers. Thiobarbituric acid reactants (TBARs), organic hydroperoxide concentrations

Main results

Before any treatment whatsoever and despite a selenium status close to those of control subjects, cystic fibrosis patients showed significant increase in plasma lipid peroxidation markers. Thiobarbituric acid reactants (TBARs) were normalized after the first treatment period of 5 months in both cystic fibrosis groups receiving either selenium supplementation or placebo. In this latter group, TBARs were reduced despite a significant decrease in plasma selenium concentrations as compared with the control group. Organic hydroperoxide concentrations were also simultaneously normalized in both cystic fibrosis groups at the end of the second treatment period.

Authors' conclusions

These results showed that improvement of lipid peroxidation markers was not related to the selenium supplementation. Nevertheless, oxidative stress sustained by cystic fibrosis children must be taken into account so that it does not aggravate the prognosis of the disease.

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See also

Clin Chim Acta. 1995 Jan 31;234(1-2):137-46.

Keywords

Adolescent; Adult; Child; pharmacological_intervention; Selenium; Supplementation; Minerals;