

Abstract

Am J Clin Nutr. 2008 Jun;87(6):1802-8.

Randomized, double-blind, placebo-controlled trial of selenium supplements among HIV-infected pregnant women in Tanzania: effects on maternal and child outcomes.

Kupka R, Mugusi F, Aboud S, Msamanga GI, Finkelstein JL, Spiegelman D, Fawzi WW.

Department of Nutrition, Harvard School of Public Health, Boston, MA 02120, USA.

BACKGROUND: In observational studies, adequate selenium status has been associated with better pregnancy outcomes and slowed HIV disease progression.

OBJECTIVE: We investigated the effects of daily selenium supplements on CD4 cell counts, viral load, pregnancy outcomes, and maternal and infant mortality among 913 HIV-infected pregnant women.

DESIGN: In this randomized, double-blind, placebo-controlled trial, eligible women between 12 and 27 wk of gestation were given daily selenium (200 mug as selenomethionine) or placebo as supplements from recruitment until 6 mo after delivery. All women received prenatal iron, folic acid, and multivitamin supplements irrespective of experimental assignment.

RESULTS: The selenium regimen had no significant effect on maternal CD4 cell counts or viral load. Selenium was marginally associated with a reduced risk of low birth weight [relative risk (RR) = 0.71; 95% CI: 0.49, 1.05; P = 0.09] and increased risk of fetal death (RR = 1.58; 95% CI = 0.95, 2.63; P = 0.08), but had no effect on risk of prematurity or small-for-gestational age birth. The regimen had no significant effect on maternal mortality (RR = 1.02; 95% CI = 0.51, 2.04; P = 0.96). There was no significant effect on neonatal or overall child mortality, but selenium reduced the risk of child mortality after 6 wk (RR = 0.43; 95% CI = 0.19, 0.99; P = 0.048).

CONCLUSION: Among HIV-infected women from Dar es Salaam, Tanzania, selenium supplements given during and after pregnancy did not improve HIV disease progression or pregnancy outcomes, but may improve child survival. This trial was registered at clinicaltrials.gov as NCT00197561.

PMID: 18541571

