PERBEDAAN PEMBERIAN ZINC TERHADAP PERBAIKAN T-LIMFOSIT DAN C-REACTIVE PROTEIN PADA BALITA KURANG GIZI SETELAH SUPLEMENTASI VITAMIN A DOSIS TING

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KKC KK TKM 47 / 11 Nug p

SUMMARY

The Difference of Zinc Supplementation on the Correction of T-Lymphocyte and C-Reactive Protein Levels of Children Under Five Age with Undernutrition After High Doses Vitamin A Supplementation

Under five is the golden age in which the problem of infection is a critical point which seriously affect the growth, one form of the emergence of state of undernutrition. Incidence of recurrent infection was known to result in stunted growth, and this is because the most of the nutrient requirements for growth will be diverted to solve the problem of infection. Incidence of infection is often found in children under five, especially with vitamin A deficiency. Efficacy of vitamin A supplementation to cope with the infection have been tested through studies of randomize, double blind, placebo control trial in many cases of malnourish children in various regions in developing countries. Zinc supplementation with high doses of vitamin A can improve under five children immunity. This research was conducted to prove the ability of Zn and their interaction with vitamin A to improve toddlers immunity. This study is a randomized experimental study using Pre Test Post Test Control Group Design with a Double Blind of treatment. The research population is all children aged 24-60 months at Mojo RW 8, District Gubeng, Surabaya city received high-dose vitamin A supplementation. Then do the initial screening examination based on anthropometric indices Body Weight/Body Height with Z-score ≤ -2 SD. After laboratory screening was performed to see salivary zinc levels with normal values 88-135 mg / L, does not suffer from infections and fill Informed consent. The samples consist of two groups, treatment and control groups, each of the samples in the group is 13 children. With Random Sampling Allocation method determined the treatment group who were given zinc supplements, while the control group given a placebo To know the consumption pattern and consumption level five, conducted interviews with food frequency fill the questionnaire and food recall 24 hours, using a questionnaire that had been prepared. Intake of additional data using a questionnaire was also conducted at the beginning of the study include the characteristics of children and family characteristics. Result showed that supplementation can increase the lymphocyte levels as evidenced by the $p = 0,009 < \alpha$ in the treatment groups and it's quite significant different from control groups by the $p = 0,048$. Whereas CRP levels decrease in the treatment groups demonstrated the $p = 0,049 < \alpha$ but its'n quite different from control groups by the $p = 0,056$. Conclusion: there are lymphocyte and CRP levels correction in treatment groups, but only lymphocyte levels correction is quite significantly different from the control groups who did not receive treatment, in other hand CRP levels correction is not quite significantly different from the control groups. The final result this research sure to suggest the implementation of zinc supplementation to fight infection and undernutrition in under five children.

ABSTRACT

The Difference of Zinc Supplementation on the Correction of T-Lymphocyte and C-Reactive Protein Levels of Children Under Five Age with Undernutrition After High Doses Vitamin A Supplementation

This study aims is to analyse the differences of zinc supplementation on the correction of T-Lymphocyte and C-Reactive Protein levels of children under five age with undernutrition after high doses vitamin A supplementation.This study is a randomized experimental study using Pre Test Post Test Control Group Design with a Double Blind of treatment. The result showed that supplementation can increase the lymphocyte levels as evidenced by the $p = 0,009 < \alpha$ in the treatment groups and it's quite significant different from control groups by the $p = 0,048$. Whereas CRP levels decrease in the treatment groups demonstrated the $p = 0,049 < \alpha$ but its'n quite different from control groups by the $p = 0,056$. From this research can be concluded that there are lymphocyte and CRP levels correction in treatment groups, but only lymphocyte levels correction is quite significantly different from the control groups who did not receive treatment, in other hand CRP levels correction is not quite significantly different from the control groups. The final result this research sure to suggest the implementation of zinc supplementation to fight infection and undernutrition in under five age children.

Keywords: zinc supplementation, high doses vitamin A, T-lymphocytes, CRP, undernutrition.