

## **PENGARUH PEMBERIAN ZINC TERHADAP PERBEDAAN PENINGKATAN STATUS GIZI PADA PASIEN HIV/AIDS**

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### **ABSTRACT**

#### **The Effect Of Zinc On The Difference Increasing Nutritional Status In Patients With HIV/AIDS**

Nutrition had the important role in patient with HIV/AIDS, it increased the immune system and delayed the progression of HIV into AIDS. Zinc played a role in optimizing immune function, especially in T cell, need for accelerating growth process, stabilized structure of cell membranes and activated growth hormone. The purpose of this study was to analyze the differences in weight and albumin levels after administration of zinc sulfate in patients with HIV/AIDS. This research is experimental research with pretest posttest control group design with the provision of a double-blind treatment. Data collection techniques using questionnaire, food recall, food frequency questionnaire, anthropometry, blood sampling and laboratory examination. The results showed that there were significant differences in body weight between before and after zinc administration in the treatment group ( $p = 0.030$ ), whereas in the control group showed no significant differences in body weight between before and after zinc administration ( $p = 0.839$ ). T-test results of elevated levels of albumin difference between before and after zinc administration between the treatment and control groups showed that there were significant difference with  $p$  value = 0.673.

Key words: zinc administration, body weight, and albumin levels

### **SUMMARY**

#### **The Effect Of Zinc On The Difference Increasing Nutritional Status In Patients With HIV/AIDS**

HIV/AIDS was a major concern for health and very influential in the socio-economic growth of countries around the world, including Indonesia. Based on DEPKES estimates, 2006, in Indonesia estimated number of people living with HIV/ AIDS was between 193,000 to 247,000 people. The Survailens AIDS DEPKES RI reported that until September 2009 reached 28,260 people. And almost all provinces in Indonesia reported increased cases of HIV/AIDS. HIV/AIDS Infection will affect nutritional status and immune system of people with HIV/AIDS. The changes at nutritional status caused by various factors: anorexia, hypercatabolic, chronic infection, fever, decreased nutrient intake, nausea, vomiting, diarrhea, mal absorption, increased nutrient needs as well as loss, depression, medication side effects, radiation and chemotherapy. All the events were closely related to HIV/AIDS that espouse it. Nutrition in HIV/AIDS was able to encourage and also to suppress the progression of HIV into AIDS. Micro mineral based nutrition was very important in patients with HIV wasting

syndrome that occurs due to nutritional changes during the course of infection. Endogenous infections could form free radicals that affect the work of mitochondrial enzyme to optimization super oxide demitasse (SOD), which required the help of micronutrients, including Zn (zinc). Optimal nutritional status was the balance of nutrient intake with nutrient requirements. Thus, the intake of nutrients affected a person's nutritional status. In addition to nutrient intake, infection also affected nutritional status. In people with less nutritional status, the lack of nutrient intake and the presence of infection were usually the cause. The purpose of this study was to analyze the differences in weight and albumin levels after administration of zinc sulfate in patients with HIV/AIDS. This research was experimental research with pretest posttest control group design with the provision of a double-blind treatment. Data collection techniques used questionnaire, food recall, food frequency questionnaire, anthropometry, blood sampling, and laboratory examination. The population was all patients with HIV/AIDS of outpatient UPIPI care unit of Hospital Dr. Soetomo Surabaya that had been getting ARV. The sample in this study were patients with HIV/AIDS screening results were taken at random from the sub-populations and meet the inclusion criteria who received ARV in the past year. Study sample consisted of two groups, namely the treatment and control groups. The results showed a majority of respondents in the treatment group experienced weight gain as many as eight respondents. Whereas in the control group of respondents who experienced an increase in lower body weight compared with treatment group as many as five respondents. Albumin treatment groups after zinc supplementation tended to increase even as many as 13 respondents (100%). The control group, indicating there were 3 respondents (23.1%) albumin levels increased after zinc supplementation. T-test results showed that there were significant differences in body weight between before and after zinc administration in the treatment group ( $p = 0.030$ ), whereas in the control group showed no significant differences in body weight between before and after zinc administration ( $p = 0.839$ ). T-test results in elevated levels of albumin before and after zinc administration with  $p$  value = 0.673.