ABSTRACT

The Effect of Zinc and Lysine Supplementation on Infection Rate and CD4 Count in Elderly

Elderly people tend to have higher susceptibility to infections because of immune dysfunction, especially cell-mediated immune system which is related to zinc deficiency. Lysine can support zinc role to boost up the cell-mediated immune system which can be determined by CD4 count. To determine the effect of zinc and lysine supplementation on infection rate and CD4 count in elderly, a randomized, double-blind, placebo-controlled trial was conducted in an old folks’ home. This study was conducted on 24 healthy elderly subjects of both sexes aged 62-90 years. They were divided into two experimental groups and one control group. They were given zinc syrup 20 mg per day or zinc 20 mg and lysine syrup 500 mg per day or placebo for 2 months. Infection rate during supplementation period was documented. Albumin level, zinc level in the serum and CD4 count were measured before and after supplementation. Compared to control group, infection rate was lower in zinc group and zinc and lysine group (p=0.065). Zinc and lysine supplementation increased significantly the zinc level in the serum (p=0.012) and had better effect compared to zinc supplementation alone. Zinc and lysine supplementation also increased CD4 count (p=0.784) and had better effect to increase CD4 count compared to zinc supplementation alone. Zinc and lysine supplementation did not increase the albumin level which was already in normal level. Conclusion: Zinc and lysine supplementation can reduce infection rate in elderly by increasing zinc level and CD4 count.

Key words: Zinc and lysine syrup supplementation, CD4 count, elderly