

Zinc deficiency and clinical practice

○Hiroyuki Yanagisawa

(Dept. of Health Sci. & Prev. Med., Faculty of Med., Saitama Med. Univ.)

In recent years, the number of patients visiting outpatient clinics with complaints of abnormal sense of taste and/or olfaction has been on the increase. It has been estimated that approximately 240,000 new patients with such complaints are registered annually, and that approximately 30% of these patients have dietary zinc deficiency. There are adverse effects of drugs, hypogeusia associated with systemic diseases and essential hypogeusia (etiology unknown) as other factors causing abnormal sense of taste. Zinc supplementary therapy, when done to patients with hypogeusia, ameliorates the complaint in 60-75% of such patients. This observation strongly suggests that most of patients with hypogeusia, even any cause, are in zinc-deficient conditions. It has been recently reported that zinc supplementary therapy brings about a satisfactory effect on the medication of decubitus and gastric ulcer. This supplementary therapy is now tried for the medication of liver diseases, kidney diseases, rheumatoid arthritis, diabetes mellitus and osteoporosis etc. On the other hand, it is recently indicated that zinc deficiency is involved in life style-related diseases and aging. There are an increase in free radicals, a decrease in immunocompetence, an increase in blood pressure, the disorder of lipid metabolism, a reduction in glucose tolerance and a rise in carcinogenesis etc. in the pathophysiological background of aging. Similar pathophysiology is also observed in zinc deficiency. The reason why these various clinical symptoms are seen in zinc deficiency is that zinc is an essential trace element to serve as the active center of approximately 300 enzymes in humans. Thus, etiology and clinical findings of zinc deficiency, the relationship between zinc and aging and the validity of zinc supplementary therapy are outlined in this symposium.