THE EFFECT OF ZINC SALIVA ON THE TODDLERS' NUTRITIONAL STATUS

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Abstract

This study aimed to know the correlation between zinc saliva and the toddlers' nutritional status (W/A). The writer utilized observational analytic and utilized 102 toddlers (3-5 years old) in Ambulu subdistrict, Jember, for the sample as the method of this study. The toddlers' nutritional status was measured by W/A index, furthermore, the unstimulated saliva was collected and analyzed by utilizing AAS method in order to estimate the concentration of zinc saliva. The result of this study showed that there was the correlation between zinc saliva and toddlers' weight by utilizing Spearman correlation (P=0.000, α=0.05). In conclusion, zinc saliva related with the toddlers' weight. This correlation is associated with the fact that zinc saliva is not only as the regulator of appetite but also it can stimulate the production of leptin that is considered as the protein of weight regulator. Zinc of saliva influenced the sense of taste on the tongue that could increase more the function of taste. Hence, it could increase the toddlers' appetite and cause the increasing of toddlers' weight.


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Introduction

Nutrition is one of important aspects of human's growth and development. The nutrition has a role of the metabolic activity of various organs¹. Besides, the nutrition also has an important role in determining the individual's growth. The human's growth and development are considered appropriate if it is indicated by the adequacy of nutritional intake. In contrast, if the nutritional intake is inadequacy, it can make the human's growth slower².

Saliva is used to diagnose disease and to control the health status and disease. Moreover, saliva has the hundreds of components that help to detect systemic disease and to give biomarker of health and disease status. The saliva test provides more advantages than blood test. The advantages are the blood sampling can be taken easily and it can be done by all of the people (non-medical people), some samples can be collected, hence, it can give more information than single blood sample. Most of the studies show the advantages of the use of saliva to detect the physiologic or pathologic condition because the parameter of saliva relates with the parameter of serum¹.

Kadoum et al., reported that there was a systematically correlation between zinc saliva and BMI in their study. Zinc saliva had a role in the metabolism process and if it occurred inadequacy, it could cause the loss of appetite, hence, the human's growth was slower³.

The deficiency of zinc influences almost two billions of human in developed country⁴. Hence, almost two billions of human in the world undergo the deficiency of zinc. The deficiency of zinc can cause the loss of weight, the loss of appetite, the long process of wound curing, the abnormality of sense of taste, and the cognitive disorder, anorexia, retardation of growth⁵,⁶.