EFFECTS OF NUTRITION AND VITAMIN D DEFICIENCY ON CENTRAL PUBERTY PRECOCIOUS

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Introduction

Puberty is a dynamic period of physical growth. Genetic factors, increasing prevalence of adiposity, environmental factors and the widespread presence of endocrine-disrupting chemicals are suspected to contribute to the trend of earlier pubertal onset.

Method

The study group consists of 32 girls diagnosed with central puberty precocious. The eating habits and physical activity status were evaluated with a detailed questionnaire. Daily calorie and nutrients intake were calculated according to the three-day dietary records. Anthropometric measurements, bioelectrical impedance analysis and biochemical findings were compared with the age matched control group.

Results

All patients admitted with breast enlargement before 8 years and diagnosed by a GnRH test. The birth weight was significantly lower than the control group (p<0.05). Duration of breast feeding, beginning of supplementary food, ingestion of vitamin or mineral supplements, usage of feeding bottles and pacifiers were not significantly different between groups. Feeding with formula was more frequent in the study group; however it was not statistically different. Mean calorie and macronutrients intake was not different, as well as physical activity status. The possibility of puberty precocious was found as 3.5 fold increased in patients who consume yogurt less than 2 times a week, 9.7 fold increased in patients who consume salami every day or more than once a week and 3.4 fold increased in patients who consume chicken together with its skin. Serum Vitamin D levels were significantly low in the study group (p<0.01).

Conclusion

Recent studies have shown that the age of menarche is decreasing across the world and they also draw attention to the environmental factors. Our study showed that the some nutritional factors are important and level of 25OHD3 was significantly lower in girls with central puberty precocious, supporting the results of recent studies in the literature.

Table-1. Biochemical Parameters of the Patients with Central Puberty Precocious

Table-2. Distribution of milk and meat group consumption