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## **THE CORRELATION BETWEEN TYPES OF FEEDING AND MINERAL PROFILE OF INFANTS**

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**Background.** Rational feeding of infants remains one of the main factors to ensure the full development of the children and the formation of their health. There is a close relationship between child morbidity, qualitative composition of food and the nutrients. The study of element imbalance in infants allows timely diagnose or prevent the formation of lesions in the preclinical stage.

**Objective:** to determine the macro and microelemental (ME) profile of children on the different types of feeding.

**Material and methods.** There were examined 150 children 5 month old who are on the different feeding types. Children were complexly examined by the narrow specialists with a history of development and divided into groups: breast-feeding (BF) 52% children, partially breast feeding (PBF) 24% children, artificial feeding (AF) 24% children.

Compulsory criteria for the study ME status of patients was not receiving vitamin and mineral preparations for child and / or mother for the past two months.

**Results.** According to normative data of children's element profile were taken results (in the ratio %) of relatively healthy infant in age of 5 months, which was at breast feeding. Analysis of the results demonstrated that the strontium, nickel, bromine and chlorine level in children on the different feeding types have not any reliable differences that can be considered as the norm variant and do not need correction.

Analysis of the results showed that in the group of partially breast feeding significantly elevated zinc (0.905) and chromium (0.72)  $p \leq 0,05$ . In the group of artificial feeding marked increase chromium (0,714) and iron (0,884). Indicators of copper decreased in both groups of children, who were fed a formula (partially breast feeding (0.265) and artificially feeding (0,068).

It is known that excess of iron causes deficiency of copper and zinc. Results of the study ME in the children's hair, who are on the artificial feeding, show that 66.6% of children have increased iron than normal levels, leading to inhibition of zinc. 66.6% of children on the partialy breast feeding have increase in Zn affects to decrease Fe and Cu.

It was determined that children on breast feeding and partially breast feeding have significantly higher content of sulfur and phosphorus compared to the control group (S of 0.449 (BF) to 0.901 (PBF) and 0.943 (AF)  $p \leq 0,05$ , P 0.01 (BF) to 0,039 (PBF) and 0,036 (AF)  $p \leq 0,05$ ). Due, in our opinion, first of all, the artificial formulas compose of a sulfide, which can trigger allergic diseases (acute allergies ( $r = 0,78$ ); atopic dermatitis ( $r = 0,81$ )).

**Conclusions.** There was established that children on partially breast and artificial feeding do not have the adequate macro/microelement balance and are in the risk group of formation of pathologies that needs the certain correction at the stage of preclinical manifestations.