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Clinical and Pharmacology Significance of Micronutrients for Pregnant Women and Newborn Infants

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ABSTRACT

The aim of the study was to study the micronutrient composition and the physiological role of the national product - grape gurob, in order to provide nutritional support, correction and prevention of macro- and microelement deficiencies in the "Mother-child" system. To prevent micronutrient deficiencies in the "Mother-Child" system, the macro- and microelement composition of little-studied and little-used national food products - grape gurob - was studied. The determination of 23 macro- and microelements in the composition of the grape gurob was carried out by the neutron activation method, bacteriological, toxicological, radionuclide studies were carried out. The composition of the grape gurob revealed a high concentration of macro- and microelements - potassium, calcium, magnesium, sodium and chlorine, as well as essential microelements - iron, zinc, copper, cobalt, manganese, iodine and molybdenum. Grape Gurob should be recommended for the purpose of preventing and correcting micronutrient deficiencies, optimizing the growth and development of children, accelerating recovery processes and improving the quality of life in the Mother-Child system.

The purpose of the study: Child growth and development are the main indicators of health. A wide range of risk factors for child health problems are now known from birth onwards.

Combating micronutrient deficiency is one of the main tasks of the Ministry of Health of the Republic of Uzbekistan (Ministry of Health of the Republic of Uzbekistan), adopted in 2010 "On prevention of micronutrient deficiency in the population of the Republic of Uzbekistan the law indicates that.

Issues of clinical nutrition and nutrition support in the "mother-child" system include problems of micronutrient deficiency in pregnant and lactating women: anemia, obesity, diabetes, cardiovascular risk, etc., in children - energy deficiency, rickets, anemia, food allergies, children who are often sick, functional digestive disorders, etc.

In the conditions of Uzbekistan and other countries, there are no studies on the elemental composition and medicinal properties of the national product of grape pomace produced for the purpose of nutritional support against various diseases and micronutrient deficiencies.

Materials and styles:

Vitamin B deficiency is 30-40% (vitamin B6 deficiency approaches 90-100% in pregnant

women), vitamin C - 70-80%, carotenoid and folate deficiency - more than 40%, polyhypovitaminosis is detected. Also, nutritional deficiency of magnesium, calcium, iron, iodine, selenium, and zinc is common among pregnant women in Uzbekistan. The main cause of mass deficiency of microelements is malnutrition. Currently, there are regions in Uzbekistan that lack various vitamins and trace elements [1-5].

The main goal is to apply ghorob among the population in order to provide nutrition and correct the deficiency of macroelements. The composition of macro and microelements of national food was studied in three samples.

The Institute of Nuclear Physics of the Academy of Sciences of the Republic of Uzbekistan determined according to the standard content values in plants - μg/g (mg/kg) [8]

Table 1. Composition of macronutrients in grape pomace

Product	Ca	Na	Cl	Mg	K
grape pomace (n=3)	2600-21120	44 - 11445	5500-12540	100-152570	31000-662770 (0,31%-6,6%)
standard composition in plants (Kist A.A., 1987)	12000	1500	2000	1200	15000

Table 1 shows the presence of high concentration of organic calcium salts in grape pomace - up to 21120μg / g (2.1%), which is 2 times higher than standard samples;

The amount of organic sodium and chlorine was determined in high concentrations: grape pomace - from 11445 μg/g to 12540 μg/g.

High concentration of potassium in the form of organic salt is present in grape pomace - 662770 (6.6%). Only grape pomace contains such a high amount of potassium.

Magnesium is present in high concentration: grape seed - from 100 to 152570 μg / g.

From the group of important microelements, we studied the content of iron, zinc, cobalt, manganese, chromium, selenium, molybdenum and iodine in the grapes grown by us.

Manganese in the highest concentration is 1000 μg/g to 1210 μg/g in grape juice and 125.7 μg/g in dry grape table wine. Raisins, dried apricots, almonds, peanuts, walnuts, grapes, and pistachios contain 10 to 30 mcg/g of manganese. Dried fruits contain 1 to 10 μg/g of manganese. The above products should be recommended for manganese and iron deficiency. manganese is a synergist of iron and helps its absorption from the intestine.

Selenium as an important trace element is found in phytonast in the highest concentration - in decoction of vine (9.3 μg / g), in other food products - less than 0.1 μg / g.

Some food products contain iodine in a low concentration - 0.1 μg/g, many products do not contain iodine. All this is the basis for considering the Zarafshan valley as a biogeochemical zone of iodine deficiency, and it is necessary to take it into account when carrying out preventive measures.

High concentrations of molybdenum were found in grape seed and peanuts - from 7 μg/g to 56 μg/g, average - below 1.0 μg/g, in almonds and dried apricots, and grape skins.

Among the essential trace elements, we studied bromine and nickel in fruits and fruit-based foods. From 1.0 μg/g to 42 μg/g of bromine was found in grape products - dry wine, black raisins, as well as figs, walnuts and dried plums. Information about the functional role in the body of the mother and the child is not sufficiently covered in the literature, in this regard,

nutrition support in the conditions of deficiency requires further development.

Summary: Currently, the greatest risk during pregnancy is folic acid, vitamin E and iodine deficiency, which in many cases leads to miscarriage and fetal defects. In view of the latest advances in medicine based on fundamental science, the lack of other vitamins and micronutrients is also important for the development of the fetus and the normal course of pregnancy.

In the late 1990s, more and more studies began to appear, noting the important role of vitamins and minerals for the formation of children's health, harmonious growth of functional systems and age-related development [6-10].

According to the WHO, more than 2 billion people are deficient in essential vitamins and minerals, including vitamin A, iodine, iron and zinc. During pregnancy, the body's daily need for vitamins and minerals increases by 30-50%, 60-70% of women registered for pregnancy lack vitamins and minerals.

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