Clinical and Pharmacological Importance of Micronutrients for Pregnant Women and Newborns

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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 gurb, 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 gurb - was studied. The determination of 23 macro- and microelements in the composition of the grape gurb was carried out by the neutron activation method, bacteriological, toxicological, radionuclide studies were carried out. The composition of the grape gurb 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 Gurb 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.

Key words: grape gurb, composition, macronutrients, microelements, deficiency, correction, prevention.

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%, polypovitaminosis is detected. In addition, 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 where various vitamins and microelements are lacking.

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 number of values was determined according to the standard composition values in plants of the Institute of Nuclear Physics of the Academy of Sciences of the Republic of Uzbekistan - μg/g (mg/kg) [8], (Table.1-jadval).

<table>
<thead>
<tr>
<th>Product</th>
<th>Ca</th>
<th>Na</th>
<th>Cl</th>
<th>Mg</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>grape vine (n=3)</td>
<td>2600-21120</td>
<td>44 - 11445</td>
<td>5500-12540</td>
<td>100-152570</td>
<td>31000-662770</td>
</tr>
<tr>
<td>standard content in plants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.31%-6.6%)</td>
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<td>(Kist A.A., 1987)</td>
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<td></td>
<td></td>
<td></td>
<td>12000</td>
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<td></td>
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<td></td>
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<td>1500</td>
<td>2000</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>1200</td>
<td>15000</td>
</tr>
</tbody>
</table>

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, iron, zinc, cobalt, manganese, chromium, selenium, molybdenum and iodine - we studied the composition of grape pomace.

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.

The formation of children's health in the late 90s, functional tizimlarning uyg'un o'sishi va yoshga bog'liq more and more studies are beginning to appear, noting the important role of vitamins and minerals to ensure the development.

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.
Abiogenic elements took their place in the metabolism of animals due to their low reactivity, despite their wide distribution in the lithosphere, they participated in the metabolism of marine forms of organisms, which determined their further competition in the metabolism of land species (leading to pathology). Of the abiogenic elements, rubidium is found in the highest concentration in healthy foods; it can be considered as being closer to essential microelements.

Brain elements in the body are presumably involved in the conduction of brain impulses in mammals, the functional role of these elements in the body of children remains unexplored, perhaps they are involved in metabolic processes in the body [3]. This indicates the harmlessness of food products of the local flora for the body of the mother and child. The clinical picture of methylmercury poisoning is the most studied.

When analyzing abiogenic and toxic elements in the content of food products - grape gurob grown in the Zarafshan Valley region, we revealed very low levels of the content of such toxic elements as mercury and scandium, which indicates the safety and harmlessness of this product.

References/Citations


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