

LABORATORY CHANGES IN VITAMIN D IN HELMINTHIC DISEASES IN CHILDREN

Sobirova Nargiza Mukhtor qizi

Karakalpak Medical Institute, 1st year master's student in Laboratory profession

nsobirova124@gmail.com

Ph.D. Almaganbetova Ulbosyn Kartzhanovna

Republican Multidisciplinary Medical Center named after U. Khalmuratov. Head of the Department of Hematology

Otoboyev Olloyor Baxodirovich

Assistant of the Department of Military Field Therapy, Hematology and Diagnostics of the Urgench branch of Tashkent medical academy

In Uzbekistan, the most common helminthiases are: enterobiasis, ascariasis, trematodosis. The incidence of enterobiasis in the country is 1100 cases per 100 thousand of the population. Among the patients, 90% are children, mainly aged 1 to 3 years. The incidence of geminolepiasis is 100 cases per 100 thousand of the population. In the Aral Sea region, intestinal helminthiases occupy a leading place in the structure of the disease, and enterobiasis and geminolepiasis are common among them, accounting for more than 40% of all identified helminthiases.

Vitamin D has a modulating effect on the immune system and in case of its deficiency the immune system may be affected. It has been stated that the risk of developing bacterial, viral and fungal infections as well as parasitic infections may increase in immunosuppressive conditions.

Objective of the study. To analyze the frequency of changes in Vitamin D in patients with enterobiasis and geminolepiasis.

Material and methods: The scientific study was conducted with the participation of 50 patients with helminthiasis, who were treated with helminthiasis in the University Clinical Laboratory of the Karakalpak Medical Institute and the Children's Infectious Diseases Hospital of the Republic of Karakalpakstan. Verification of the diagnosis was carried out helminthiasis according to the recommendations of international experts of the international consensus.

-The clinical laboratory examination included a range of generally accepted and special studies:



- The clinical examination included a survey, a general examination of patients by organs and systems according to the traditional scheme with a detailed description of parasitic complaints, taking into account the diagnostic recommendations of international experts;

- Laboratory examination included a complete blood count, biochemical blood test results and stool analysis, general urine analysis and statistical research methods. Blood for examination was taken in the morning on an empty stomach. Determination of the level of hemoglobin, erythrocytes, leukocytes, thrombocytes, leukocyte formula was carried out in capillary blood, biochemical blood analysis and coprology.

In order to evaluate the general blood test parameters, they were examined using a hematological analyzer Chongqing MIC CO., Ltd (China) with subsequent morphological study using a MEKEY N-1000MIC microscope.

Statistical analysis of the results was carried out using the statistical software package “Microsoft Office Excel” and “Biostatistics 4.03”.

Results. It should be noted that 72% (36) of the analyzed patients had a moderate level of anemia, and the remaining 28% (14) had severe anemia. An important aspect is the change in the amount of vitamin D in the blood.

In a study of 50 children that examined the impact of enterobiasis (n=36) and geminolepiasis (n=14) infestation on micronutrients using rapid diagnostic methods, vitamin D deficiency was found in 20% of participants.

The effects of deficiency include changes in the immune response and an increased risk of developing various infections, data on which are presented in

Table 1. **Table 1. Vitamin D status in relation to intestinal parasitoses**

Parasitosis	Age, years	25(OH)D, ng/ml
Enterobiasis (N=36)	4-14	22,5 ± 5 ng/ml
Heminolepiasis (N=14)	4-17	17,0±5 ng/ml

Conclusion. Based on our analysis, these values may be the status and “required values” for adults. However, vitamin D deficiency and insufficiency in children is a particularly pressing problem. The level of deficiency below which the short-term risk of pathological deficiency is significant and requires immediate correction. Multiple doses of 25 (OH) D given to neonates, infants and children with clinical signs of deficiency (skeletal deformities and/or neurological signs due to hypocalcemia) clearly demonstrate a close correlation of these signs with values from 10 to 12 ng/mL (25-30 (OH) D nmol/L).

