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ALGORITHMIC DETECTION AND TREATMENT OF MICRONUTRIENT DEFICIENCY IN PRESCHOOL CHILDREN WITH INTESTINAL PARASITIS

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Abstract:

Intestinal parasites remain one of the most common problems of special medical, social and economic importance among children worldwide.

Micronutrient deficiency among children with intestinal parasitosis is dangerous and causes complications, so early diagnosis and treatment are of practical importance. Providing drugs to risk groups reduces the intensity of intestinal helminth infections. Treatment of intestinal worms among children of preschool age is carried out seasonally in preschool educational institutions.

Keywords: Intestinal parasitosis, micronutrients, preschool children, deficiency.

Introduction

Enter. Deficiency of micronutrients is common among preschool children with intestinal parasitosis and negatively affects changes in the child's physical and mental development at the same age. Especially among children, cases of infection with liabliosis and enterobiosis are often followed by micronutrient deficiency.

According to WHO [2017], ascariasis is widespread throughout the world, affecting the population of all countries to one degree or another, except for regions with very low temperatures (polar and subpolar) and strong dryness. Ascariasis is especially common in tropical regions with an annual rainfall of 100 mm or more. Almost all children and more than 50% of the adult population are affected by ascariasis, starting from early childhood. Trichurias are widespread mainly in tropical and subtropical countries and humid temperate regions. Currently, the number of trichuriasis patients in the world is about 800 million, mainly children aged 5 to 15 years are more affected.

40-50% of children of tropical and subtropical zones are infected. Despite the fact that many micronutrient deficiencies, including iron deficiency, are related to helminths, their incidence, clinic, diagnosis, treatment and prevention in children have not been sufficiently studied. Observations show that worm infestation causes great harm to children's health by causing indigestion, increasing the level of anemia, as well as retardation in mental and physical development. Helminthosis is one of the most common diseases in Uzbekistan, accounting for more than 90% of the total number of parasitic diseases (Abdiev F.T., 2007). It is known that the absence of a national program for the prevention of certain diseases causes economic and social damage to the state and society. In particular, the loss of anemia for Uzbekistan is 153.9 million dollars per year (Karimov X.Ya., Suleymanova D.N., 2010).

Lack of micronutrients: iron, soul, cobalt, manganese, copper, vitamin A, group B vitamins, vitamin V12 and folic acid directly affects the cause of anemia. Iron deficiency anemia accounts for 95% of all forms of anemia in childhood. The main cause of iron deficiency in children is its insufficient amount entering the body with food and impaired absorption through the intestinal mucosa (Skalnyy A.V., Yatsqk G.V., 2002)

Kh.N. According to Khalafli (2010), the socio-epidemiological analysis of the spread of helminthiasis among children shows that the complication of the epidemiological situation in intestinal parasitosis depends on social factors, that is, these infections in urban conditions have acquired the character of social dependence. The data obtained on the basis of surveys conducted among children, their parents and employees of preschool educational institutions show that the distribution is influenced by such factors as the material well-being of families, their housing and communal conditions, cultural and hygienic level. In general, 192 out of 284 healthy children (67.6+2.8%) came from families with medium and high financial status, 207 out of 288 children infected with helminthiasis had low financial status (71.9+2.7%, ch2 =1.23, r>0.05) from the family. In families with a very strong positive correlative dependence with a very low and low material level, the percentage of sick children increases with an increase in the number of children (r̀=+0.90+0.08) - from 21.4+3.9% to 75.4+ up to 5.8% (ch 2=40.32, r <0.01).

Purpose of work: Our object of examination was observation of 134 children with micronutrient deficiency among preschool children of 2-6 years old with intestinal parasitosis in different regions of Samarkand region. The anamnesis, clinical and laboratory instrumental examination of children 2-6 years old is considered.

Results: Children's outpatient cards (F# 026/u) were used to carry out the work. The general condition of the children was evaluated according to the algorithm for assessing the condition of children infected with parasites and micronutrient deficiency, as well as physical development indicators, which we developed.

All patients were divided into 2 groups. The main group 1 is 100 patients, the control group 2 is 34 patients

In order to solve the issues presented to us in the course of our research, during the years 2021 and 2023, under different climatic conditions, in the area belonging to the 47th Bahrin QVP, located in the territory of the Urut district of the Samarkand region, which belongs to the foothills of Uzbekistan and has a temperate climate with summer months 4-5 degrees lower than in other regions of the Republic. 100 children for the main group, 100 children for the main group, among the students of the 20th MTS in the Payariq district of Samarkand region and the students of the INTELLECT NMTT of the city of Samarkand, located in the area of the mild arid zone of our republic (dry and hot temperatures are observed in summer, there is no natural water body) for 34 children, we conducted observations and examinations in total of 134 children.

Gut as the main groupdeficiency of micronutrients in children affected by parasitesobserved condition a total of 100 children were examined based on the consent of their parents, and when we

compared them in the regional section, 48 (48%) were in Urgut district, 43 (43%) in Payariq district and 9 (9%) in Samarkand city.

A total of 134 children were examined by a self-developed questionnaire consisting of 10 questions aimed at early detection of micronutrient deficiency in patients in order to determine the risk factor and choose the type of treatment individually.

For each question in the questionnaire, the answer "YES" - 1 point, the answer "NO" - 0 value. Based on the accumulated points, children are divided into risk groups. We analyzed the obtained results.

No	Disease susceptibility groups	Girls	%	Boys	%	Total
1	Low propensity (1-3 points)	3	**15**	2	**16.7**	5
2	Moderate inclination (4-7 points)	6	**30**	2	**16.7**	6
3	High propensity (8-10 points)	9	**45**	5	**41.6**	16

Summary:

The developed algorithm for determining susceptibility to intestinal parasites and its complications has the following advantages:

- Algorithm and questionnaire-card allow early detection of giardiasis and enterobiosis invasion in children.
- With the help of the developed algorithm and questionnaire-card, it is possible to determine the degree of susceptibility to postparasitic micronutrient deficiency in children.
- The developed algorithm and questionnaire-card is a non-invasive research method, which provides a great economic benefit in determining the probability of parasitic infestation and susceptibility to post-parasitic micronutrient deficiency without expensive biochemical tests at the primary level of health care practice and improves the quality of life.

- Based on the results of using the algorithm and the questionnaire-card, it is recommended to correct the conditions related to micronutrient deficiency caused by post-parasitic infestations and develop preventive measures.

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