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CLINICAL AND LABORATORY ANALYSIS OF MICROELEMENTS DEFICIENCY IN WOMEN OF FERTILE AGE

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✓ ***Resume***

The study involved 349 women aged all women ", factors causing zinc, copper, iron and folic acid deficiency, as well as clinical data from the deficiency questionnaire -questionnaire method. In women of fertile age, there are significant differences between cases of anemia + polydeficiency, when a condition with anemia is added, and cases without anemia, that is, the added condition was detected 1.43 times more often than IDA, and 1.22 times more often than HA. The repeated occurrence of the addition of IDA and XA in this age group indicates the presence of specific features of chronic diseases that occur in them, and the need to take into account several patterns in the diagnosis of anemia.

Keywords: polydeficide, zinc, copper, iron, folic acid, iron deficiency anemia.

ФЕРТИЛ ЁШДАГИ АЁЛЛАРДА МИКРОЭЛЕМЕНТЛАР ТАҚИСЛИГИНИНГ КЛИНИК-ЛАБОРАТОР ТАҲЛИЛИ

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Бухоро Давлат тиббиёт институти

✓ ***Резюме***

Тадқиқотга жалб этилган 349 нафар фертил ёшдаги аёллар орасида мис ва рух, темир танқислиги клиник белгилари, уни келтириб чиқарувчи хавф омиллари ва ривожланиш эҳтимоллиги бўлган асоратларни аниқлаш мақсадида анкета-сўровнома ўтказилди. Сўровномада келтирилган саволлар асосида фертил ёшдаги аёлларда микроэлементлар танқислиги учраш сабаблари ва келтириб чиқарувчи хавф омиллари учраш даражаси таҳлил қилинди. Фертил ёшдаги аёлларда анемия + полидефицитли ҳолат қўшилиб келганда ва анемиясиз кечувчи полидефицитли холатлар орасида ишончли фарқлар мавжуд, яъни қўшилиб келган ҳолат ТТА дан 1,43 марта ва СКА дан 1,22 марта кўп аниқланди. Бу ёшдаги гуруҳда ТТА ва СКА қўшилиб келишининг кўп учраши, уларда кечадиган сурункали касалликларнинг ўзига хос хусусиятлари мавжудлиги ва камқонликлар ташхисотида бир неча қонуниятларни инобатга олиш заруратини кўрсатади.

Калит сўзлар: полидефицит, рух, мис, темир, фолий, темир танқислиги анемияси

КЛИНИКО-ЛАБОРАТОРНЫЙ АНАЛИЗ ДЕФИЦИТА МИКРОЭЛЕМЕНТОВ У ЖЕНЩИН ФЕРТИЛЬНОГО ВОЗРАСТА

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✓ ***Резюме***

В исследовании приняли участие 349 женщин в возрасте всех женщин, факторы, вызывающие дефицит цинка, меди, железа и фолиевой кислоты, а также клинические данные опросника дефицита -метод по анкети. У женщин фертильного возраста существуют достоверные различия между случаями анемии + полидефицита, когда добавляется состояние с анемией, и случаями без анемии, то есть добавленное состояние было обнаружено в 1,43 раза чаще, чем ЖДА, и в 1,22 раза чаще, чем ХА. Многократное появление добавления ЖДА и ХА в этой возрастной группе указывает на наличие специфических особенностей хронических заболеваний, которые встречаются у них, и необходимость учитывать несколько закономерностей при диагностике анемии.

Ключевые компоненты: полидефицид, цинк, медь, железо, фолиевая кислота, железодефицитная анемия.

Relevance

One of the proven cases in the stages of development of modern medicine is the deficiency of macro - and microelements necessary for the body on the basis of various pathological conditions observed in the body. It is known that the human body contains 81 types of macro-vamicroelements, which are of important functional importance for the human body. Among them are several vital microelements, the participation of which in all processes in the body is due precisely to these microelements. Violation of the balance of microelements in the human body leads to the development of diseases called microelentoses [5; 11-27b.]. It should be noted that micronutrients can be manifested not only by a decrease in their amount, but also by a violation of the normal balance of microelements in the body (dysbalance) and excess (presence in excess) [123; 1–6b., 192; 187-190B.].

It has been established that chemical elements appear in the body in a completely different way, regardless of their content in bodies of living and inanimate nature. [28; 296-300b.].Nowadays, it is more appropriate to apply the concept of" bioelement". The chemical element present in a living organism in quantity, proportion and state is specific to living matter or, in other words, corresponding to vital processes [123; 1-6.b].

The division of microelements in the body into essential vital, toxic, conditionally toxic, etc.types eliminates certain inaccuracies existing in modern classifications of chemical elements on the basis of this concept.Medical microelentology is constantly updated with extensive factual material about the role of trace elements and various Macroelements in ensuring the vital processes of the human body, on the basis of such views such concepts as bioelement metabolism, bioelement homeostasis, the appearance of a human bioelement appeared [80; 10-15 b].

Under a growing volume of scientific information on various issues of micronutrientology, bioelementology as a whole, there is a need to dynamically evaluate, analyze and summarize New, accurate and based information from among them [90; b. 37-42; 90; 553–62b.].It is not enough to assess the biological role of an element only by its content in tissues. Lack of a number of microelements (Cr, Cu, Fe, I, Mn, Mo, Se, Zn) can disrupt the balance of almost all metabolic processes in the body. The biological activity of the substance can be maintained even at very low concentrations, while at high concentrations relative to the norm, even essential micronutrients can have a toxic effect [121; 3-6 b].

The subject of the study is a questionnaire designed to identify capillary and venous blood, blood plasma, nutrient deficiency questionnaire.

Methods of research

The study used methods such as the use of general clinical-laboratory, biochemical examination, determination of the amount of trace elements copper, zinc and iron in the blood, functional-diagnostic examinations, statistical analysis.

Result and discussion

Among the 349 fertile age women involved in the study at the initial stage, a questionnaire-survey was carried out with the aim of identifying complications with copper and zinc, clinical signs of iron

deficiency, risk factors that cause it and the likelihood of development. tkazildi.So based on the questions presented in the rovnoma, the causes of micronutrient deficiency in women of fertile age and the degree of occurrence of provoking risk factors were analyzed (Table 3.1).

3.1 table

The degree of occurrence of risk factors leading to the development of micronutrient deficiency among women of fertile age

	Risk factors	Level of occurrence	
		Absolute	%
1	Diseases of the digestive and intestinal systems	134	38,4
	The presence of chronic liver diseases	89	25,5
2	More than 3 pregnancies	115	32,9
3	Consecutive pregnancy	147	42,1
4	Hyperpolimenoria	126	36,1
5	Lack of greens in the diet ration	184	52,7
6	Dried fruits to be consumed less	179	49,3
7	The presence of chronic diseases in the body	156	44,5
8	The use of diets to maintain weight	102	29,2
9	Those born of anemic mother (Anamnesis)	157	44,9

As can be seen from the table, the main factors leading to copper and zinc deficiency among women of fertile age are food ration, low intake of dried fruits, the presence of chronic diseases (49.3±% and 44.5%, respectively).

In the following places are those born of anemic mother and between childbirth without keeping the term, getting pregnant in series, without these pointers being appropriate

It was 44.9 ±% and 42.1± % (R0,05).

Based on the results of the survey conducted in women who were involved in the study on the basis of the same survey, the presence of micronutrient deficiencies was determined, and they were involved in further investigations as the main group.

As we know, zinc, copper, iron and folic are considered hematopoietic micronutrients, that is, they play an important role in the formation of erythrocytes and hemoglobin. From this, a clinical analysis of blood was carried out in all women.

After the clinical analysis of blood, those involved in the study were divided into 2 groups.

Deficiency of trace elements of Group 1 is accompanied by anemia, n=116

Group 2 micronutrient deficiency manifested without anemia, n=233

A comparative relationship between the content of zinc, copper, iron in women in cases with poly deficit, which is accompanied by anemia and anemia, has been studied and analyzed (fig.

The analysis of the indicators presented in the figure showed that the amount of trace elements in women in whom anemia is present is lower than the norm indicators in almost all examiners, the average amount of them in women who have not been diagnosed with anemia, although giving regulatory indications, individual analyzes showed that these women do not have a constant positive:

Example 1. 39-year-old woman. Hemoglobin micdor 126.2 g/l; iron content 6.7 mmkmol/l, copper micdor 7.4 and zinc micdor 9.9 μmol/l.

Example 2. 39-year-old woman. Hemoglobin micdor 123.9 g/l; iron content 7.2 mmkmol/l, copper micdor 6.4 and zinc micdor 11.2 μmol/l.

In order to determine the etiopathogenetic form of anemia in women of fertile age who were diagnosed with anemia, a comparative analysis of trace elements with indicators of blood pereferic analysis of detected markers was carried out in those involved in the study. Taking into account the fact that the studied trace elements are essential microelements involved in hematopoietic and immune-inflammatory processes, the connections between them were studied by comparative analysis of hemoglobin, erythrocyte and its qualitative markers in blood analysis, the amount of leukocytes, the amount of thrombocytes, ECHT indicators (table 3.2).

Clinical signs	**Fe+Cu+Zn**	**Fe+Cu**	**Fe+Zn**	**Zn**	**Cu+Zn**
	52	19	23	4	18
Hemoglobin (g / l)	102,9 [84,2-114,6]	109 [87,6-111,6]	98,6 [81,7-104,1]	118 [100,3-118,7]	113,4 [90,7-117,1]
Erythrocyte	3,8 [3,6-3,9]	3.7 [3,6-3,8]	3,4 [3,2-3,6]	4,1 [3,8-4,4]	4,0 [3,5-3,2]
Number	72,4 []	81,6 [3,6-3,9]	76,1 [3,6-3,9]	89,6 [3,6-3,9]	80,5 [3,6-3,9]
MCV (fl)	22,4 [18,6-25,3]	25,1 [18,1-26,7]	24,9 [19,2-26,2]	28,6 [19,4-32,3]	28,1 [18,8-33,4]
80-110	315,7 [286,1-331,6]	315,4 [289,9-331,2]	316,8 [275,1-327,8]	324,5 [280-329,6]	324,9 [281,1-330,2]
MCH 27-31	59,4 [52,3-61,2]	56,8 [51,7-61,3]	52,3 [45,4-53,2]	50,1 [47,2-52,2]	49,8 [41,3-51,4]
MCHC	17,2 [4-18]	16,4 [3-18]	21,1 [8-24]	24.2 [7-26]	26,3 [11-28,3]
Leukocyte	5,2	4,9	4,8	3,8	4,03

Table 3.2

Comparison between micronutrient deficiency markers and perepheric blood markers that occur against the background of anemia analysis results

Note: MCV is the average volume of erythrocyte; MCH is the average indicator of the amount of hemoglobin in erythrocyte; MCHC is the concentration of hemoglobin in erythrocyte; RDW is the degree of occurrence of volumetric variations of erythrocytes; ECHT is the rate at which erythrocytes precipitate.

In order to increase the likelihood of the connection of the developing anemia with the deficiency of trace elements, FYOA divided them into groups depending on the types of micronutrient deficiency. Only 4 women (3.4%) saw the presence of a monotony of zinc when a separate deficiency of the trace element iron, copper and zinc was detected. A separately developed state of monodeficite of iron and copper was not detected. Cases of concomitant deficiency of iron+zinc+ copper trace elements at 44.8% FYOA (polydeficite), iron and zinc at 19.8%, iron and copper at 16.4%, and zinc and copper deficiency at 15.5% were found.

As can be seen from the data presented in Table 3.2, anemia was most often observed when all three micronutrient deficiencies were encountered together (44.8%). However, the lowest indicator when the average amount of hemoglobin was compared was found in a group where iron and zinc deficiency were encountered together 98.6 g/l [81.7-104.1].

The results of a comparative analysis of the amount of erythrocytes in the perepheric blood and its qualitative indicators showed that the state in which the mean indicator of erythrocytes is the least was observed in the case of iron+ zinc polydeficite, and the highest indicator of the average was observed in the monodeficite of the zinc element. Suitable case 3,4(3.6 - 3.9)X10 12/l and 4.1 (3.8 - 4.4) X10 12 / l

The mean size of erythrocytes (MSV)was observed in groups where the microcytosis iron+zinc+copper and iron +zinc polydefisite was detected (72.4 and 76.1 fl, respectively)

And in the rest of the groups, although normocytosis was detected, the average pointers were around the lower limits of the norm, from which the highest pointer was determined in the monotony of zinc (89.6 fl).

When a comparative analysis of the mean amounts of erythrocytes to hemoglabine saturation indicators (MSN and MsnS) was studied among the groups, the results showed that in groups with a

deficiency of trace elements iron+zinc+copper, there was a development of hypochromia (22.4, 25.1 and 24.9 fl, respectively), copper+ zinc deficiency, and normochromia (28.1 and 28.6 fl, respectively) in zinc monodeficitis. In the analysis of anisocytosis level pointers, however, it was found that in almost all groups the pointers are higher.

In a comparative analysis of the amount of leukocytes, it was observed that in zinc and zinc+ copper groups, the indicators were slightly reduced by the amount of the norm.

Conclusion

From the results of the analysis carried out, it can be concluded that the signs characteristic of anemia in perepheric blood were more pronounced in cases of poledificitis of essential micronutrients.

Zinc and copper deficiency, on the other hand, have affected changes in erythrocyte anisocytosis levels, ECHT and leukocyte levels.

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