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## CLINIC AND DIAGNOSTICS OF IRON DEFICIENCY ANEMIA IN ADOLESCENT GIRLS

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### ABSTRACT

*This article is devoted to the clinic and diagnosis of iron-deficiency anemia in adolescent schoolgirls, the problems that arise in them and the measures to eliminate them. Most of the analyzed symptoms in girls with YTT and TTK were clearly expressed and the main ones were combined together. The total amount of hemoglobin and erythrocytes, hematocrit, reticulocyte formula, average amount and concentration of hemoglobin in erythrocytes were determined.*

**KEYWORDS:** *Blood, Anemic Syndrome, Erythron Parameters, Iron Deficiency, Schoolgirls.*

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### INTRODUCTION

**Significance of the article:** Adolescence or puberty is considered one of the critical periods of ontogenesis. By this period, rapid growth and rapid development of the body increase the demand for the blood-forming system.

According to E.M. Mosyagina, the need for iron in teenagers is 2 times higher than that of adults. In such conditions, the lack of complete and uniform nutrition or the influence of other unfavorable factors quickly leads to a decrease in the amount of hemoglobin and a state of iron deficiency (Otaniyozov O.A., 2011).

Currently, 2 types of iron deficiency are recognized: iron deficiency anemia (IDA) and hidden iron deficiency (IAD).

**The purpose of the work:** to study the clinical semiotics of iron deficiency anemia in adolescent girls living in rural areas of Bukhara region.

Materials and methods of investigation: Clinical semiotics of the disease was studied by the questionnaire method among students of 9-10th grade. The questionnaire consisted of 36 questions on the clinical semiotics of illness. Questionnaires were distributed to 270 female students of Bukhara, Peshku, Shafirkon and Vobkent districts.

**Obtained results:** Anemic syndrome was observed in 144 (60.5%) girls based on the results of questionnaire analysis and peripheral erythron parameters, iron deficiency was noted in 86 (59.7%) girls based on the results of iron metabolism analysis. Of these, YaTT 62 (72.1%), TTK-24 (27.9%). During our inspections, 64.5% of schoolgirls with SEN had average physical

development, 25% below average and 9.6% above average. 60.1% TTK corresponds to the age of physical development in the observed students. The complete clinical semiotics of YTT and TTK is presented in Table 1.

#### Clinical semiotics of YATT and TTK in adolescent girls

Symptoms	YTT (n=62)		TTK (n=24)		
	n	M+m	n	M+m	p
Headache	16	25,8+3,4	8	33,3+4,2	
Dizziness	15	24,1+3,1	6	25,0+3,8	
Fatigue and fatigue	48	77,4+6,3	20	83,3+4,9	
Feeling sick in a stuffy room					
Decreased appetite	7	11,2+2,8	4	16,5+3,9	
Paleness of the skin and mucous membranes (pallor) Changes in taste	10	16,1+3,4	5	20,8+4,2	
Dry skin	34	54,8+6,7	17	70,8+7,3	
Hair loss	5	8,1+1,0	7	29,1+4,1	
Koilonychia	13	20,9+3,7	8	33,3+3,6	
Panting on physical exertion	18	29,0+1,9	7	29,2+2,6	
	27	43,5+4,2	14	58,3+5,3	
	25	40,3+3,8	11	45,8+4,2	

As can be seen from the table, all the clinical symptoms in schoolchildren diagnosed with CKD were found in those with CKD. It can be seen that many of the noted symptoms were also found in healthy girls with different frequencies and it was admitted that the main symptoms were added.

In TTC, Pica Chilortica increased taste and smell (liking the smell of kerosene, gasoline, acetone, naphthalene), soil, toothpaste, and eating dry tea 3-6 times more often. Examination reveals dryness of the skin, hair and nails, dysphagia, stomatitis, smoothing of the tongue papillae, and in some, a bluish color in the sclera of the eye.

Most of the analyzed symptoms in girls with YTT and TTK were clearly expressed and the main ones were combined together. It was found that 3-4 of the epithelial symptoms were present in 39.5% of the children in the YTT, and only in 18.4% of the children in the group of healthy children. It was found that the changes in the skin, hair and nails accompanied by changes in the sense of taste were clearly expressed in the children with YTT and TTC (20.9% and 33.3%) compared to the group of healthy children (6.5%).

The combination of taste changes and anorexia is a manifestation of iron deficiency (21.5% and 16.4%) much higher than the group of healthy children (14.1%). Manifest and combined asthenovegetative disorders (combination of 2-3 or more symptoms) were found in children with YTT and TTK. In all variants of hyposiderosis, compared to healthy children, susceptibility to the disease has a high level of importance in children. More than 40% of girls (out of 270) reported feeling worse in rooms with heavy air (bus, bathroom).

When these girls are studied individually, it turns out that in narrow, stuffy rooms, i.e. classrooms, bathrooms, buses, short-term cases of fainting occur, and sometimes (in 10.5% of cases) girls feel bad about themselves for no reason, and these parents it was determined that it

always caused concern. Researchers attribute the frequent occurrence of fainting in children with paroxysms associated with increased sensitivity and low partial pressure of oxygen even at rest.

We focused on the onset, duration and period of menstruation in schoolgirls with iron deficiency. The identified data are as follows: the average age of the onset of menarche is 13 years, the duration of 6 months is 5 days in 77.9% of girls, 6-7 days in 21.9% of girls, it should be noted that in 75.5% of cases, the average duration of menstruation in girls with TTC is 6-7 days and full details are given in Table 2.

**The beginning of menstruation in YTT and TTK**

Character of menstruation	Healthy(n=94)		YTT(n=62)		TTK(n=24)	
	Abs	%	abs	%	Abs	%
1. Beginning						
13 years old	55	58,5	44	70,9	15	62,5
14 years old	23	24,4	14	22,5	4	16,6
15 years old	8	8,5	5	8	2	8,3
16 years old	2	2,1	-	-	1	4,1
2. Periodicity						
Every 3 weeks	4	4,2	24	38,7	13	54,1
Every 4 weeks	64	68	37	60	6	25
More than 4 weeks	20	20	1	1,6	3	12,5
3. Menstrual period -						
painful	27	28,7	38	61,2	11	45,8
-painless	61	64,9	22	35,5	13	54,2
4. Duration						
2-3 days	24	25,5	18	29,1	4	16,7
4-5 days	62	66	38	61,3	5	20,8
6-7 days	2	2,1	4	6,4	15	62,5
5. No menstruation	6	6,4	2	3,2	-	-

The period of onset of menstruation is 13 years and 6 months, it was found that the menstrual process is disturbed mainly in the YTT and TTK, that is, the periodicity and duration are disturbed. We believe that menstruating girls with heavy blood loss need iron supplements. It is not possible to satisfy the body's extiogen with microelements that fall with food products and are absorbed into the body from menstrual blood losses that last more than 4 days and go with the separation of clots. In such cases, it is necessary to take iron preparations for 10 days after each menstruation.

In order to confirm the diagnosis of iron deficiency, 238 schoolgirls were examined by the method of direct selection, 94 of them were healthy, 62 were diagnosed with CKD, and 24 were diagnosed with CKD. The total amount of hemoglobin and erythrocytes, hematocrit, reticulocyte formula, average amount and concentration of hemoglobin in erythrocytes were determined. In order to determine the level of starvation of the serum, as well as determining the level of saturation of iron and transferrin in the blood, indicators of the total iron-binding capacity of the serum were determined. And this last indicator in healthy schoolgirls ranges from 38 to 68.8 µmol/l, and the iron saturation level of transferrin is 17-26%.

**CONCLUSION:**

1. With the help of a questionnaire test-questionnaire, it helps to accurately assess the clinical semiotics of iron deficiency in a quick and short time.
2. Based on the results of a special questionnaire and red blood cell indicators, the clinical features of latent and manifest forms of iron deficiency in adolescent girls living in rural conditions are studied.
3. Objective examinations of peripheral erythron indicators revealed anemic syndrome in 60.5% of girls and iron deficiency in 59.7% based on the results of iron metabolism analysis.
4. Despite the fact that a constant diet consisting mainly of carbohydrates and fats fully covers the caloric deficit, it can cause iron deficiency anemia in children, adolescents with a lot of blood loss, and pregnant women, a particularly dangerous group.

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