Original Article

Key Aspects Of The Development Of The Menstrual And Ovarian Cycle In Adolescent Girls

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Abstract

To determine the causative factors that are etiological factors in the development of menstrual-ovarian cycle disorders in the structure of gynecological pathology among adolescent girls in the Bukhara region and develop recommendations for the early prevention of reproductive dysfunctions. Violation of the harmony of development, lagging pace and timing of the development of secondary sexual characteristics, later than the "menarche" to a certain extent determines the low level of their reproductive health, which dictates the need for a thorough integrated approach and timely correction of premorbid conditions in adolescence. However, already today, starting from adolescence, we can use the possibilities of preventing the above pathologies to really provide, on a population scale, individualized preconception training for each girl and girl, aimed at strengthening the reproductive potential of the country.

Keywords: ovarian cycle, harmony, hormonal hemostasis, reproductive health

Relevance. Juvenile gynecology is undoubtedly a priority area of health care for the state, given the fact that the reproductive health of adolescent girls in each country determines the level and lifestyle, future potential for demographic growth, the well-being of the parents' families and the socio-cultural characteristics of the population of the region of residence [2,4,17,19]. In Uzbekistan, the incidence of menstrual disorders in girls aged 11 to 18 has increased 3.4 times over the past 10 years. The number of girls at risk of absolute or relative infertility has increased (Ashurova S.A., 2011, Ayupova F.M. 2018).

Khamoshina M.B., Lebedeva M.I. et al. (2018) studied the reproductive potential of teenage girls in Russia. The data obtained by the authors confirm the continuing negative rate of natural population growth (-1.8% in 2009), the aggravation of the progressive decline in the number and level of health of children aged 0-17, which creates a real threat to replenish the demographic reserve and the successful implementation of the reproductive function that lies ahead for them. in the coming decades. During this period, the proportion of children and adolescents in the general structure of the population decreased by 26.0%. [1,3,6,11,15].

According to the recommendations of the International Association of Obstetricians and Gynecologists (FIGO) 2011, the parameters of a normal menstrual cycle include the following: regularity, in which deviations of 2-12 days are allowed during the year, the duration of the menstrual cycle is from 24 to 37 days, the duration of the menstrual days is from 4,5-8 days, as well as the volume of blood loss - from 10 to 75 ml [5,7,12,20,24]. Any uterine bleeding that does not meet the parameters of a normal menstrual period is assumed to be abnormal uterine bleeding. This term was adopted at the XIX World Congress of Gynecologists and Obstetricians (FIGO) in 2009 in Cape Town [8,10,18,23].

The results of the study indicate a significant frequency of anxiety and depressive disorders in menstrual dysfunction, especially on the basis of hyperandrogenism, sometimes reaching up to 40-45% of cases. The problem has acquired social significance and attracted increased interest in view of the fact that it is associated with a high risk of anxiety, irritability and neurosis, and sometimes even aggressiveness and depression in adolescent girls with skin

manifestations. Also, such symptoms as a decrease in the timbre of the voice, androgenetic alopecia, black acanthosis can also lead to a decrease in mood [9,13,14,16,22].

Purpose of the work: To determine the causative factors that are etiological factors in the development of menstrual-ovarian cycle disorders in the structure of gynecological pathology among adolescent girls in the Bukhara region and develop recommendations for the early prevention of reproductive dysfunctions.

Material and methods of research: The research included 176 adolescent girls from 11 to 17 years old (with the permission of their parents). Of these, 96 girls were with various types of menstrual dysfunction (main group) and 80 girls had normal menstruation of the same age. The surveyed were students of secondary schools in the Bukhara, Zhandar and Romitan districts of the Bukhara region, as well as the city of Bukhara. Of these, 42% of the girls were city dwellers, and 58% lived in rural areas. A questionnaire-survey method was used with the consent and in the presence of their parents, as well as an anthropometric method to determine the body mass index (BMI) of adolescent girls. The Kettle formula (kg/m2) was used to determine BMI

Results and discussions: We have studied outpatient medical records of 272 schoolchildren from schools in the Bukhara region with various types of menstrual-ovarian cycle disorders, which are under the supervision of an attached doctor and nurse of this school. Based on the questionnaire, general examination, and anthropometric data, we summarized the results and clarified that the mean age at menarche was 12.3+/-1.2 years. Among the various disorders of the menstrual cycle, the most frequently observed hypomenstrual syndrome, manifested by rare, short and meager menstrual flow, as well as irregular cycles, which were recorded in 56% of adolescent girls. At the same time, 7.2% of the examined girls in this group were diagnosed with primary and secondary amenorrhea. The duration of amenorrhea varied from 6 to 16 months.

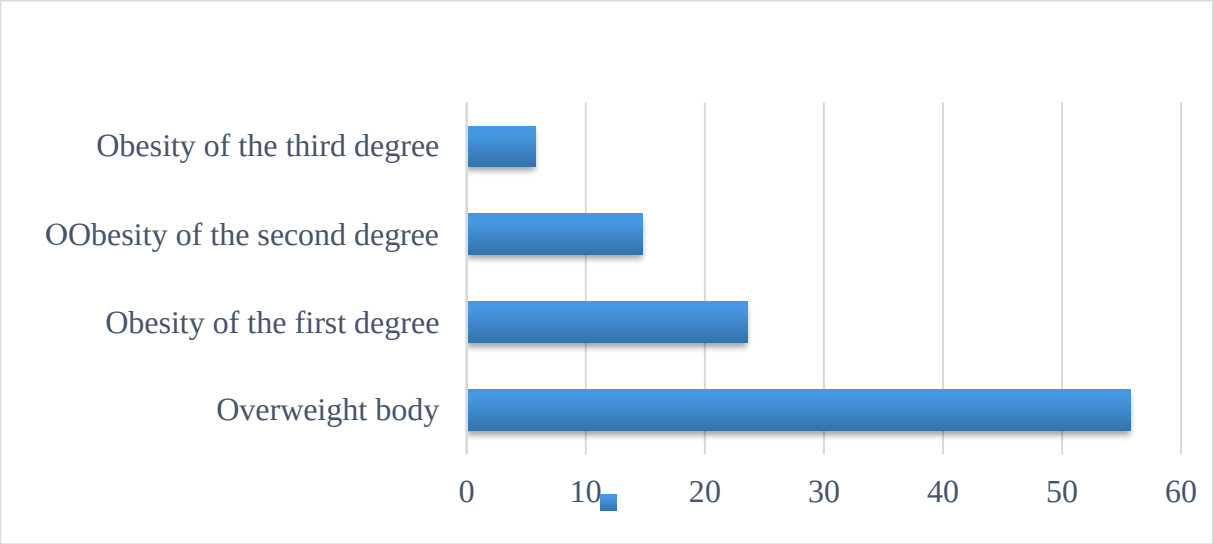
Etiological factors in the development of menstrual disorders in the surveyed adolescent girls

№	Risk factors	Main group (n=96)		Control group (n=80)	
		abs	%	abs	%
1	Maternal history of infertility	28	29,2	8	10,0
2	Complicated course of pregnancy in this child	58	60,4	12	15,0
3	Complicated course of labor	34	25,0	10	12,5
4	Maternal menstrual dysfunction	46	47,9	22	27,5
5	Frequent SARS (more than 6 times a year)	88	91,7	10	12,5
6	Physical retardation	72	75,0	-	
7	Presence of euthyroid goiter	66	68,8	24	30,0
8	Lack of secondary sexual characteristics	30	31,25	-	
9	Male pattern hair	12	12,5	-	
10	Overweight/Obesity	6	6,25	-	
11	Reduced nutrition	30	31,25	14	17,5
12	Increased mental load	18	18,75	12	15,0
13	The presence of chronic somatic patholog	96	100,0	-	
14	Unfavorable social and living conditions	20	20,8	6	7,5
15	Chronic sleep deprivation	14	14,6	10	12,5
16	Frequent exposure to stressful situations	10	10,4	4	5,0
17	Wrong and unbalanced diet	24	25,0	8	10,0
18	Frequent change of climate and place of residence	10	10,4	4	5,0

Almost every third respondent girl (31%) pointed to painful menstruation, especially in her 1-2 days. The pain manifested itself with varying intensity, from slight to temporary disability. In some cases, girls were forced to refuse to attend school. The following table lists the studied factors that may have influenced the development of menstrual irregularities. Pain resolved spontaneously in 27% of cases, and pain medication was required in 73% of cases. Only 5.6% of respondents consulted medical staff about painful menstruation. Of the medical methods, non-steroidal anti-inflammatory drugs (kyupen, fanigan, diclofenac, cinepar, bolnol, etc.), as well as antispasmodics (no-shpa, baralgin), are mainly used. 21% of respondents indicated a late onset of menarche compared to their peers. In 7% of adolescent girls who have reached the age of 15, the menstrual cycle has not yet functioned (primary amenorrhea), which indicates a lag in sexual development. Three patients had a history of episodes of acyclic bleeding, about which they turned to a specialist and received complex therapy with the inclusion of drugs for hormonal hemostasis.

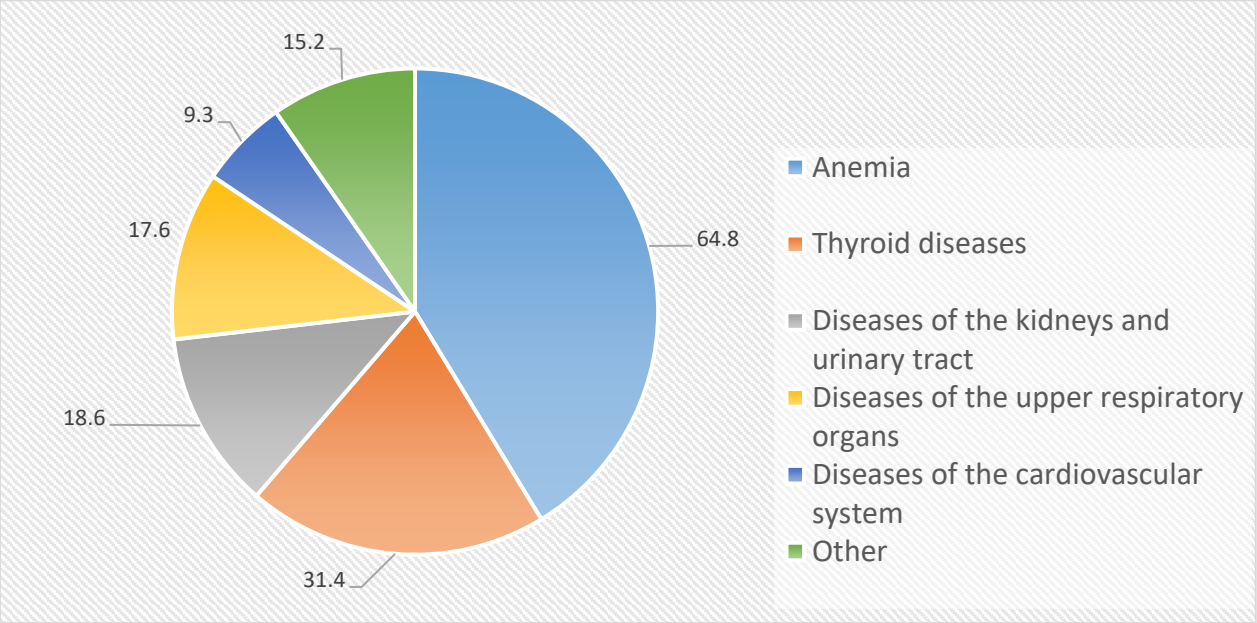
According to the results of the study, it was revealed that every fourth (25%) girl had overweight. Including, obesity of the first degree was diagnosed in 23.6% of cases, obesity of the second degree in 14.8% of adolescents. In 4 (5.8%) patients, obesity of the third degree was diagnosed. And 55.8% of adolescent girls had a borderline degree (BMI = 25-29) of weight gain. In 28% of cases, there was a combination of obesity with signs of hirsutism.

Degrees of obesity in surveyed adolescent girls



In addition to overweight and obesity, all adolescent girls were diagnosed with various extragenital diseases, among which anemia predominated (66% of cases), diseases of the thyroid gland (37% of cases), kidney and urinary tract (28% of cases), ENT diseases (17 % of cases) and others, for which they were referred to narrow specialists. 26% of girls had a combination of several extragenital pathologies.

The incidence of extragenital diseases in the surveyed adolescent girls



It is possible that the presence of extragenital pathologies at puberty was the background for the development of various menstrual dysfunctions.

Thus, the frequency of occurrence of menstrual irregularities in adolescence to a certain extent indicates the accumulation of the "burden" of pathology, which undoubtedly affects, in particular, an increase in the incidence of women of childbearing age and pregnant women. The decrease in the index of somatic and gynecological health is primarily associated with an increase in chronic diseases of organs and systems responsible for the preparation, formation and implementation of the function of motherhood, the incidence of which was 60-75% among modern schoolgirls in the Bukhara region. In the structure of deviations in the rhythm of menstruation in girls from 14 to 17 years, delays in menstruation (74.9%), up to amenorrhea (29.7%), against the background of obesity, hyperandrogenic manifestations, thyroid diseases, anemia and metabolic disorders prevail.

Violation of the harmony of development, lagging pace and timing of the development of secondary sexual characteristics, later than the “menarche” to a certain extent determines the low level of their reproductive health, which dictates the need for a thorough integrated approach and timely correction of premorbid conditions in adolescence. However, already today, starting from adolescence, we can use the possibilities of preventing the above pathologies to really provide, on a population scale, individualized preconception training for each girl and girl, aimed at strengthening the reproductive potential of the country.

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