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Prediction and Prevention of Reproductive Health Issues in Young Women and Adolescents

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Abstract Efforts to prevent reproductive system disorders in adolescent girls and women of early reproductive age have led to the development and implementation of predictive measures, standardized laboratory procedures, and ultrasound guidelines. Research has shown a significant association between hormonal markers (FSH, LH, estradiol, progesterone, AMH, and testosterone) and the lipid profile, as well as blood serum optical density in this group. Methodological recommendations have also been established to guide interventions. Scientific studies have confirmed that metabolic and hormonal disturbances in adolescent girls are predictive of future reproductive health issues.

Keywords Reproductive health, Adolescent girls, Hormonal disorders

1. Introduction

Relevance of scientific workis evident in the advancements made in our republic, where new medical care standards have been developed and implemented. These standards aim to reduce the risk of gynecological diseases in their early stages and improve the prognosis of their progression. Efforts are also being made to enhance the effectiveness, quality, and accessibility of medical care, alongside standardizing diagnostic and treatment methods for tuberculosis. These initiatives reflect a commitment to improving public health outcomes.

In contrast to traditional married families with children, certain models emphasize patronage and responsibilities typically associated with parenthood. This highlights the diverse structures and dynamics that can exist within family units.

The aim of the study is to create an optimal framework for predicting and preventing reproductive health issues in adolescent girls and women in their early reproductive years.

2. Materials and Methods

Disruptions in menstruation can impair reproductive function, leading to irregular menstrual cycles and affecting overall somatic health, which may paradoxically enhance reproductive capacity in some cases. We are excited to welcome women impacted by these conditions to the 2021 program, as detailed in documents 120-2019 and references [7,8].

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The research was carried out on the basis of the Bukhara Regional Perinatal Center, the regional reproductive center, the Regional Multidisciplinary Children's Center of Bukhara and jointly with the Department of Obstetrics and Gynecology of the Bukhara State Medical Institute for the period 2019-2021.

Anamnestic data were collected from all women in the studied groups, medical history data were studied, indicators of objective studies, laboratory data and the obtained parameters of functional research methods were interpreted.

In order to compile an anamnesis, complaints, information about operations, the transfer of gynecological and extragenital diseases, and the identification of the hereditary nature of the disease were taken into account. The menstrual and generative functions were studied in detail. The surveys also included data on body type, anthropometric data, and the state of the body's organs and systems. For a reliable interpretation, the nature of sensations during the menstrual cycle was clarified in detail.

Statistical processing of the obtained data was carried out with the calculation of the following parameters: arithmetic mean (M), error of the arithmetic mean (t), mean square deviation, confidence interval. The Student's criterion was used to compare the averages and the degree of reliability of the differences between the samples. The differences between the indicators were considered significant if the degree of probability was $p<0.05$. The principle of evidence-based medicine was used in the organization and conduct of research.

3. Research Results

In accordance with the objectives and tasks of the study, a

retrospective examination of 500 girls and women aged 16 to 20 years was conducted to identify the frequency and types of menstrual disorders, study their somatic status, and determine the risk group for reproductive dysfunction. Prospectively, 120 girls and women with various menstrual disorders were examined during the period from 2019 to 2021. The control group consisted of 30 healthy women of the same age. The average age of the examined individuals was 18.0 years. More than half of the examined patients, 280 (56.0%), were rural residents, while the remaining 220 patients (44%) were permanent urban residents. The average age of patients in Group 1 was 17 ± 0.6 years, in Group 2 it was 17.9 ± 0.7 years, and in Group 3 it was 18.0 ± 0.75 years. It is evident that there is no significant difference in age or place of residence between the groups, indicating the correct selection of patients and the representativeness of the groups [1,2].

Based on the obtained anamnesis data and clinical examination of the studied groups of patients, the following pathologies were identified.

Table 1. The structure of somatic and gynecological pathology in a comparative aspect

Nosology	The maingroup **2-A, n=91**		The maingroup **2-B, n=29**		Control group 1-groupn=30		P-reliability and fidelity
	abs	%	abs	%	abs	%	
Endocrinopathies							
Hypothyroidism	26	28,5	6	20,6	1	3,33	p≥0,05
Nodulargoiter 1st.	8	8,7	6	20,6	5	16,6	p≥0,05
Nodulargoiter 2st	3	3,2	3	10,3	2	6,66	p≥0,05
Nodulargoiter 3 st	1	1,09	1	3,4	1	3,33	p≥0,05
Gynecologicaldiseases							
Dermoidcyst	5	5,5	2	6,8	-	-	p≥0,05
Follicularcyst	18	19,7	6	20,6	-	-	p≥0,05
Hematocolpos	1	1,09	-	-	-	-	p≥0,05
Aplasia of the uterus	1	1,09	-	-	-	-	p≥0,05
Ovarianaplasia	1	1,09	-	-	-	-	p≥0,05
Bartholinitis	1	1,09	-	-	-	-	p≥0,05
inflammatorydiseases of the pelvicorgans	31	34,0	9	31,03	-	-	p≥0,05
Uterinefibroids	-	-	5	17,2	-	-	p≥0,05
Endometriosis	9	9,8	5	17,2	-	-	p≥0,05
Genitalinfantilism	21	23,0	2	6,8	-	-	p≥0,05
PCOS	26	28,5	5	17,2	-	-	p≥0,05

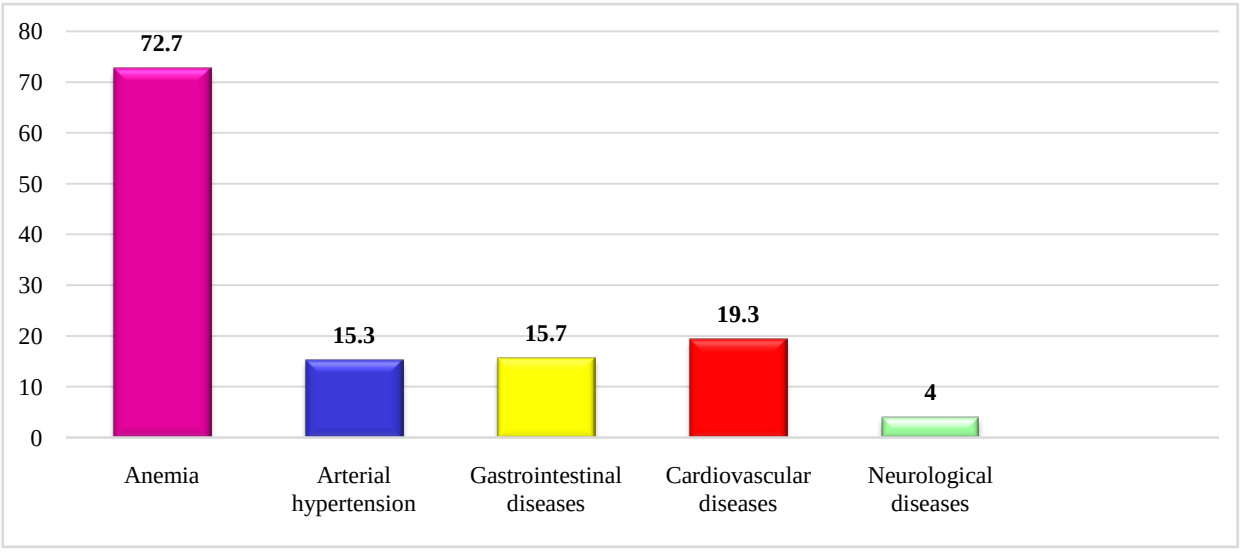

Figure 1. Diagnosed concomitant diseases in the women we examined, in % ratio.

As can be seen from the above data, the main indicators of endocrinopathies and gynecological diseases prevailed in group 2 compared with group 2 and control groups. Hypothyroidism and nodulargoiter of the 1st degree prevailed among endocrinopathies, whereas in gynecological terms, there were more cases of IBD. The course and prognosis of the underlying disease depends on many factors that can affect the outcome of the disease, including the success of treatment of this disease [3,4]. One of these factors is the presence of concomitant diseases in patients, the diagnosis of which is of great importance. In this regard, we diagnosed concomitant somatic diseases in the women we examined aged 16 to 20 years. (Fig. 1). It was found that the examined girls most often had anemia of varying degrees (72.7%), in subsequent places there were such nosologicalunitsasarteria lhypotension (15.3% n=23), cardiovascular diseases (19.3, n=29), neurological diseases (4%, n=6). When summarizing the data on the presence of EGZ among the examined patients, we found the following, so in the control group EGZ occurred in 29.9% of cases, in group 2–in 54.9%, which is almost 1.9 times more common than among girls from the control group. All data is shown in Figure 1.

The clinical characteristics of the examined patients would be incomplete without establishing the patients' complaints, including the presence of pain [5,6]. It was found that pain was observed in (30.1%). The rest (69.9%) had no pain as the main complaint of the patients. In addition, a small proportion of girls (%, n=14.8) complained of bleeding from the genital tract. Which were caused by the lengthening of menarche days, 6.0% for lean menstruation. In addition, a certain part of the examined patients complained of intermenstrual bleeding from the genital tract (%, n=8,9). Based on the complaints of women and their subjective feelings, the pathological course of premenstrual syndrome was substantiated. This syndrome has been identified in girls. 31 (20.6%) patients were clinically identified. All the examined women (n=150) were divided into 3 groups to compare the obtained research parameters and in order to obtain reliable data: group 1-patients with the physiological course of the reproductive period (n=30); The 2nd group consisted of girls and girls (n=120) with pathology of menstrual function in the reproductive period. Patients from this group underwent a screening study by initially examining the optical density of the blood serum, followed by the state of trace elements in the blood serum, steroid hormones, thyroid hormones, ultrasound diagnostics in order to predict and early diagnose disorders of their reproductive potential, to select timely corrective adequate therapy. According to other clinical characteristics – diagnosis, concomitant diseases, complaints at admission, parity and the use of contraceptive methods, similar indicators were obtained. Table-2 shows the height and weight of the surveyed women by group in a comparative aspect.

As can be seen from the indicators listed in this table, there were no significant differences in height and weight parameters between the groups. All the examined women underwent clinical, instrumental, and laboratory tests. Biochemical markers (the content of calcium, magnesium, zinc in peripheral blood) and hormones (PH, FSH, LH, estradiol, progesterone, TSH, and thyroxine) were determined. Ultrasound examination of the pelvic organs (uterus, appendages) was performed in all women of the studied groups (n=150).

Table 2. Comparative parameters of average height and weight of the examined groups n=150

Groups	Average height, sm	Average weight, kg
Group1, n=30	165,3±2,3	60,5±1,4
Group, n=120	168±2,45	59,1±1,1

4. Summary

Adolescent girls with thyroid dysfunction, obesity, somatic pathology, and menstrual disorders, regardless of their physical and sexual development stage, require necessary examination -consultation with an endocrinologist, thorough evaluation by relevant specialists, and gynecological advice to address the issue of adequate management and treatment strategies. To diagnose reproductive health disorders in girls, an ultrasound examination should be conducted to scan the uterus, ovaries, and thyroid gland, along with hormone level testing as indicated. Determining appropriate levels of Anti-Müllerian Hormone (AMH) in adolescent girls, particularly its declining trend, can predict developmental potential and reproductive disorders, especially in obese girls, and provide insight into their future reproductive capacity. Early correction of endocrine and hormonal disorders during adolescence can help avoid future reproductive problems. Addressing these issues also involves raising awareness among parents through educational efforts, emphasizing the importance of timely visits to a gynecologist one year after menarche in cases of irregular menstrual cycles, as well as early detection of weight gain or increased hair loss in their daughters.

REFERENCES

[1] Kholova Nodira Fazliddinovna. Forecasting the readiness to perform the reproductive function of adolescent girls. Scholar's Digest- Journal of Multidisciplinary Studies Volume 02, Issue 05, May, 2023. P 47-49.

[2] Rakhmonkulova Nargiza Gofurovna & Nematilllaeva Mastura Nurullaevna & Tuksanova Dilbar Ismatovna & Kholova Nodira Fazliddinovna & Solieva Nozima Karimovna. (2024). Comparative characterization of liver morphometric parameters during pregnancy in experimental chronic renal failure. BIO Web of Conferences. 121.04004.10.1051/bioconf/202412104 004. https://www.researchgate.net/publication/382478714.

[3] Kholova Nodira Fazliddinovna. Risk factors and their negativeimpact on the formation reproductive function (Overview). Eurasian Scientific Herald. Volume 15| December, 2022. P 32-36.

[4] Akhmedov F.K., Negmatullayeva M.N., Tuksanova D.I. Features of kidneyfunction in women with complicated

preeclampsia. International Journal of Current Research and Reviews, 2021, 13(1), pp. 70-744.

[5] Ashurova N.G., Bobokulova S.B. Prediction of menstrual-ovariancycle disorders in adolescent girls based on the study of geneticmarkers. "Russian Bulletin of obstetrician-gynecologist"". 2024; 24(5): 12-18.

[6] Zaripova D.Ya., Abdullayeva M.A., Sultanova N.A., Akhmedov F.K., Nasirov Z.S., Umarov E.U., Shukrullayeva G.J. Optimization of diagnosticmeasures for earlymenopause and prematuremenopause. The journal" Reproductive Health of Eastern Europe". 2024; 14(5). pp. 617-628.

[7] Zaripova D.Ya. Diagnosticcriteria for the detection of osteoporosisin the perimenopausalperiod. Productivehealth of EasternEurope. 2024; 14(5). pp. 590-598. https://doi.org/10.34883/PI.2024.14.5.004.

[8] Kholova Nodira Fazliddinovna. Main aspects of reproductive health of adolescent girls and girls of early reproductive age. Eurasian Scientific Herald. Volume 15| December, 2022. P 27-31.