

Open Access Article

PROBLEMS OF REPRODUCTIVE PATHOLOGY IN BOYS AND GIRLS

Zilola Aramovna Juraeva

Lecturer of Endocrinology course, Department of Therapy No. 3 Samarkand State Medical Institute
Samarkand, Uzbekistan

Nazira Karimova

PhD of Medical Sciences, Head of Endocrinology course, Department of Therapy No. 3 Samarkand
State Medical Institute Samarkand, Uzbekistan nazira2310@gmail.com

Timur Makhmudovich Kamalov

Master of Science of Endocrinology course, Department of Therapy No. 3 Samarkand State Medical
Institute Samarkand, Uzbekistan tima1993@bk.ru

Nozima Sobirzhanovna Kurbanova

Assistant of Endocrinology course, Department of Therapy No. 3 Samarkand State Medical Institute
Samarkand, Uzbekistan

Sitora Nodirovna Azimbekova

Master of Science of Endocrinology course, Department of Therapy No. 3 Samarkand State Medical
Institute Samarkand, Uzbekistan

Sarvinoz Ulugbekovna Rakhmatova

Master of Science of Endocrinology course, Department of Therapy No. 3 Samarkand State Medical
Institute Samarkand, Uzbekistan

Introduction

In recent years, the problem of adolescent reproductive health has become of particular medical and social importance worldwide, due to the steady increase in morbidity. The spectrum of reproductive system pathology: inflammatory diseases of the genitals (77%), chronic foci of infections (41.8%), hormonal disorders (61.2%) [1, 2, 3, 4]. Sexual development delay in obese adolescents is a functional, tempo - related delay in the appearance of signs of puberty by more than two standard deviations compared to the average time. So, the frequency of delayed sexual development among boys older than 4 years is 5 %. At the same time, in 70% of cases, sexual development delay is combined with obesity [5, 6, 7].

简介

近年来，由于发病率的稳步上升，青少年生殖健康问题在世界范围内已成为特别重要的医学和社会问题。生殖系统病理范围：生殖器炎症性疾病 (77%)、慢性感染灶 (41.8%)、激素紊乱 (61.2%) [1, 2, 3, 4]。肥胖青少年的性发育延迟是与平均时间相比，青春期迹象出现超过两个标准差的功能性、节奏相关延迟。因此，4岁以上男孩性发育迟缓的频率为5%。同时，在70%的情况下，性发育迟缓与肥胖相结合 [5, 6, 7]。

Hyperprolactinemia (HPLC) is one of the most common endocrine syndromes that occupy a place at the intersection of reproductive endocrinology and clinical endocrinology [8, 9, 10].

Rehabilitation of adolescents and prevention of pathology of the reproductive system is an urgent problem [11, 12].

Syndrome of impaired sexual development in adolescent girls lack of menstruation. Adolescent boys with no development of secondary sexual characteristics, gynecomastia are tall, look older than their peers, the face is similar to a woman, there is no hair growth on the face, armpit, pubic area. The size of the testicles, scrotum and penis meet the age norm and reach full development before the age of 15. On radiography of the hands- "growth zones" are closed 2, 5-7 years faster than usual. Possible ovarian enlargement (sclerosis) on ultrasound [13, 14, 15].

Aim of the research was to study the risk factors for sexual development disorders in obese adolescents.

The implementation of this goal predetermined the solution of tasks;

1. Detection of pathology by preventive examinations.

2. Assessment of physical and sexual development in adolescents with obesity

3. Study of the hormonal background in adolescents with impaired sexual development

Material And Methods

To achieve our goals and objectives, we conducted preventive examinations in colleges and schools in the districts: The total number of teenagers was 5982 aged 15-16 years living in the Samarkand region. 58 of them were identified with pathology of the reproductive system. Of this number, 36 boys with obesity and gynecomastia are boys, while 26 are girls.

Criteria for inclusion in the study:

- there is no hair growth on the face, armpit, pubic region.
- age > 14 years;
- obesity BMI over 35.- amenorrhea in girls
- Gynecomastia in boys

At the first stage, adolescents with the revealed pathology were examined in polyclinic settings, where the somatic state and physical development were assessed. The study of adolescents revealed abdominal obesity in 83.3% of cases, carbohydrate metabolism disorders (80.0%), hypertriglyceridemia (63.3%), and a decrease in HDL levels (76.7%).

To date, the negative impact of obesity on the male reproductive system has been proven. It is established that obesity in men can disrupt the

androgenic function of the testicles. It was proved that the content of total and free testosterone in the blood serum of overweight and obese patients was significantly lower compared to the group of patients with normal body weight. It is assumed that a decrease in testosterone in overweight and obese men is associated with an increase in serum estrogens. So, excess adipose tissue leads to aromatization of androgens in estradiol by increasing the aromatase enzyme of white adipose tissue. In addition, obese patients are characterized by hyperinsulinemia, which can lead to a decrease in SHBG synthesis in the liver, which leads to an increase in the free fraction of estradiol. In turn, an excessive amount of estradiol by the negative feedback mechanism can lead to a decrease in the secretion of gonadotropin hormones with the formation of hypogonadism. This leads to a decrease in the amplitude of LH secretion, a decrease in the total secretion of LH, FSH during the day in men with obesity. In addition, hyperestrogenemia can inhibit the production of testosterone by Leydig cells, which is confirmed by a number of studies [16, 17, 18]. Additional evidence for the deterioration of androgen function in obese men is an increase in the concentration of testosterone in the blood serum with a decrease in body weight [19, 20, 21].

To establish the genesis of the pathology in adolescents, magnetic resonance imaging was performed. 50 patients were examined, including:

1. Prolactinoma (macro and microadenoma) was detected in 26 patients
2. 2 patients have "empty" Turkish saddle syndrome
3. 4 patients had polycystic ovary syndrome

4. 18 patients had functional (idiopathic) hyperprolactinemia.



Table 1. Examination results

Indicators	KZPR with excess capacity	KZPR with normal body weight	r
------------	---------------------------	------------------------------	---

	body weight/obesity (n= 25)	(n= 38)	
Me [25;75]			
Prolactin, mME / l	161,9 [106; 218]	158 [108; 206]	0,9
Cortisol, nmol / l	273 [240; 315]	351[266; 432]	0,07
DHEA-s, mmol / l	4,4 [3,7; 5,4]	3,3 [2,8; 4,5]	0,03
Insulin, mcEd / ml	9,7 [7,8; 12,8]	4,0 [3,2; 5,3]	0,00003

Conclusion

1. Preventive examinations should be conducted with the participation of pediatric gynecologists, after preliminary training of girls.
2. Conduct a thorough assessment of physical and sexual development when somatic pathology is detected, and conduct effective rehabilitation therapy.
3. Evaluation of the pathology of the reproductive system on a commission basis with the participation of a pediatric gynecologist, endocrinologist and pediatrician.

Completed treatment:

1. Diet therapy table 9
2. Dostinek (Kobergalin) on 1 tab 2 times once.
3. Against the background of the treatment, gynecomastia disappeared after 3 months, and

secondary sexual characteristics appeared in boys. However, monthly monitoring of weight and prolactin levels is necessary. In 2 patients, the effect was achieved after one year.

References

1. Alimdzhanova N.T. Medical and social aspects of the reproductive health of a young family // Abstract dissertation. Candidate of Medical Sciences Tashkent 2008 pp. 1-4.
2. Banyushevich I. Reproductive health of adolescent girls aged 15-17 years in the Omsk region // Doctor-Moscow 2010. No. 8- P. 79.
3. Bogdanova E.A. Features of the hormonal status of girls with uterine bleeding during puberty // Problems of reproduction - Moscow, 2010.-№3 p.35-39.
4. Almazov V.A., Blagosklonnaya Ya.V., Shlyakhto E.V., Krasilnikova E.I. Metabolic cardiovascular syndrome. // SPb.: St. Petersburg State Medical University, 2010.-202 p.
5. American Diabetes Association. Diabetes from A to Z. The knowledge you need about diabetes - in a simple statement. // Per from English. Ed. A.S. Fokina, A.A. Fokina, L.P. Churilova, Yu.I. Stroeve. SPb: EIBi, 2013.- 206 p.
6. Alexandrov O.V., Alekhina R.M., Grigoriev S.P. and other Metabolic syndrome. // Ros med zhurn, 2016, No. 6, pp. 50-55.
7. Balabolkin M.I., Mamaeva G.G., Kravchenko T.V. Gene polymorphism in patients with arterial hypertension and non-insulin dependent diabetes mellitus. // Actual problems of modern endocrinology. Mater. IV All-Russia. Congress of Endocrinologists. - SPb, 2011. -- P. 19.
8. Balluzek MF Age features of the course, nadjuvant phototherapy of cardiovascular metabolic syndrome: // Abstract of the thesis. dis. ... Cand. honey. Sciences., - SPb., 2012.

9. Aminov, Z., Haase, R., Rej, R., Schymura, M. J., Santiago-Rivera, A., Morse, G., ... & Akwesasne Task Force on the Environment. (2016). Diabetes prevalence in relation to serum concentrations of polychlorinated biphenyl (PCB) congener groups and three chlorinated pesticides in a native American population. *Environmental health perspectives*, 124 (9), 1376-1383.
10. Aminov, Z., Haase, R., & Carpenter, D. O. (2016). Diabetes in Native Americans: Elevated risk as a result of exposure to polychlorinated biphenyls (PCBs). *Reviews on environmental health*, 31 (1), 115-119.
11. Khwaja, H., Fatmi, Z., Aminov, Z., & Carpenter, D. (2011). Effects of Fine Particulate Matter on Rates of Cardiovascular Diseases in a Developing Mega City. *Epidemiology*, 22 (1), S224-S225.
12. Aminov, Z. Z. (2013). *Exposure to Persistent Organic Pollutants and Metabolic Diseases* (Doctoral dissertation, University at Albany. Department of Environmental Health Sciences).
13. Akhmedov M.Zh., Shavazi N.M., Lim V.I. The state of metabolic processes in infants with pneumonia complicated by neurotoxic syndrome // *Allergology and immunology*, 2007. T. 8. No. 1.S. 326-326.
14. Juraeva Z.A., Nasrullaeva R.T. The prevalence of diffuse and nodular goiter in the Samarkand region according to the data of physical and ultrasound examination // *Physician Bulletin*, 2016, p. 38.
15. Rustamov M.R., Garifulina L.M. Indicators of the cardiovascular system in children and adolescents against the background of obesity and arterial hypertension // *Problems of Science and Education*, 2019. No. 6 (52).
16. Tursunov F.O. and others. Diabetes mellitus type 1 in children in the system of emergency medical care // *Bulletin of emergency medicine.*, 2013. №. 3.
17. Umedova S.E., Khamraev Kh.T. The effect of intensive insulin therapy in the correction of glycemia in patients with diabetes mellitus // *Scientific life*, 2011. No. 2. P. 8-9.
18. Malik A. et al. Hypertension-related knowledge, practice and drug adherence among inpatients of a hospital in Samarkand, Uzbekistan // *Nagoya journal of medical science*, 2014. T. 76. No. 3-4. P. 255.
19. Kasimov S. et al. Haemosorption in complex management of hepatargia // *The International Journal of Artificial Organs*. - 2013. -T. 36. - No. eight.
20. Shamsiyev A.M., Khusinova S.A. The Influence of Environmental Factors on Human Health in Uzbekistan // *The Socio-Economic Causes and Consequences of Desertification in Central Asia*, Springer, Dordrecht, 2008, pp. 249-252.
21. Juraeva Z.A., Nasrullaeva R.T. The prevalence of diffuse and nodular goiter in the Samarkand region according to the data of physical and ultrasound examination // *Physician Bulletin*, 2016, p. 38.