

Complications of Reproductive Pathology Disorder of Physical Development in Adolescents

Zokirova Fazila Boltayevna

Bukhara State Medical Institute

ABSTRACT

Today, due to various environmental factors and ingredients in different foods, there is a violation of sexual hormonal activity in adolescents, the results of which are reflected in the disruption of reproductive life. Based on our research, we found that the factor of obesity in adolescents also causes changes in sex hormones.

KEY WORDS: hormones, reproductive, obesity, multiple sclerosis

The urgency of the problem. In recent years, all over the world, the problem of impaired physical development of adolescents has acquired special medical and social significance, due to the steady increase in the incidence. Along with this, the spectrum of pathology of the reproductive system is growing: inflammatory diseases of the genitals (77%), chronic foci of infections (41.8%), hormonal disorders (61.2%). Particular alertness is caused by impaired physical development with delayed sexual development in adolescents with obesity. - This is a functional, temporal delay in the onset of signs of puberty by more than two standard deviations compared to the average. Thus, the incidence of delayed puberty among boys over 4 years old is 5%. Moreover, in 70% of cases, delayed sexual development combined with obesity. Hyperprolactinemia (HPRL) is one of the most common endocrine syndromes that occupy a place at the junction of reproductive endocrinology and clinical endocrinology. Rehabilitation of adolescents and prevention of reproductive system pathology is an urgent problem.

Syndrome of impaired sexual development in adolescent girls, lack of menstruation. In adolescent boys, the lack of development of secondary sexual characteristics, gynecomastia are short, look younger than their peers, the face looks like a woman's, there is no growth of hair on the face, armpit, and pubic region. The sizes of the testicles, scrotum and penis do not meet the age norm and do not reach full development until the age of 15. On hand radiography - "growth zones" are 2, 5-7 years slower than usual. Possible reduction of the ovaries (sclerosis) on ultrasound.

Objective: To study the risk factors for impaired physical and sexual development in obese adolescents.

Implementation;

1. Identification of pathology by preventive examinations.
2. Assessment of physical and sexual development in obese adolescents
3. Study of hormonal levels in adolescents with sexual development disorders

Material and research methods. To solve the set goals and objectives, we carried out preventive examinations in colleges and schools in the districts: The total number of adolescents was 5982 aged 15-16 years living in Bukhara city. of them, 58 were diagnosed with pathology of the reproductive system. Of this number, 36 boys with obesity and gynecomastia were boys and 26 girls. Inclusion criteria for the study: -. Lag in physical development with impaired development of secondary sexual characteristics

- age > 14 years;
- obesity BMI over 35.
- amenorrhea in girls
- Gynecomastia in boys

At the first stage, adolescents with identified pathology were examined in an outpatient setting, where the assessment of the somatic state and physical development was carried out. Examination of adolescents revealed abdominal obesity in 83.3% of cases, disorders of carbohydrate metabolism (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 has been established that obesity in men can impair the androgenic function of the testes. It has been proven that the content of total and free testosterone in the blood serum in overweight and obese patients was significantly lower than in the group of patients with normal body weight. The decrease in testosterone in overweight and obese men is thought to be associated with an increase in serum estrogens. Thus, excess adipose tissue leads to the aromatization of androgens into estradiol by increasing the white adipose tissue aromatase enzyme. In addition, obese patients are characterized by hyperinsulinemia, which can lead to a decrease in the synthesis of SHBG in the liver, which leads to an increase in the free fraction of estradiol. In turn, an excess amount of estradiol through the mechanism of negative feedback can lead to a decrease in the secretion of gonadotropic 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 obese men. In addition, hyperestrogenemia can suppress testosterone production by Leydig cells, which is supported by a number of studies. Additional evidence of the deterioration of androgenic function in obese men is an increase in serum testosterone concentration with a decrease in body weight.

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

1. Prolactinoma (macro and microadenoma) was found in 26 patients
2. In 2 patients, the syndrome of "empty" Turkish saddle
3. In 4 patients, polycystic ovary syndrome
4. In 18 patients, functional (idiopathic) hyperprolactinemia.

Indicators	KZPR with redundant body weight / obesity (n = 25)	KZPR with normal body weight (n = 38)	p
Me [25; 75]	161,9 [106; 218]	158 [108; 206]	0,9
Prolactin, mIU / L	273 [240; 315]	351 [266; 432]	0,07
Cortisol, nmol / l	4,4 [3,7; 5,4]	3,3 [2,8; 4,5]	0,03
DHEA-s, μmol / l	9,7 [7,8; 12,8]	4,0 [3,2; 5,3]	0,00003

1. Preventive examinations should be carried out with the participation of pediatric gynecologists, after preliminary training of girls.
2. Conduct a thorough assessment of physical, sexual development in the detection of somatic pathology to conduct effective rehabilitation therapy.
3. Assessment of the pathology of the reproductive system by a commission with the participation of a pediatric gynecologist, endocrinologist and pediatrician.

Treatment performed:

1. Diet therapy table 9
2. Dostinek (Kobergalin) 1 tab 2 times once.
3. Against the background of the treatment, after 3 months gynecomastia disappeared in boys, secondary sexual characteristics appeared. However, monthly monitoring of weight and prolactin levels is necessary. In 2 patients, the effect was achieved after a year.

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