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Review Article

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MODERN VIEWS ON CORRECTION OF BODY WEIGHT IN PATIENTS OF REPRODUCTIVE AGE WITH OBESITY ANNOTATION

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ABSTRACT

Obesity is a serious medical and social problem. Women of reproductive age with obesity and overweight have impaired reproductive system function, complicated pregnancy, childbirth and the postpartum period. These patients have risks of developing somatic and gynecological pathology. Reproductive health in obese women is an urgent problem. Weight loss and metabolic correction have a positive effect on the restoration of ovulatory function in 40% of patients who are overweight. The article presents the recommended methods of treating obesity in women of reproductive age.

KEYWORDS: Obesity, complications of reproductive function, calorie content, physical activity, metformin, rosgitazone.

Relevance

Obesity is a serious medical, social and economic problem in modern society. Its relevance is primarily determined by its high prevalence. According to forecasts by WHO experts, while maintaining the existing growth rate of the incidence rate, by 2025 there will be more than 300 million people with this diagnosis in the world, of which more than 200 million will be women of childbearing age. Overweight (BMI≥25 kg / m2) according to WHO is found in 40% - 66.3% of the adult female population.[5] Every year, 2.8 million people die due to overweight and 94 obesity in the world.[12] The prevalence of obesity among women of reproductive age is about 25%.[6] As a result, this problem is one of the most relevant in the modern world.

Purpose of the work. To study the statistics and causes of obesity at the present stage of development. To study the available data on the effective treatment of obesity in patients of reproductive age and the relationship between the use of oral contraception and obesity.

In developing countries, the prevalence of overweight and obesity among children is 30% higher than in developed countries. If this trend continues, by 2015 the number of overweight children will increase to 70 million Schokker et al.[15] believes that obesity, in childhood, will lead to a significant increase in overweight infertility in adults. According to the literature in the USA, from 33 to 50% of women have obesity, and 8% of women of reproductive age have a body mass index above 40.[10] In Russia, the frequency of obesity among women is 30–40%.[11]

Obesity is the excess deposition of adipose tissue in the body. On the etiological basis, primary obesity (alimentary and due to genetic defects), symptomatic (associated with other endocrine and mental diseases) and iatrogenic are distinguished.[7] To quantify obesity, use body mass index (BMI): body weight, kg / height, m According to the WHO classification, BMI of 30 and above corresponds to obesity. The distribution of adipose tissue is estimated by the ratio of the waist circumference to the circumference of the hips (WC / CH). In women with android type of obesity, this indicator is higher than 0.83, with gynoid type - less than 0.83.[11]

In patients with obesity, the risk of developing many diseases is increased - impaired fat metabolism, diabetes mellitus, arterial hypertension, cholecystitis, osteoarthritis.[24] Excess aromatase in adipose tissue leads to hyperestrogenism and an increase in the frequency of estrogen-dependent diseases (breast cancer, endometrial cancer). Overweight and obesity increase the risk of pregnancy complications such as gestational diabetes mellitus, hypertension, preeclampsia, preterm birth, and antenatal fetal death. It is dangerous for the fetus from the point of view of the development of developmental anomalies, macrosomia and birth trauma.[12,14] In childbirth, the caesarean section frequency significantly increases up to 32.6% in women with a BMI of 30-35, up to 36.9% with a BMI of 35-40,

up to 47.4% with a BMI of more than 40.[18] After birth, septic complications more often develop.

Very often, obesity is combined with hormonal dysfunction of the ovaries. 45% of obese women develop impaired reproductive function. The frequency of infertility in obese women is 33.6%, which is 2 times more often than in women with normal body weight. Obese women are 2–5 times more likely to experience various menstrual irregularities.[4,7,8] In the practice of a gynecologist, one of the most common causes of anovulation in combination with insulin resistance, hyperinsulinemia and obesity is polycystic ovary syndrome (PCOS), which occurs in 4-7% of women of reproductive age, and 65% of these women are overweight or obese [eleven]. The causative role of obesity in the pathogenesis of reproductive system dysfunction is confirmed by the restoration of the ovulatory menstrual cycle after a decrease or normalization of body weight.[12,15]

It is proved that menstrual function normalizes with a loss of 5 to 10% of body weight. For this purpose, a comprehensive metabolic therapy is carried out, including the principles of a healthy diet and medications. Many authors believe that normalization of body weight leads to the restoration of metabolic and hormonal homeostasis, which contributes not only to the implementation of the generative function, but also to a reduction in health risk and the development of long-term skills in a healthy lifestyle.[13] With the development of obesity, a decrease in body weight of less than 5% of the initial does not lead to the expected effect, 5-10% gives a satisfactory effect and more than 10% leads to a good treatment effect.[9] The optimal weight loss is 0.5-1 kg per week. To implement the principles of good nutrition, it is necessary to calculate the caloric content of the daily diet proposed by WHO.[2,13] The scheme of this calculation for women is as follows:

- 18-30 years: (0.0621 x weight in kg + 2.0357) x 240 x coefficient of physical activity;
- Over 30 years: (0.0342 x weight in kg + 3.5377) x 240 x coefficient of physical activity.

The coefficient of physical activity is calculated from the level of physical activity:

- Low physical activity (mental, sedentary, light domestic work) - coefficient 1.0;
- Moderate physical activity (work related to walking, physical education at least 3 times a week) - coefficient 1.3;
- High physical activity (hard physical work, playing sports) - coefficient 1.5

To reduce body weight, need to reduce the resulting calorie intake by 20%.

I.B. Manukhin et al.[9,10] proposed a simplified scheme: a patient with overweight or obesity needs 22 kcal per 1 kg of weight to maintain weight. To reduce body weight, the resulting daily caloric value is reduced by 700 kcal.

D.G. Bessessen and R. Kushner[3] give the following practical recommendations:

- Consume fruits and vegetables more than 5-7 times a day;
- Take dietary fiber at 25-30 g / day;
- There are varieties of bread from wholemeal flour;
- Drink at least 1.8 liters of water per day;
- Consume low-fat dairy products at least 2 times / day;
- Choose protein foods with a reduced fat content;
- Eat fish at least 2 times a week;
- Limit the use of salt to 2.4 g / day.

The use of insulin sensitizers is not only indicated in the presence of insulin resistance, but also helps to reduce the risk of hyperstimulation syndrome during in vitro fertilization in patients with PCOS.[13] Of the medications in insulin-resistant patients with normal body weight, metformin therapy is recommended at the first stage. The drug from the biguanide class Metformin (Glucofage, Siofor) leads to a decrease in peripheral insulin resistance, improving glucose utilization in the liver, muscles and adipose tissue, normalizes the blood lipid profile, lowering the level of triglycerides and LDL, without affecting the function of pancreatic β-cells. The drug is prescribed for 1000-1500 mg / day. under the control of a glucose tolerance test. The duration of therapy is 3-6 months, including against the background of stimulation of ovulation.[12] Meta-analyzes show that the use of metformin in obesity and PCOS leads to a significant decrease in body weight.[1,4,8]

In recent years, rosglizatone, a drug from the group of thiazolidinediones, which is a selective ligand of specific nuclear receptors capable of inducing the synthesis of proteins responsible for the transport of glucose into the cell, has been used to treat insulin resistance. L.B. Liao et al.[12] in their study compared the effectiveness of metformin and its combination with rosgitazone in obese women and PCOS. The results of the study showed that fasting insulin levels, insulin resistance, luteinizing homon, testosterone, low-density lipoproteins decreased significantly in both groups, but with a combination of drugs the effect was more significant.

In the study of E.N. Andreeva et al.[1] it was shown that the combination of sibutramine / metformin significantly affects the normalization of carbohydrate and lipid metabolism.

Thus, women of reproductive age who are overweight should first be prescribed therapy aimed at reducing body weight for the treatment and prevention of somatic and gynecological diseases, reproductive dysfunctions, complications of a planned pregnancy, childbirth and the postpartum period.

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