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MODERN THERAPEUTIC APPROACHES TO OBESITY MANAGEMENT IN WOMEN WITH METABOLIC SYNDROME

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Abstract: Obesity is the leading clinical manifestation of metabolic syndrome and significantly increases the risk of cardiovascular disease and reproductive dysfunction in women. This study aimed to evaluate the effectiveness of comprehensive obesity therapy in women with metabolic syndrome. Seventy-two women received a combined treatment program including dietary modification and sibutramine-based therapy for 12 weeks. Treatment resulted in significant reductions in body weight, waist circumference, blood pressure, and atherogenic lipid parameters, together with restoration of menstrual function in most patients. Comprehensive obesity management may improve metabolic control, reduce cardiovascular risk, and enhance reproductive health in women with metabolic syndrome.

Keywords: metabolic syndrome, obesity, weight management, sibutramine, cardiovascular risk, reproductive function, women, lipid metabolism, insulin resistance.

СОВРЕМЕННЫЕ ПОДХОДЫ К ЛЕЧЕНИЮ ОЖИРЕНИЯ У ЖЕНЩИН С МЕТАБОЛИЧЕСКИМ СИНДРОМОМ

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Аннотация: Ожирение является ведущим клиническим проявлением метаболического синдрома и значительно повышает риск сердечно-сосудистых заболеваний и нарушений репродуктивной функции у женщин. Целью исследования явилась оценка эффективности комплексной терапии

ожирения у пациенток с метаболическим синдромом. В исследование были включены 72 женщины, получавшие комбинированное лечение, включавшее диетотерапию и терапию на основе сибутрамина в течение 12 недель. Лечение сопровождалось достоверным снижением массы тела, окружности талии, уровня артериального давления, улучшением показателей липидного обмена и восстановлением менструальной функции у большинства пациенток. Комплексная терапия ожирения способствует улучшению метаболического контроля, снижению сердечно-сосудистого риска и восстановлению репродуктивного здоровья женщин с метаболическим синдромом.

Ключевые слова: метаболический синдром, ожирение, снижение массы тела, сибутрамин, сердечно-сосудистый риск, репродуктивная функция, женщины, липидный обмен, инсулинорезистентность.

Introduction: Obesity is one of the most prevalent chronic non-communicable diseases and represents the principal clinical manifestation of metabolic syndrome. The global prevalence of obesity has increased dramatically over recent decades, making it a major public health challenge. Excess body weight is strongly associated with insulin resistance, dyslipidemia, arterial hypertension, and chronic low-grade inflammation, all of which substantially increase the risk of cardiovascular disease and type 2 diabetes mellitus. In women, obesity is also associated with endocrine dysfunction, menstrual irregularities, infertility, and the development of polycystic ovary syndrome, leading to impaired reproductive health and reduced quality of life. Lifestyle modification remains the cornerstone of obesity treatment; however, long-term maintenance of weight loss is often difficult to achieve without additional therapeutic interventions. Pharmacological therapy combined with dietary counseling and regular physical activity has been shown to improve metabolic parameters, reduce visceral adiposity, and decrease cardiovascular risk. Early and effective treatment of obesity may also contribute to the restoration of normal menstrual function and improvement of reproductive

outcomes in women with metabolic syndrome. Therefore, comprehensive management of obesity should be considered an essential component of metabolic syndrome treatment. Further evaluation of modern therapeutic approaches is necessary to optimize clinical outcomes, reduce obesity-related complications, and improve long-term metabolic and reproductive health in affected women.

Aim of the study: To evaluate the clinical effectiveness of comprehensive obesity therapy in women with metabolic syndrome by assessing changes in body weight, anthropometric indices, cardiovascular risk factors, lipid metabolism, and reproductive function following a 12-week treatment program.

Materials and methods. A prospective clinical study was conducted at the Department of Internal Medicine of a tertiary healthcare institution in Uzbekistan. The study included 72 women of reproductive age diagnosed with metabolic syndrome and obesity according to established clinical criteria. The participants were between 18 and 30 years of age and had a body mass index (BMI) greater than 27 kg/m² with menstrual irregularities. Women with diabetes mellitus, uncontrolled arterial hypertension, severe psychiatric disorders, bulimia, or other serious chronic diseases were excluded from the study. Before treatment, all participants underwent comprehensive clinical and laboratory evaluation, including medical history, physical examination, anthropometric assessment, body weight, BMI, waist circumference, blood pressure measurement, and biochemical analysis of lipid metabolism. Patients received a comprehensive 12-week treatment program consisting of an individualized hypocaloric diet combined with sibutramine-based therapy administered at a daily dose of 10 mg. Changes in body weight, waist circumference, blood pressure, lipid profile, and menstrual function were evaluated before and after treatment. Statistical analysis was performed using IBM SPSS Statistics 26.0. Quantitative variables were expressed as mean ± standard deviation, and comparisons between baseline and post-treatment values were performed using Student's *t*-test. Statistical significance was established at a p-value of less than 0.05.

Results. The study demonstrated that comprehensive obesity therapy resulted in significant improvements in anthropometric, metabolic, and reproductive parameters in women with metabolic syndrome. After 12 weeks of treatment, a progressive reduction in body weight was observed in all participants, with a mean decrease of approximately 13% from baseline. Clinically significant weight loss of more than 5% was achieved in 50% of patients, while 40% experienced a reduction exceeding 10% of their initial body weight. Waist circumference decreased by an average of 6 cm, reflecting a marked reduction in abdominal adiposity. Positive changes were also identified in cardiovascular risk factors. Both systolic and diastolic blood pressure significantly decreased without clinically relevant changes in heart rate. Laboratory findings revealed a significant reduction in total cholesterol and triglyceride concentrations, accompanied by an increase in high-density lipoprotein cholesterol levels, indicating improvement of lipid metabolism ($p < 0.05$). The atherogenic index also declined substantially following treatment. Restoration of menstrual function was observed in most participants within the first month of therapy, with normalization of menstrual rhythm, duration, and intensity. Patients who achieved greater than 10% weight loss demonstrated the most pronounced improvement in metabolic parameters and cardiovascular risk profile. No serious adverse events requiring discontinuation of treatment were reported. Overall, the findings indicate that combined dietary intervention and pharmacological therapy effectively reduced body weight, improved metabolic status, decreased cardiovascular risk factors, and restored reproductive function in women with metabolic syndrome.

Conclusions: Comprehensive obesity therapy demonstrated high clinical effectiveness in women with metabolic syndrome by significantly improving anthropometric, metabolic, cardiovascular, and reproductive parameters. A 12-week treatment program combining dietary intervention with pharmacological therapy resulted in substantial body weight reduction, decreased waist circumference, and improved lipid metabolism. Favorable changes in blood

pressure and other cardiovascular risk factors indicated a reduction in overall cardiometabolic risk. Restoration of menstrual function in most participants confirmed the positive effect of weight loss on reproductive health. Women who achieved greater weight reduction experienced the most pronounced improvements in metabolic status and clinical outcomes. These findings emphasize that sustained weight management is a key component of metabolic syndrome treatment. Early diagnosis, individualized therapeutic strategies, and regular follow-up may improve long-term prognosis, reduce obesity-related complications, and enhance the quality of life of women with metabolic syndrome.

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