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PSYCHOLOGICAL STATUS AND HEALTH-RELATED QUALITY OF LIFE IN PATIENTS WITH METABOLIC SYNDROME

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Abstract: Metabolic syndrome is a multifactorial disorder that negatively influences both physical and psychological aspects of patients' health. The aim of this study was to assess health-related quality of life, anxiety, and depression in patients with metabolic syndrome using the SF-36 questionnaire and the Hospital Anxiety and Depression Scale (HADS). A total of 60 patients with metabolic syndrome and 45 healthy volunteers were examined and compared. Patients with metabolic syndrome demonstrated significantly lower quality-of-life scores, particularly in physical and emotional functioning, while subclinical levels of anxiety and depression were observed more frequently than in the control group. These findings emphasize the importance of combining lifestyle modification and medical treatment with psychological support to improve both emotional well-being and overall quality of life.

Keywords: metabolic syndrome, quality of life, anxiety, depression, SF-36, HADS.

ПСИХОЛОГИЧЕСКОЕ СОСТОЯНИЕ И КАЧЕСТВО ЖИЗНИ ПАЦИЕНТОВ С МЕТАБОЛИЧЕСКИМ СИНДРОМОМ

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Аннотация: Метаболический синдром представляет собой многофакторное заболевание, оказывающее неблагоприятное влияние на физическое и психоэмоциональное состояние пациентов. Целью настоящего исследования явилась оценка качества жизни, уровня тревоги и депрессии у пациентов с

метаболическим синдромом с использованием опросника SF-36 и Госпитальной шкалы тревоги и депрессии (HADS). В исследование были включены 60 пациентов с метаболическим синдромом и 45 практически здоровых добровольцев, составивших контрольную группу. У пациентов с метаболическим синдромом выявлено достоверное снижение показателей качества жизни, особенно по шкалам физического и эмоционального функционирования, а также более высокая частота субклинически выраженных тревожных и депрессивных расстройств по сравнению с группой контроля. Полученные результаты свидетельствуют о необходимости сочетания коррекции образа жизни и медикаментозной терапии с психологической поддержкой для улучшения эмоционального состояния и качества жизни пациентов.

Ключевые слова: метаболический синдром, качество жизни, тревога, депрессия, SF-36, HADS.

Introduction: Metabolic syndrome (MetS) is a complex metabolic disorder characterized by the coexistence of central obesity, impaired glucose metabolism, dyslipidemia, and arterial hypertension. Its prevalence has increased considerably in both developed and developing countries, affecting approximately 20–25% of the adult population. Beyond its well-established association with cardiovascular disease and type 2 diabetes mellitus, MetS is also linked to substantial psychological and social consequences. Patients frequently experience anxiety, depressive symptoms, reduced self-esteem, and impaired social adaptation, all of which negatively influence health-related quality of life. Psychological distress may contribute to unhealthy eating behaviors, poor adherence to treatment, and progression of metabolic abnormalities. In addition, obesity often affects body image, professional activity, interpersonal relationships, and emotional well-being, particularly among women. Assessment of quality of life has therefore become an essential component of comprehensive patient evaluation, providing important information about physical functioning, mental health, and social participation. A

better understanding of the relationship between metabolic syndrome, psychological status, and quality of life may contribute to more effective multidisciplinary management and improved long-term clinical outcomes.

Aim of the study: To evaluate health-related quality of life and determine the levels of anxiety and depression in patients diagnosed with metabolic syndrome.

Materials and methods. A case–control, cross-sectional observational study was conducted to evaluate health-related quality of life, anxiety, and depression in patients with metabolic syndrome. The study included 60 patients diagnosed with metabolic syndrome and 45 apparently healthy volunteers who served as the control group. Eligible participants were between 20 and 65 years of age and had a body mass index greater than 27.5 kg/m². Written informed consent was obtained from all participants before enrollment. Patients with malignant diseases, pregnancy, recent acute infections, or exacerbation of chronic illnesses were excluded from the study. All participants underwent a comprehensive clinical examination. Anthropometric measurements included body weight, height, body mass index, and waist circumference. Clinical evaluation also included blood pressure assessment and laboratory investigations to confirm the diagnosis of metabolic syndrome. Health-related quality of life was assessed using the Medical Outcomes Study Short Form-36 (SF-36) questionnaire. The SF-36 evaluates eight domains that reflect both physical and mental health status. Anxiety and depression were assessed using the Hospital Anxiety and Depression Scale (HADS). HADS scores of 0–7 were considered normal, 8–10 indicated subclinical symptoms, and scores of 11 or higher indicated clinically significant anxiety or depression. Statistical analysis was performed using STATISTICA 8.0 software. Differences between groups were considered statistically significant at a p-value of less than 0.05.

Results. The study included 60 patients with metabolic syndrome and 45 apparently healthy volunteers who served as the control group. The mean age of the patients was 37.6 ± 0.4 years, and all participants with metabolic syndrome had

abdominal obesity. Morbid obesity was the most common clinical finding, affecting more than 60% of both men and women. The combination of obesity and arterial hypertension was observed more frequently among male participants, whereas obesity associated with type 2 diabetes mellitus occurred less often.

Assessment of health-related quality of life using the SF-36 questionnaire demonstrated significant differences between patients with metabolic syndrome and the control group. The most pronounced reductions were observed in the domains of physical functioning, role limitations due to physical health, general health perception, vitality, and emotional functioning ($p < 0.05$). These findings indicate that metabolic syndrome negatively affects both physical performance and psychological well-being. Patients with concomitant obesity and type 2 diabetes mellitus showed greater impairment in physical activity, lower vitality, and poorer emotional status compared with patients without diabetes. In addition, longer disease duration was associated with progressive deterioration in physical functioning and increased limitations in daily activities.

Psychological assessment using the Hospital Anxiety and Depression Scale (HADS) revealed subclinical levels of anxiety and depression in most patients with metabolic syndrome. Depression scores were approximately 18% higher than those observed in the healthy control group ($p < 0.05$), indicating a greater psychological burden among affected individuals. Correlation analysis demonstrated significant inverse relationships between body mass index and several quality-of-life domains, including physical well-being ($r = -0.563$), physical functioning ($r = -0.719$), and pain intensity ($r = -0.429$). These results suggest that increasing body weight is associated with reduced physical capacity and poorer overall health perception. Overall, patients with metabolic syndrome experienced marked impairment in both physical and mental components of quality of life, emphasizing the close relationship between metabolic abnormalities, obesity, and psychological distress.

Conclusions: Metabolic syndrome is associated with a significant decline in both physical and psychological components of health-related quality of life. Patients

with metabolic syndrome demonstrated higher levels of anxiety and depression than healthy individuals, indicating an increased psychological burden. The severity of obesity was negatively correlated with physical functioning, general well-being, and pain-related quality-of-life domains. Assessment of quality of life together with psychological status provides valuable information for comprehensive patient evaluation. Along with standard medical therapy, psychological support and lifestyle modification should be included in the management of patients with metabolic syndrome. A multidisciplinary approach may improve emotional well-being, treatment adherence, and long-term clinical outcomes while enhancing overall quality of life.

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