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QUALITY OF LIFE OF PATIENTS WITH DIABETES MELLITUS

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Abstract:

The problem of quality of life (QOL) in diabetes mellitus (DM) worries scientists all over the world. DM is a severe somatic disease, the treatment of which requires strict adherence to a diet, regular intake of hypoglycemic and corrective drugs, mandatory medical supervision. It has been proved that the non-participation of the DM patient in the treatment leads to psychological depression, withdrawal into the disease, prevents the conduct of a full-fledged lifestyle, contributing to the social maladaptation of patients. First of all, with DM, such aspects of QOL suffer as: psychological, professional, family, social and financial, as well as physical, mental and sexual.A number of studies have been devoted to the problems of psychosocial maladaptation of patients with DM. 21% of young patients have difficulties in school related to the disease. Problems in obtaining the desired job are noted in 28% of patients; 19% of patients lost their jobs, 41% of patients encountered the problem of changing their place of work. The conflict zone for women with DM is violations of intra-family relations, and for men - industrial relations.

Keywords: Quality of life, diabetes mellitus, hypoglycemic,

Patients with type 1 diabetes (DM1) have low QL in all three components – somatic, psychological and social, which indicates the severity of the course of this disease, accompanied by pronounced changes in all spheres of life. They are less satisfied with work and relationships with others and give a lower assessment of their interpersonal relationships at work.Much attention is paid by researchers to the search for factors affecting QL in DM1. People with DM1 often feel guilty about the existing disease, which negatively affects their QL. Women are more negative about the impact of DM1 on their lives than men. Pronounced QL disorders are found in patients with unstable course of DM1 (with frequent hyper- and hypoglycemic conditions). In general, QOL in DM1 depends on age, severity of the course, stage, duration of the disease, and the presence of disability.

The aim of the study was to study the quality of life of patients with type 1 diabetes mellitus.

MATERIAL AND METHODS OF RESEARCH

90 patients with DM1 (46 men and 44 women) were examined. The average age of the patients was 32.5± 1.28 years; the length of the disease was 11.7±0.91 years; the age at the onset of the disease was 21.1±1.3 years.

To assess the quality of life of patients with DM, a methodology was developed that includes 18 questions divided into 3 blocks, characterizing, respectively, the state of psychological adaptation of the subjects, social adaptation and a block reflecting the somatic component, which assessed the patient's motivation for independent management of the disease. The subject was asked to express his attitude on each of these questions by choosing one of the possible answers that is most characteristic at the present time. The somatic component was evaluated according to the following questions: 6,11,12,14,15,18; psychological: 8,13,16,17; social: 1,2,3,4,5,7,9,10.

Each answer was evaluated from 0 to 3 points, for the answer a – 0 points, b – 1, b – 2, d – 3 points, in connection with which the maximum possible number of points in the somatic sections was 18 points, psychological – 12 points and social adaptation – 24 points. To equalize the sum of points for all three components, coefficients were used: 1.5 for the somatic component, 2 for the psychological component, and 1 for the social component. The sum of points for the three specified blocks characterizes the total quality of life of patients with DM; the maximum possible number of points is 72 points (in total for three blocks). The quality of life according to the components was considered as extremely unsatisfactory with values from 0 to 6 points, as unsatisfactory – 7-12 points, satisfactory – 13-18 points, good – 19-24 points. The overall quality of life was assessed as extremely unsatisfactory with values from 0 to 18 points, as unsatisfactory – 19-36 points, satisfactory –37-48 points, good - 49-72 points.

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To identify the relationship of QOL with the psychological characteristics of patients, the following experimental psychological methods were used: "Depression Scale"; the "Self-esteem Scale" test, developed by C.D. Spielberger and adapted by Y.L.Khanin; the SAN questionnaire; K. Leonhard's characterological questionnaire; the "Type of attitude to the disease" (TOBOL) method.

Clinical and physiological-biochemical methods were used to study the criteria for the success of DM1 management. The cholesterol content in blood serum was determined by a unified method by reaction with acetic anhydride (Ilka method, 1962); blood sugar level - by glucose oxidase method (Rosh, Austria) (blood sugar self-monitoring data measured on glucose meters "One-Touch", "Akku-chek", "Satellite", and determination of blood sugar by visual strips "Glucochrome D"; from the data obtained, the average blood sugar index for patients for 18 months was determined); the content of glycosylated hemoglobin (HbA1c) is a "Diabetes test".

According to the results of clinical and physiological-biochemical examination, the stage of complications of DM1 and the severity of the disease were determined.

Statistical processing of the obtained data was carried out using the STATISTICA 6.0 program; evaluation of the reliability of differences - according to the Student's criterion ($p<0.05$), correlation - according to the Pearson criterion.

Results and their discussion

The sum of the scores for assessing the psychological adaptation of the QL of patients with DM was 12.68±0.41 points, the somatic component was 12.55±0.41, the social aspects of their lives were evaluated the lowest by patients with DM1 – 10.14±0.29. The total QL score was 35.37±0.87 points, which indicated low QL in all areas of life of patients with DM1.

According to the results of the study, it was revealed that in 66.7% of the surveyed DM had an impact on professional activity, in 87.1% - created restrictions in everyday life, in 72.6% - changed plans for the future. 41.1% of respondents noted that the disease affected their communication with friends.

Only 22.2% of patients with DM1 were completely satisfied with their work, and 27.9% with their education. Only 8.9% of respondents rated their financial situation as good, while 28.9% considered their housing conditions good.

QOL of patients with DM1 was higher at a young age ($r=-0.24$; $p<0.05$) and with a short history of the disease ($r=-0.23$; $p<0.05$). There were no significant differences in the study of QOL in men and women.

When analyzing the relationship of the components of QL with the criteria for the success of DM1 management, it was revealed that the psychological component had a negative relationship with the level of glycemia ($r=-0.26$) and cholesterol ($r=-0.27$), meaning that the higher the psychological QL, the better the indicators of glycemia and cholesterol. The somatic component was associated with the level of glycemia ($r=-0.28$) and HbA1c ($r=-0.35$), confirming the conclusion that with the deterioration of glycemic indices, the subjective well-being of patients naturally worsens. Total QL was associated with the level of glycemia ($r=-0.30$) and cholesterol ($r=-0.26$), that is, the worse the QL was, the higher the indicators of carbohydrate and lipid metabolism.

During the study, there were significant differences in QOL in patients with DM1, depending on the severity of complications of the disease. With the appearance of severe complications of DM1, the scores of the psychological and somatic components of QL were lower, and the overall integral indicator of QL also decreased.

Thus, DM1 had an impact on all spheres of life and activity of patients, reducing their quality of life. The internal conflict that was present in patients with DM1 about the loss of health, the unavailability of a happy family and financially secure life, created additional barriers in the process of realizing basic life goals.

Analysis of the relationship of QL components with the types of attitude to the disease showed that the psychological component of QL positively correlated with harmonic ($r=0.25$), anosognosic ($r=0.30$) and negatively with neurasthenic ($r=-0.39$), melancholic ($r=-0.26$), egocentric ($r=-0.30$), hypochondriac ($r=-0.27$) types of attitude to the disease, that is, those with low QOL were most likely to have hypernosognosic reactions to the disease, and those with high – hyponosognosic. The somatic component of QOL was negatively associated with melancholic ($r=-0.31$), neurasthenic ($r=-0.33$) and apathetic ($r=-0.29$) types of attitude to the disease, explaining that with subjectively poor health, the most likely hypernosognosic reaction to the disease, which was accompanied by "flight into the disease". The social component of QOL was positively associated with ergopathic ($r=0.27$) and anosognosic ($r=0.30$) types of attitude to the disease and negatively – with neurasthenic ($r=-0.31$), melancholic ($r=-0.30$) and apathetic ($r=-0.29$), that is, with good social conditions

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and satisfaction with social hyponozognosia is more characteristic of the environment, and with bad conditions – hypernozognosia.

The dependence of QOL on the scale of nosognosia in patients with DM1 was analyzed . Attention was drawn to the low QL of patients with hypernosognosia, there was a significant difference in their psychological and social components, as well as the integral QL index in comparison with hyponozognosia and anosognosia.

In the course of the study, we identified the relationship of the components of QOL with psychological characteristics. The psychological component of QOL was positively associated with the scale of "Well–being" (r=0.46), "Activity" (r=0.39), hyperthymic character accentuation (r=0.25), negatively - with personal (r=-0.43) and situational anxiety (r=-0.396), depression scale (r=-0.49) that is, patients with DM1 with psychological problems had high personal and situational anxiety, high indicators on the depression scale; in persons with hyperthymic character accentuation, there is a high psychological component of QOL, indicating a good psychological state.

The somatic component of QOL was associated with the scales of the SAN questionnaire: the higher the indicators of somatic well-being, the better were "Well-being" (r=0.35), "Activity" (r=0.32) and "Mood" (r=0.32). Overall QOL was positively associated with the scales "Well–being" (r=0.42), "Activity" (r=0.32), "Mood" (r=0.25), negatively - with reactive (r=-0.29) and personal anxiety (r=-0.34), depression scale (r=-0.35), in other words, the higher the indicators of the SAN questionnaire were, the higher the overall quality of life, and the higher the indicators of reactive and personal anxiety, depression, the lower the overall quality of life.

Thus, patients with DM1 are characterized by low quality of life, closely related to psychological characteristics and indicators of carbohydrate metabolism. The disease has a significant impact on the professional activities of patients and changes their plans for life. Indicators of the social component of QOL are found to be the lowest, and psychological and somatic indicators are slightly higher.

CONCLUSION

There is a correlation between the components of QL and the criteria for the success of the management of DM1; low QL values correlate with higher indicators of glycemia, glycosylated hemoglobin and cholesterol. Low QL in patients with DM1 is observed in severe disease and is accompanied by high anxiety and depression. Hypernosognosic reactions to the disease in DM1 cause low QL, and harmonic, ergopathic and anosognosic types of attitude to the disease – higher QL.

The revealed features of QOL in patients with DM1 should be taken into account when organizing outpatient medical and psychological care for this category of patients.

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