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QUALITY OF LIFE IN PATIENTS WITH DIABETIC NEPHROPATHY AND OVERWEIGHT

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***Abstract**. Introduction. Diabetes mellitus (DM) permanently changes person's life. The diabetic nephropathy has an impact so much physical as emotional status along the process of its progression, this process deteriorates the quality of patient's life (QOL). The purpose of the present investigation is to learn influence of the clinic-psychological factors on the quality of life of patients with diabetic nephropathy and overweight.*
Methods. Short Form Health Survey-36 (SF-36) questionnaire, socio-demographics and clinical parameter characteristics were used.
Results. The study enrolled 78 patients with DM, chronic kidney disease (CKD): diabetic nephropathy (DN). 65% of the patients suffered from CKD 1, 25 % had 2 stage and 10% - 3 stage. We found the lowest level of QOL in patients with type 1 DM, with DN at 3 stage of CKD, hypertension, in patients older 45 years. Patients with type 1 DM 3 stage of CKD had strongly reduced general health perceptions, role physical functioning, and vitality.
Summary. Health-care professionals have the duty to monitor quality of patient's life, personal psychological pattern to prescribe the effective treatment to its full potential.
***Key words:** quality of life, diabetes mellitus, overweight*

Introduction

Diabetes mellitus (DM) has become a serious society wide health problem regarding increasing prevalence. DM is a chronic disease associated with several potentially preventable disabilities such as neuropathy, nephropathy, cardiovascular disease, blindness, and amputation. Diabetes-related morbidity and mortality impose a sizeable burden on individuals with diabetes and on society, representing a major public health concern. DM is a chronic disorder that can limit a patient's life, physically, emotionally, socially and spiritually, and this has an impact on a patient's quality of life (QOL) [1, 2]. Diabetic nephropathy (DN) is the most severe complication of diabetes mellitus, which has an impact as on physical so on

emotional status during the process of its progression. Chronic kidney disease (CKD) is an important cause of hospitalization and morbidity in patients with DM. Data on the effect kidney problems have on quality of life among persons with diabetes are not available, nor are data on changes in quality of life experienced among persons treated for DM complicated by CKD [1, 2, 3]. Recent years have witnessed a dramatic rise in the prevalence of obesity worldwide, stimulating interest in the health and quality of life consequences of this phenomenon. Doctors and researchers have found that obesity and diabetes are connected. Persons who are obese are at high risk for developing Type 2 diabetes, particularly if a close family member is affected with diabetes. Obesity deteriorates the quality of patient's life too. Numerous studies have demonstrated that obese persons experience significant impairments in quality of life as a result of their obesity, with greater impairments associated with greater degrees of obesity. Weight loss has been shown to improve quality of life in obese persons undergoing a variety of treatments. Further research is needed to clarify whether quality of life differs among subsets of obese persons [4, 5, 6]. Until recently, there has been little standardization of quality of life measures in obesity. The SF-36 has been used in a number of studies of obese persons. Several obesity-specific instruments have also been developed and have shown great promise.

Diabetic patients need not only improvement of the symptoms, but also in improvement the well-being and life satisfaction. The quality of life of obese individuals is an important issue that should be included in weight management treatment and research [5, 7].

Therefore, the *purpose* of the current study is to learn influence of the clinic-psychological factors on the quality of life of patients with diabetic nephropathy and obesity.

Methods

We used Short Form Health Survey-36 (SF-36) questionnaire, psychological tests: Spielberg, EPI, Schmieschek, socio-demographics and clinical parameter characteristics for examination of the patients with DM complicated with DN and

obesity. The SF-36 includes one multi-item scale that assesses eight health concepts: 1) limitations in physical activities because of health problems; 2) limitations in social activities because of physical or emotional problems; 3) limitations in usual role activities because of physical health problems; 4) bodily pain; 5) general mental health (psychological distress and well-being); 6) limitations in usual role activities because of emotional problems; 7) vitality (energy and fatigue); and 8) general health perceptions.

The study enrolled 78 patients with DM, chronic kidney disease (CKD): DN (M-59%, F-41%; mean age - 41.3 years): 40 pts with type 1 (DM 1) and 38 pts with type 2 (DM 2) diabetes mellitus, which were examined in Kharkiv Regional clinical hospital. 38% of diabetic patients had compensated DM and 68 % - subcompensated DM.

Socio-demographics and clinical parameter characteristics (the diagnosis, treatment management, sex, age, body mass index (BMI), and blood pressure (BP) were indicated. QOL results for people with DM were compared to the healthy person (n=20).

Results

Based on their BMI, 47% of patients were nonoverweight, 53% were overweight and obese (BMI 30,5 to 52 kg/m^2). Blood pressure were elevated in 24% of patients, 65% of the patients suffered from CKD 1 stage (75.2% microalbuminuria, 24.8% macroalbuminuria), impaired renal function was found in 35% of patients (25 % had CKD 2nd stage and 10% - CKD 3rd stage).

Worsening of quality of life for people with diabetes mellitus and obesity found decreasing of role physical functioning and vitality, energy or fatigue.

Mean SF-36 scale scores were: Physical health (PH), 38.2±9.7 compare to 51.0±5.6 for control group; mental health (MH), 41.0±11.2 compare to 44.0±8.0.

We found the lowest level of QOL in patients with type 1 DM, with DN at 3 stage of CKD, hypertension, in patients older 45 years. Patients with impaired renal function scores significantly lower than those with normal renal function. Patients with type 1 DM 3 stage of CKD had strongly reduced general health perceptions, role physical

functioning, and vitality: Physical functioning (PF) – 41.85±10 in CKD 1st stage and 35.9±8.14 in CKD 3rd stage; General health (GH) - 32.94±5.18 in CKD 1st stage compare to 29.87±4.1 in CKD 3rd stage.

Lower level of QOL was found in patients with type 2 DM than patients with 1 type DM: PH - 33.4±7.8 and 40.7±9.9; MH – 34.7±12.1 и 43.0±9.9.

Patients with good control of the glucose level had twice bigger level of social functioning, than persons with poor one.

Personal psychological status of the patients with DM and obesity had revealed diminished levels of the patients‘ health and activity, but much higher mood. PH and MH in patients with BMI < 30 kg/m^2 was higher than in persons with BMI > 30 kg/m^2 (PH: 42.4±9.3 compare to 32.7±7.5; MH: 44.0±9.9 compare to 35.1±11.2). It was shown more high level of introvertion in DM and obesity, and high level of personal anxiety and situational anxiety. Choleric, phlegmatic, melancholic number of patients was the same as in obese and normal weight groups.

Summary

The SF-36 Health Survey is the most widely used self-report measure of functional health. It has a primary advantage of ease of administration which allows estimating a disease by the patient himself, to reveal «critical factors», influencing on QOL in each individual case, to establish the possible reasons for a low assessment the patient of the physical, mental, social possibilities. In addition, it provides a vehicle for quickly screening patients for readiness and specific treatment-related concerns. By consideration of the ethical problems arising at dialogue of the patient and the doctor, it is necessary to consider results of its research

QOLHealth-care professionals should monitor quality of patient‘s life, personal psychological pattern to prescribe the effective treatment and affect the social rehabilitation.

The clinical variables of obesity, impaired renal function, arterial hypertension were significantly associated with reduced QOL.

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