Uzbek Scholar Journal
Volume- 11, Dec., 2022
www.uzbekscholar.com

COMPARATIVE ANALYSIS OF PROGRAM HEMODIALYSIS EFFICIENCY AND IMPACT ON QUALITY OF LIFE

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Relevance
End-stage renal disease is a chronic disease that has a large negative impact on the health-related quality of life of patients, mainly due to comorbid disorders or imposed restrictions in almost all areas of their daily life.

Goal
Comparative assessment of the quality of life of those receiving renal replacement therapy.

Materials and Methods
The study included 60 patients with ESRD receiving program hemodialysis for at least a year. The patients were divided into 2 groups. The first group n-30 patients with type 2 diabetes and ESRD, the second group n-30 patients with chronic glomerulonephritis and ESRD. In order to assess QOL, the Kidney Disease Quality of Life Short Form (KDQOL-SFTM) questionnaire was used, which includes sections specific to dialysis therapy, which makes it possible to assess and compare the quality of life (QoL) of patients treated with hemodialysis (HD).

Results
This article presents the results of a prospective study conducted in the Bukhara region. Among patients on renal replacement therapy, a survey was conducted reflecting the specifics of the provision of program hemodialysis and its impact on the quality of life of patients. The analysis of the results showed that the self-assessment of the health status of patients with CG, in contrast to those with diabetes on dialysis, was significantly lower in terms of psycho-emotional parameters. However, the results of physical health parameters were lower in patients with type 2 diabetes, which, as a result, indicates a low quality of life in the first group of patients.

Conclusion
The data indicate that RRT is more difficult in patients with diabetes and, accordingly, the quality of life in this category of patients is much lower. The version of the KDQOL-SF™ 1.3 questionnaire adapted by us makes it possible to quite clearly study and evaluate various psychometric parameters of QoL in patients on renal replacement therapy.

Keywords. Hemodialysis, end-stage renal disease, chronic kidney disease, chronic glomerulonephritis.

Introduction

The quality of life (QOL) of the patient is one of the important criteria for the effectiveness of treatment and rehabilitation measures. QoL indicators make it possible to get an idea of whether the patient considers his life to be full-fledged, and, if not, what is the degree of dissatisfaction with life. To date, there are many types of questionnaires that determine the quality of life of patients [1-2]. These

questionnaires allow you to get an idea of the main aspects of the QoL of patients with a certain nosology, make it possible to compare with a healthy population and with various groups of patients. Special questionnaires covering a certain nosology make it possible to identify the specific impact of this disease on the QoL of patients, to more fully characterize the problem areas of patients' lives, and to compare the effectiveness of various types of therapy [5–6]. The most useful for practical application is such a tool for measuring QoL, which would include both general characteristics of QoL for various diseases and disease-specific parameters. With regard to nephrology, such a tool, which combines the features of a general and a special questionnaire, is the Kidney Disease Quality of Life Short Form (KDQOL-SFTM) - a technique that allows a comprehensive assessment of the quality of life of patients receiving dialysis therapy [10, 11].

Materials and Methods of Research

60 patients who received treatment at the Department of Nephrology and Hemodialysis of the Bukhara Regional Medical Center were examined. Of these, 30 patients were with type 2 diabetes mellitus, 30 patients with chronic glomerulonephritis. 60% of the total number of examined were men, the average age in the first group was 56.72±1.78 years, in the second group - 46.24±2.16 years. The study included patients who had been treated with HD for at least a year.

To assess QOL, a special questionnaire Kidney Disease Quality of Life Short Form (KDQOL-SF™) is used, available on the website of the copyright holder of the University of California, Los Angeles. The questionnaire was developed at the US Institute of Health (Ware J.E, 1992). The original version contains 43 questions that reflect the specifics of dialysis therapy and have appropriate scales designed specifically for this category of patients: symptoms and problems; impact of kidney disease on daily activities; social adaptation; cognitive functions; quality of social interaction; sexual functions; dream; satisfaction with social support; support from medical staff; patient satisfaction with the quality of care. KDQOL-SF™ scores are converted to standard scores so that each area of life is scored on a scale from 0 to 100: the lower the score, the better the quality of life.

In our study, a modified version of the KDQOL-SF™ questionnaire was used. This questionnaire includes 20 questions from the SF-36 general questionnaire and 55 questions divided into RRT-specific scales. 20 items of the general questionnaire are grouped into 4 sections: physical condition; the impact of the disease on the general condition; the impact of the disease on quality of life; social aspects. At this stage, we studied the questionnaires of patients of 2 groups: patients with type 2 diabetes and ESRD, and patients with ESRD without diabetes.

Results

According to our own research, the level of QoL of patients in the compared groups differed. The total scores reflecting QoL for each section are given below (Table 1).

Table 2 Quality of life scores

Indicators	Diabetes mellitus, CKD stage 5, on dialysis (n=30)	CKD grade 5 without diabetes, on dialysis (n=30)
Your health score	75,55±0,77***	70,21±0,72
Your kidney disease, score	44,31±1,16**	38,79±1,41
The impact of kidney disease on your life, score	31,41±0,67*	33,55±0,66
Satisfaction with care, score	6,28±0,16	6,21±0,14

Note: *-p <0, 05, **- p <0,01.

In patients with HD and type 2 diabetes, indicators of the general physical condition were significantly reduced, which is associated with the psychological and physical dependence of patients on medical personnel and equipment, fluctuations in the level of glycemia, blood pressure, as well as symptoms of late complications of diabetes. A detailed analysis of individual parameters of QoL revealed significant differences in the scales of manifestation of clinical symptoms - 44.31±1.16 points in patients with type 2 diabetes and 38.79±1.41 points in the second group. This reflects the low level of QoL among diabetic patients. The overall scores for the impact of kidney disease on daily activities and satisfaction with the care of others did not differ sharply.

Table 2 Comparative analysis of the psycho-emotional state of patients with ESRD

Indicators	**diabetes mellitus + dialysis (n-30)**	**glomerulonephritis – dialysis (n-30)**
Restriction in daily activities (feeling depressed or emotionally disturbed)	86% (**n**-26)	96,7% (**n**-29)
Physical or emotional problems in social life	22% (**n**-4)	22% (**n**-4)
Have you experienced bodily pain in the past 4 weeks?	16% (**n**-5)	22% (**n**-4)
Rarely or never felt (la) full of life	66,7 % (**n**-20)	43,3% (**n**-13)
Irritability (always or most of the time)	26,7 % (**n**-8)	30 %(**n**-9)
Severe loss of energy (always or most of the time)	36,7 % (**n**-11)	43,3% (**n**-13)
Feeling overwhelmed (always or most of the time)	60% (**n**-18)	36,7 % (**n**-11)
Feeling happy (always or most of the time)	36,7% (**n**-11)	40% (**n**-12)
Feeling worse (in the past 4 weeks)	46,7% (**n**-14)	73,3% (**n**-22)
My health is excellent (false statement)	100% (**n**-30)	90% (**n**-27)

CRF and its treatment, namely renal replacement therapy, are a chronic stressful situation, which leaves its mark on the psycho-emotional background of patients. На основе опроса выявлены следующие отличия КЖ: чувство де Based on the survey, the following differences in QOL were revealed: a feeling of depression and emotional anxiety occurred in 86% of patients with DM and 96.7% of patients without DM; depression and emotional anxiety occurred in 86% of patients with DM and 96.7% of patients without DM; physical or emotional problems in social life bothered 22% of patients in both groups; bodily pain was experienced by 16% of patients in the first group and 22% in the second group; life satisfaction was observed in 66.7% with DM and 43.3% of patients without DM; irritability most of the time was experienced by 26.7% of patients in the first group and 30% in the second group. A pronounced decline in strength bothered 36.7% and 43.3% of the respondents in both groups; feelings

of depression and unhappiness were experienced by 60% and 36.7% of the respondents; only 36.7 and 40% of patients in both groups considered themselves happy. 100% of the patients of the first group and 90% of the patients of the second group consider the statement “My health is excellent” to be false

(Fig. 1). Fig.1 analysis of the frequency of occurrence of various symptoms associated with the treatment of HD in patients with diabetes.

The results of the study provide information about the main symptoms and stress factors that are relevant for patients during dialysis treatment. Most patients with DM on HD are concerned about muscle pain, cramps, weakness and dizziness, lack of appetite, increased fatigue, numbness of the hands and feet, nausea, fistula problems, and hypoglycemia during dialysis. Among the most significant stress factors are the restriction in fluid intake and the need to comply with nutritional rules, dependence on medical personnel. These data partially coincide with the results obtained by researchers from the USA: the main complaints of dialysis patients are associated, according to American authors, with a low energy level, lack of strength, diet and restrictions on the water and drinking regimen [4. Hays RD, Kallich JD, Mapes DL et al. Development of the kidney disease quality of life instrument. Qual Life Res 1994; 3(5): 329-338].

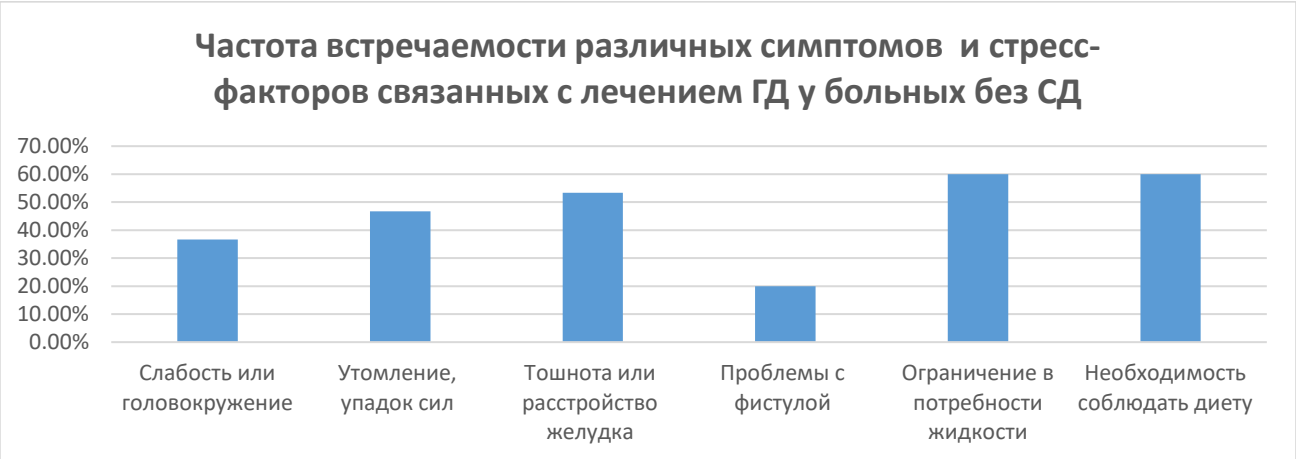

Fig. 2 analysis of the frequency of occurrence of various symptoms associated with the treatment of HD in patients without DM.

The results of the study of the second group of patients without DM provided significantly different information about the main symptoms and stress factors. Most of all, patients in this group are concerned about weakness and dizziness, lack of appetite, increased fatigue, nausea, problems with the fistula. Among the most significant stress factors were also fluid restrictions and diet.

Conclusion

The data indicate that RRT is more difficult in patients with DM and, accordingly, the quality of life in this category of patients is much lower. The version of the KDQOL-SF™ 1.3 questionnaire adapted by us makes it possible to quite clearly study and evaluate various psychometric parameters of QoL in patients on renal replacement therapy.

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