Quality of life and depressive symptoms in patients with chronic renal failure undergoing hemodialysis

Qualidade de vida e sintomas depressivos em pacientes renais crônicos submetidos à hemodiálise

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ABSTRACT

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Introduction: during the initial periods of the use of dialysis, all effort is devoted to the maintenance of life. Following the progress reached in this regard, there is now concern about the emotional aspects of chronic renal patients and their quality of life. **Objective:** This study aims to investigate the relationship between quality of life and depressive symptoms in chronic renal failure patients undergoing hemodialysis. **Methods:** The sample consisted of 30 patients interviewed using the the Major Depression Inventory (MDI) and abbreviated WHOQOL quality of life questionnaires. **Results:** The prevalence of depression was 37%. Quality of life was considered good for 89.6% of the sample. There was a weak association (Pearson 0.455) between the depression and quality of life variables. **Conclusions:** This sample showed good levels of quality of life and moderate levels of depressive symptoms.

Key words: Quality of Life; Depression; Hemodialysis.

RESUMO

*Introdução: nos períodos iniciais do uso da diálise, todos os esforços eram dedicados para a manutenção da vida; atualmente, com os progressos alcançados neste sentido, observa-se preocupação com os aspectos emocionais dos pacientes renais crônicos e com sua qualidade de vida. **Objetivo:** Este trabalho objetiva verificar a relação entre qualidade de vida e sintomas depressivos em pacientes renais crônicos submetidos à hemodiálise. **Métodos:** a amostra foi composta de 30 pacientes, aos quais foram aplicados o Inventário de Depressão Maior (MDI) e o questionário de qualidade de vida WHOQOL-abreviado. **Resultados:** a prevalência de depressão foi de 37%. A qualidade de vida foi considerada boa em 89,6% da amostra. Obteve-se fraca associação (Pearson 0,455) entre as variáveis depressão e qualidade de vida. **Conclusões:** esta amostra apresentou bons índices de qualidade de vida e índices moderados de sintomas depressivos.*

Palavras-chave: Qualidade de Vida; Depressão; Hemodiálise.

INTRODUCTION

Kidney problems are becoming increasingly common worldwide and are considered a public health problem in Brazil because the number of patients has been increasing every decade.[1] Chronic renal insufficiency (CRI) stands out among renal issues as a disease characterized by progressive and irreversible lesion caused by diseases that disable the kidney.[2] The symptomatology is evident when kidney

function is reduced below 10-12% and when the use of methods to treat kidney failure, such as dialysis or kidney transplant, becomes necessary.[3]

Several diseases can lead to CRI including hypertension (SAH), diabetes mellitus (DM), and glomerulonephrites.[4] In Brazil, the main causes of CRI are nefroesclerosis, responsible for 27.1% of cases and DM for 22.3%.[5]

Hemodialysis (HD), a renal function support procedure, consists in the removal of toxins and excess fluid from the blood.[6] Dialysis is initiated in more than 220,000 persons/year worldwide[1], and in about 40,000 in Brazil in 2008.[7]

In the initial periods of dialysis use, the concerns were focused on the maintenance of life for patients.[8] Technological and therapeutic advances in the area of dialysis contributed to increased survival rates of chronic kidney patients, without, however, allowing them to return to life in relation to qualitative aspects.[9] Currently, progress has been made in this direction opening space for concerns with emotional aspects and the patients' quality of life (QL).[8] The main focus is to improve physical symptoms and psychological and psychosomatic complaints.[10] The impact of the diagnosis and dialysis treatment may lead the patient to an emotional burnout due to the need to undergo lengthy treatments involving physical and social life limitations.[11]

CRI brings psychic manifestations that involve changes in social interactions and psychological imbalances.[12] The mental disorder mostly identified in CRI patients is depression, present in 10 to 20% of cases[13], however, almost half of patients under dialysis refers to depressive symptoms.[14] Nevertheless, controlled studies evaluating the relationship between kidney disease and depression are few.[15] Depression generates decreased immunity and personal care leading to decreased adherence to treatments and diets[16], and may lead to death in the long run.

HD treatment is known to change the QL of patients because it involves a time-consuming procedure requiring several visits to the treatment unit, changing daily life.[6] The health-related QL assessment is extremely important and has become an important criterion in the evaluation of treatments and interventions effectiveness in the area of health[9] because it can indicate the impact of the disease on the patient.[17]

The present study aimed to evaluate the relationship between QL and depressive symptoms in patients with CRI undergoing HD.

MATERIAL AND METHODS

The study was conducted at the Renal Diseases Clinic in the municipality of Tubarão - Santa Catarina, between September and December of 2008 after approval by the Ethics and Research in Humans Committee from the Santa Catarina Southern University – UNISUL, under the protocol 08.360.4.01.III.

The inclusion criteria were being 18 years and older, having CRI diagnosis, undergoing HD for at least six months, and signing an informed consent. The exclusion criteria were having severe systemic conditions, diagnosed psychiatric illness, or any illness that could preclude the understanding of the applied questionnaires.

The selected participants were analyzed through a research protocol that included demographic data such as age, gender, education, marital status, occupation, causes of CRI, and time and number of HD sections per week. The Portuguese version of the Major Depression Inventory (MDI) was used for screening depressive symptoms and the abbreviated World Health Organization Quality of Life-WHOQOL questionnaire was applied to assess QL.

The Major Depression Inventory contains 10 questions to assess symptoms of depression according to DSM-IV and CID-10 and classifies depression in mild, moderate, or severe.[18] The cutting at point 16, suggested by Parthians et al. was used [19]. Patients with scores ≤ 16 were considered with some degree of depression.

The abbreviated WHOQOL Portuguese version was developed at the WHOQOL Center for Brazil in the Department of Psychiatry and Forensic Medicine at the Federal University of Rio Grande do Sul in Porto Alegre, in the State of Rio Grande do Sul-Brazil. It is an abbreviated version, with 26 questions that showed the best psychometric performance, extracted from the extensive version with 100 questions and composed of four domains: physical, psychological, social relations, and environmental. In this study, patients were divided into two groups with regard to QL; the first considered with bad QV (<74 points) and the second subdivided in good and great QV subgroups (≥ 75 points).[20] A subjective evaluation of QL was performed independently by requesting a self-assessment from each individual through the question: "How do you think your QV is: good or bad?".

Data were analyzed through descriptive statistics (absolute frequency distributions and measures of central tendency), inferential statistics (Chi-squared test, significant p ≤ 0.05), and Pearson coefficient (p ≤ 0.05) using the SPSS 15.0 statistical program.

RESULTS

This was a descriptive observational cross-sectional study involving 30 patients with a mean age of 52.5 years, diagnosed with CRI, and undergoing HD for at least six months. Out of the 30 selected patients, 11 were women (37%) and 19 were men (63%) with an average schooling of 7.35 years; 22 (73.3%) were married, 3 (10%) were divorced, and 5 (16.7%) were singles; 23 (76.7%) were retired, 6 (20%) were active workers, and 1 (3.3%) was a student.

The main causes that led these patients to CRI were hypertension, diabetes mellitus, and polycystic kidney among others (Figure 1). The average time in HD was 3.7 years; all patients were performing three sessions weekly.
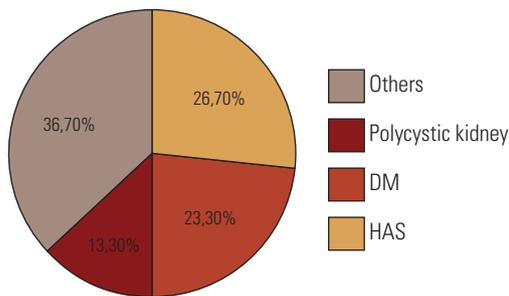

Figure 1 - Main causes of chronic renal insufficiency.

The average MDI score was 14.1 (median, mode). Depressive symptoms were observed in 11 (37%) patients and absent in 19 (63%).

The majority of the sample (89.6%) showed good QL when evaluated by the abbreviated WHOQOL. When asked about the subjective perception of QL, 68.9% mentioned it as good and 31% as bad (Figure 2). A significant difference ($p < 0.05$) was observed between QL assessed with the abbreviated WHOQOL and the subjective perception self-assessment.

The comparison between QL and depressive symptoms showed Pearson's coefficient of 0.455 ($p < 0.05$), revealing a weak association (Figure 3).

DISCUSSION

CRI is a public health problem that has HD as one of the treatments. Although its mortality rate in Brazil is lower than that of many developed countries, the patients' survival rates can still improve.[21]
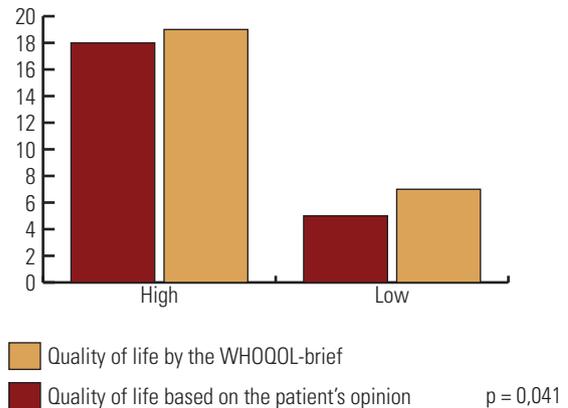

Quality of life by the WHOQOL-brief
Quality of life based on the patient's opinion   p = 0,041

Figure 2 - Comparison between quality of life assessed by the abbreviated WHOQOL and the patient's subjective perception.

Depression no
Depression yes   p = 0,013

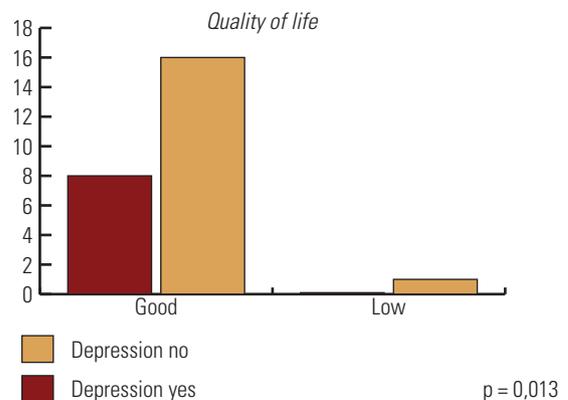**Figure 3** - Comparison between quality of life and depressive symptoms.

In this study, most patients undergoing HD were men, as reported in the Dialysis Brazilian Census report performed in 2008 with 41,614 patients showing 57% of male patients.[21]

Depression in patients undergoing HD is still contradictory due to several factors, among them, the use of different measuring instruments.[8] Lopes et al.[22] concluded that there is an association between depression, morbidity, and mortality in HD patients, however, they suggested more studies to confirm these associations. In this study, depression was observed in 37% of patients, however, other studies using this instrument in HD patients were not found.

The QL of individuals who are dependent on HD suffers significant alterations due to the restrictions in their everyday life imposed by a chronic condition.[23] In this study, high QL values were obtained. Valderrabano et al.[24] concluded that the HD impact on retired patients is much less than that on those in productive

activity, which may suggest that the high QL detected in the study's participants was due to the fact that most of them were already retired.

Conversely to our results, Malik and Cesarino[9] found low QV through the SF-36 questionnaire in a sample fairly similar to ours composed of patients undergoing HD for about two years, mostly married (53.6%), retired (52.8%), and with an average of five years of schooling. The difference between the two studies may have been the time undergoing HD and the use of different assessment tools.

The perception of health and its meaning can vary between individuals or in the same individual over time, as well as during the trajectory of the illness. People normally perceive their health-related QL by comparing their expectations with their experiences. QV is a highly individual concept and its measure will never capture all the aspects of life that are important to the person.[11] The results from the two ways of QL assessment, used in this study, differed significantly from each other ($p < 0.041$). Around 89.6% of individuals reported good QV when evaluated by the abbreviated WHOQOL, whereas 68.9% considered their QL as good in the subjective evaluation.

When trying to explain the consequences of depression in individuals undergoing HD, the important impact of this disorder on their QL is noted.[8] A weak association was obtained when QV was correlated with depressive symptoms, which can be partly explained by the short dialysis time presented by the sample, a factor that directly influences QV in relation to depressive symptoms. Studies on the duration of HD highlight that the longest their duration, the increased acceptance to the disease is perceived.[25,26]

The limitations in this study refer to the reduced sample size and the use of a single assessment tool. Thus, larger samples are suggested for future studies with the use of different screening instruments of depression to assure more analyses replicating this study.

CONCLUSION

Depressive symptoms were present in less than half of the studied patients, and despite the chronic HD, most reported good QV when compared to similar populations.

Further studies must be conducted with the same objectives presented here, using different instruments, and larger samples because of the importance of verifying the level of QL, which is a prognostic factor of satisfactory clinical outcomes in CRI patients undergoing HD.

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