Depression in the elderly on hemodialysis for chronic renal failure*

Depressão em idosos portadores de insuficiência renal crônica em tratamento hemodialítico

Depresión en personas ancianas con insuficiencia renal crónica en tratamiento de hemodiálisis

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ABSTRACT
Objectives: This study aimed to characterize the elderly on hemodialysis for chronic renal failure in a teaching hospital and to describe their levels of depression. **Methods**: This is a descriptive exploratory study with 61 patients. A socio-demographic questionnaire and the geriatric depression scale (GDS) were used to collect the data. Data analysis consisted of descriptive statistics and Spearman rho correlations. **Results:** The mean age of patients was 69.97±7.51. The majority was white (79%), married (72%), and male (57%). Approximate a quarter of the patients (26%) were illiterate. The mean depression score was 10.43±4.37, suggesting the presence of normal to slightly depressive symptoms. **Conclusions:** There were statistically significant correlation coefficients between family monthly income and education (p value=0.004) and between depressive symptoms and illiteracy (p=0.028). This last finding indicates that the illiterate patients had more depressive symptoms, suggesting they have less adaptation capacity or resilience to cope with the disease and its implications.
Keywords: Depression; Frail elderly; Renal insufficiency, chronic; Renal dialysis/nursing; Renal dialysis/psychology

RESUMO
Objetivos: Caracterizar idosos com insuficiência renal crônica submetidos à hemodiálise em um hospital escola e identificar níveis de depressão na população estudada. **Métodos:** Trata-se de uma pesquisa descritiva - exploratória, de natureza quantitativa utilizando a Geriatric Depression Scale (GDS) e questionário de caracterização populacional, sendo entrevistados 61 pacientes. Na análise dos dados foi utilizado método quantitativo progressivo (porcentagem) e correlação de Spearmann. **Resultados:** A média de idade foi de 69,97±7,51 anos, 57% eram do sexo masculino, 79% de cor branca, 72% eram casados, sendo 26% analfabetos. A média de respostas depressivas foi 10,43±4,37, o que sugere humor normal-levemente deprimido na população em geral. **Conclusão:** Houve correlação estatisticamente significativa entre renda mensal familiar e escolaridade (valor p=0, 004) e escore GDS e analfabetismo (p=0,028), mostrando que os analfabetos apresentaram mais respostas depressivas, sugerindo menor capacidade de adaptabilidade/resiliência desses indivíduos à doença e suas implicações.
Descritores: Depressão; Idoso fragilizado; Insuficiência renal crônica; Diálise renal/enfermagem; Diálise renal/psicologia

RESUMEN
Objetivos: Caracterizar a personas ancianas con insuficiencia renal crónica sometidos a hemodiálisis en un hospital docente e identificar niveles de depresión en la población estudiada. **Métodos:** Se trata de una investigación descriptiva - exploratoria, de naturaleza cuantitativa en la cual se utilizó la Geriatric Depression Scale (GDS) y el cuestionario de caracterización poblacional, siendo entrevistados 61 pacientes. En el análisis de los datos se utilizó el método cuantitativo progresivo (porcentaje) y la correlación de Spearmann. **Resultados:** El promedio de edad fue de 69,97±7,51 años, el 57% era del sexo masculino, el 79% de raza blanca, el 72% era casado, siendo el 26% analfabetos. El promedio de respuestas depresivas fue 10,43±4,37, lo que sugiere humor normal-levemente deprimido en la población en general. **Conclusión:** Hubo correlación estadísticamente significativa entre el ingreso mensual familiar y la escolaridad (valor p=0, 004) y escore GDS y analfabetismo (p=0,028), mostrando que los analfabetos presentaron más respuestas depresivas, sugiriendo menor capacidad de adaptabilidad/resiliencia de esas personas a la enfermedad y sus implicancias.
Descriptores: Depresión; Anciano frágil; Insuficiencia renal crónica; Diálisis renal/enfermería; Diálisis renal/psicología

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INTRODUCTION

The elderly population growth rate is increasingly more relevant as is already superior to the total population rate, becoming a global issue. The most frequent depressive symptoms in such population relate to humor oscillations, which is the fourth cause of social incapability in the world[1].

Life expectation's progressive growth implies on the increase of morbidity by chronic, not-contagious diseases, which commonly are incapability factors and drivers of a larger share in health expenditures in developed countries. Depression of the elder population, for example, is an important issue for the public health service given the high level of prevailing, frequent relation to chronic diseases, negative impact on life quality and risk of suicide. Clinical diseases can contribute for the depression pathology with direct effects on the brains' functions or through psychological or psychosocial effects[2].

Chronic disease is seen as a long duration stress agent, which affects not only patients but also family members and health professionals involved. The most common causes of renal disease in terminal stage are: diabetes mellitus, arterial hypertension, glomerulonephritis and polycystic renal failure. Generally, the hemodialysis therapy is used in such terminal condition of the disease (extracorporeous process of blood depuration), avoiding patients' early death[3-5].

The dialysis changes the life style of patients and family due to the dedication of time it requires for the sessions, medical appointments, nutrition diets, and drinking habits. The fact of being chronically ill can generate conflicts, frustrations and guilt, being hard for patients, spouses and husbands, family members to express negative feelings and hatred. When such reactions are not expressed, they can be kept inside and lead to despair, depression and suicide (the rate of suicide is higher on renal failure patients), destroying families that are already living a fragile relationship moment[5].

Nursing care is offered to these patients through the integration with the multifunctional and support services team. Activities of different nature such as health care and administrative have been considered impossible to conciliate, however, are part of the same process of the broadened care proposition. Studies show the hemodialysis nurses experience frustrations and discomforts related to their duties in their job Units for not being able to conciliate managerial functions to healthcare ones[6].

Within this context, the present study was designed with the objective of: characterizing older patients in chronic renal condition using the hemodialysis therapy of the Hospital de Base de São José do Rio Preto-SP and identify levels of depression of the targeted population.

METHODS

The present research is a descriptive/exploratory, quantitative study and was developed at the Hemodialysis Center of the Nephrology Service Unit of the Hospital de Base de São José do Rio Preto. Patients' sample included individuals with age equal to or superior than 60 years old, with chronic renal failure, using hemodialysis therapy at the Nephrology Unit, during April through September 2007. Patients presenting moderate-critical cognitive problems were not included, nor were the ones not willing to sign the Term of Informed Consent. Data gathering was made after the agreement from the institution and approval of the research project by the Ethics Committee of Faculdade de Medicina de São José do Rio Preto, according to the Resolution nº 196/96 from the Conselho Nacional de Saúde (National Health Council). This study includes 61 patients who agreed to sign the Term of Informed Consent. A questionnaire for the characterized population was developed including: identity, age, gender, occupation, skin color, marital status, education background, base disease, time of base disease, monthly family income, and loss of a family member within the previous five months. For identifying the levels of depression the Geriatric Depression Scale (GDS) was used, a method created in 1983 by Yesavage, in the English language, bringing an original scale of 30 items specially developed for monitoring humor oscillation in older individuals, with questions that avoid the somatic complains arena. One of its advantages is the easy to understand questions composition, its small variety of choices and the fact that is can be self-applied or applied by a trained specialist. The evaluation result suggests a diagnostic of depression for such patients as they present a depressive score of answers. The study of validating such scale into Portuguese for Brazil demonstrated participants good understanding of the 30 questions composing the scale, independently of the education background, which varied from illiterate to under-graduate[7-8].

Data analysis was made through Progressive Quantitative Analysis (percentage) with organization/categorization through the application *Excel for Windows* (2002), and further inferential estimation (Spearmann correlation).

RESULTS

The study included 61 senior individuals, with average age of 69.97±7.51 years old, ranging from 60-88 years of age. The majority of the population analyzed (53%)

was 60-69 years old, while 34% was 70-79 years old and 13% over 80 years old.

The majority of the patients is male (57%), white (79%), followed by brown skin (15%), black (3%) and yellow (3%). On marital status, 72% is married, 18% widowed, 8% divorced, 2% single.

Regarding the occupation of the elder population using dialysis therapy at the selected Hospital, 10% does not work, and informal employment was the most scored, being: 36% land workers, 14.8% general support, 11.5% other (traveler, shopper, nursing professionals, bank guards, locksmiths and bus ticket clerk), 6.5% public servers, 6.5% seamstresses, 4.9% each for housekeepers and builders.

Familiar income informed (base salary R$350/month), 83% are paid from 1-3 base salaries, 9% from 4-6 base salaries, 4% from 7-10 salaries, 2% from 11-12 base salaries and another 2% received more than 13 base salaries.

Education background figures with 62% completed the elementary school, 26% illiterate, 10% completed college, 2% completed specialization courses, and none had been to university.

On base diseases, this study reports 61% arterial hypertension, 28% diabetes mellitus and 11% cardiovascular problems. Regarding illness associated to a sole individual, findings are: 71% have high blood pressure and diabetes, 16% high blood pressure and cardiovascular malfunctions. Only 5% did not report any base disease. The average of base disease in years reported is 10.84 ± 5.06 years, in the range of 4 to 23 years.

Concerning depression there is a range of depressive answers from 5-20, the average of depressive answers from 10.43 ± 4.37, which suggests a slightly depressed humor, however, when analyzed individually, the majority of the answers presented normal humor level, and thus no depression, as shows Illustration 1.

Considering recent family member loss (death/divorce), only 7% has experienced such losses in the latest 5 months, out of which all were considered slightly depressed.

GDS scores were related to other variables, through correlation of the Spearmann, and there was no significant statistical value in the following correlations in GDS and gender scores ($p=0.324$), years of base disease ($p=0.418$), marital status ($p=0.464$) and family monthly income ($p=0.529$).

A significant correlation value between family monthly income vs. education background ($p=0.004$) was verified. The dichotomy illiteracy vs. scholarship, pointed that the lower (or none) is the education background, the lower is the family monthly income. Further, on the bilateral hypothesis of GDS score x scholarship (divided here only into illiteracy and little scholar education), numbers are $p=0.028$ of illiterates, a value close to the statistically significant values ($p<0.055$), showing the illiterate elders presented higher scores of depressive answers when compared to the elders with some scholar education.
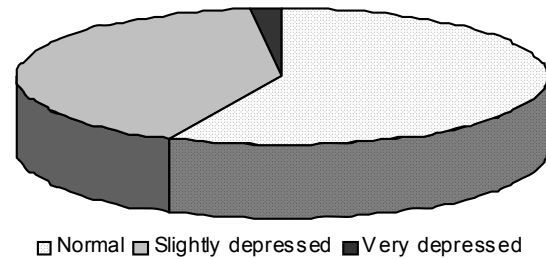

□ Normal ▨ Slightly depressed ■ Very depressed

Figure 1: GDS answers from the elder patients using dialysis therapy at the Hospital de Base de São José do Rio Preto, from April to September/2007

DISCUSSION

Chronic diseases can cause physical limitations or disabilities, impacting negatively the elderly capacity of being independent. Such questions can bring complications for the health system and for society, which is not yet organized to deal with such issues[9].

For the majority of the older patients in this study, base diseases reported are arterial hypertension and diabetes mellitus; yet, Brazilian epidemic studies reports third-age illnesses as arterial hypertension, rheumatism, diabetes, metal diseases, malnutrition and high rate of cerebral-vascular accidents, with the arterial hypertension and diabetes as the main cause of chronic renal disease globally[10-11].

From the older patients' sample, 41% feels slightly depressed and 2% very depressed. Geriatric depression should be seen as a heterogeneous condition, resulting from various factors: physiological changes due to aging, disabilities, loss of resources given the changes in life style, illnesses, prescribed drugs and the reduction of norepinephrine, dopamine and serotonin in the brain. Furthermore, it also includes psychosocial stress drivers such as: limited mobility, blindness, deafness, decreased occupational activities as well as social and leisure, retirement, loss of social status, illness, isolation, loss of privacy and sense of self-esteem. Depression increases 80-83% the mortality index of older people, which requires special attention, once it presents negative consequences for their quality of life[12].

The psychiatric co-morbidity in patients with non-infective chronic diseases presents several negative impacts on their lives, family and the health system. Mood disorders, such as depression can impact negatively on patients' life, reducing functional capacity, decreasing the quality of life and patients adhering to the treatment. Consequently, there is an increase in number of outpatients and inpatients, health and morbid-mortality costs, which makes difficult for

patients to adapt to a new life condition[13].

Socio-cultural environment interferes on the process of adapting to getting old, either facilitating it or making it more difficult, depending on the value attributed in the different societies for the elderly. Depressed elderly gains such little attention from overall, and it is largely on us, as a society who think aging is depressing. The hypothesis "it's obvious the elderly being unhappy" does not allow us to treat such unhappiness, by leaving a lot of them living days of extreme and unnecessary emotional pain. Looking forward, human being needs to be valued to enable future days of extended life and aging quality[14-15].

Writers state approximately half of the individuals with anxiety or depressive disorders were not identified such symptoms during primary visits[16].

Comparing DGS scores to illiteracy results were statistically significant, which shows illiterate individuals with the higher scores of depressive answers, when compared to older individuals with some scholar level. Some researchers while studying limitations related to emotional aspects of these individuals found that results have a direct correlation to their years in school, which implies individuals with higher levels of scholarship holds intellectual resources that enables better emotional adjustments to the consequences from a chronic renal disease and related therapy[9,17-18].

CONCLUSION

This study verifies the majority of the elderly patients suffering from total renal failure have an income of up to three monthly salaries (R$350.00/mo), education background corresponding to the Elementary school level (completed or not), of which 26% are illiterate and informally employed.

Despite of the depressive answers average suggest "slightly depressed humor", in general, the majority of this population presented answers considered "normal humor" (without signs of depression). When comparing GDS scores to illiteracy results were statistically significant, identifying the illiterate with higher scores of depressive answers when compared to older patients with some school level. This is possible due to the deficiency of intellectual resources to enable a better emotional adjustment to the renal failure and its therapy, having as a consequence a much difficult adaptation

Abilities to face the challenge are necessary to the social and psychological adjustment for the elderly. Researches being developed on diseases of higher morbidity which attacks the elderly, such as depression and total renal failure should be further fomented to leverage adequate policies related to the elderly, once the target is to enable future days of extended life and aging quality.

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