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QUALITY OF ELDERLY LIFE IN SUBSTITUTE RENAL THERAPY: A REVIEW

***[1]Maryam Andrade Fróz, [2]Luciana Cruz Rodrigues Vieira, [3]Hermaiza Angélica do Bonfim Loiola, and [4]Liberata Campos Coimbra**

[1]Master Student in Nursing from the Federal University of Maranhão, São Luís, Maranhão, Brazil
[2]Master in Maternal and Child Health, Federal University of Maranhão, São Luís, Maranhão, Brazil
[3]Master in Nursing, Federal University of Maranhão, São Luís, Maranhão, Brazil
[4]PhD in Public Policy, Federal University of Maranhão, São Luís, Maranhão, Brazil

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ABSTRACT

Chronic Kidney Disease is a general term for changes that can affect the structure of a kidney function, with several causes and several prognostic factors. It is a long-term disease, insidious and most of the time it is asymptomatic. The purpose of this article is to discuss the literature on quality of life therapy in renal replacement therapy. This is a literature review based on the scientific productions related to the theme in the last 10 years. Although the decrease in age-related Glomerular Filtration may be due to the normal aging process, this decrease in the elderly is an independent predictor of adverse disease progression, such as death and cardiovascular disease. The elderly underwent hemodialysis treatment had a poor quality of life. Because they are individuals with a chronic disease, the physical domain, which addresses issues related to the patient's health status, is the most impaired. Thus, it is necessary to develop specific public policies to follow up these patients, with appropriate treatment of comorbidities, identification and early treatment of impaired renal function, providing improvements in the quality of life of this population.

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INTRODUCTION

The morbimortality rates of the world and Brazilian population changed over time, evidencing an increase in chronic degenerative diseases. The aging population and the increase in life expectancy, due to the demographic transition in the last decades in Brazil, contributed to changes in the morbidity and mortality profile and increase in the prevalence of chronic diseases, including chronic kidney disease (CKD). (NUNES, M.B., *et al*., 2014). CKD is a general term for heterogeneous changes that affect both renal structure and function, with multiple causes and multiple prognostic factors. It is a long-standing, insidious disease that, for the majority of its evolution, is asymptomatic (BRASIL, 2014). The main causes of chronic kidney disease are: arterial hypertension; diabetes mellitus; obesity; chronic glomerulonephritis; chronic pyelonephritis; autoimmune diseases; polycystic kidney disease; family history of kidney disease; seniors; chronic use of anti-inflammatories; bilateral cortical necrosis; prolonged acute kidney injury; chronic graft nephropathy. Systemic arterial hypertension and diabetes mellitus correspond to more than 60% of the cases (DRAIBE, S.A., 2014). The Glomerular Filtration Rate (GFR) is the best overall measure of kidney function, it is defined as the ability of the kidneys to remove a substance from the blood and is expressed as the volume of blood that is completely purified in a unit of time. In most progressive renal diseases, GFR decreases with time as a result of the decrease in the total number of nephrons or reduction in the GFR per nephron due to physiological and pharmacological changes in glomerular hemodynamics. GFR may be reduced well before the onset of symptoms and correlates with the severity of CKD. In 2002, the Kidney Disease Outcome Quality Initiative (KDOQI), sponsored by the National Kidney Foundation, suggested that DRC should be classified in stages based on GFR, as shown in Table 1 (BASTOS, M.G.; KIRSZTAJN, G.M., 2011). When GFR falls

****Corresponding author: Maryam Andrade Fróz***
Master Student in Nursing from the Federal University of Maranhão, São Luís, Maranhão, Brazil

below 10-15ml / min / 1.73m², renal replacement therapy is required. The types of treatment can be: peritoneal dialysis, hemodialysis and renal transplantation. In peritoneal dialysis it is necessary to implant a peritoneal catheter, through this catheter the dialysis solution can be infused and drained. On hemodialysis, the patient's blood is removed from the body and passed through a machine that filters this blood, vascular access is required, which may be an arteriovenous fistula or a central venous catheter (PECOITS, R.F.S; RIBEIRO, S.C., 2016). Renal transplantation is the most effective type of renal replacement therapy for socioeconomic rehabilitation of patients with stage 5 chronic kidney disease (Pestana, J.O.M. de A., 2014).

According to the Report of the Brazilian Census of Chronic Dialysis 2012, the percentage of dialysis patients aged less than or equal to 12 years, between 13 to 18, 19 to 64 years, 65 to 80 years or> 80 years was 0.3%, 4.2%, 63.6%, 27.7% and 4.2%, respectively. The total estimated number of patients in the country on July 1, 2014 was 112,004, which represents an increase of 20,000 patients in the last 4 years (92,091 in 2010). There has been an average annual increase in the number of patients of 5% in the last 4 years. The prevalence rate of dialysis treatment in 2014 was 552 patients per million population (pmp) (SESSO, R.C. *et al*, 2016). Thus, it is necessary to know how the evaluation of the quality of life of elderly people in renal replacement therapy is carried out based on studies already carried out in the literature. The aging of the population associated to increased life expectancy has led to changes in the morbidity and mortality scenario, with an increase in the incidence of chronic diseases, including chronic kidney disease. The glomerular filtration rate decreases progressively over the years due to physiological changes and concomitance with chronic diseases such as hypertension and diabetes mellitus, increasing the rate of chronic kidney disease in the elderly, progressing to dialytic treatment.

Table 1. Classification of chronic kidney disease according to glomerular filtration

DRC stage (with present kidney damage)	Glomerular filtration rate (ml / min / 1.73m2)	Condition
1	≥90	Normal / High
2	60-89	Discretereduction
3 a	45-59	Discreet / moderate
3 b	30-44	Moderate / severe
4	15-29	kidneyfailure
5	<15	Dialysisortransplantation

Source: Epidemiological analysis of renal disease. Course 2. Unit 1. UNA - SUS, (2014, page 19)

It is estimated that the disease affects one in five men and one in four women aged 65-74, with half the population aged 75 and older suffering some degree of chronic kidney disease. (PORTAL BRAZIL, 2015). In view of the growing number of elderly patients with chronic kidney disease who develop into dialysis, a study in the form of bibliographic research, evaluating the published researches that have explored quality of life in elderly patients in renal replacement therapy, should be carried out to contribute to that protocols are implemented, aimed at improving the care provided to this population by the health services and multiprofessional team. The overall objective of the study is to report the discussions in the literature on the quality of life of the elderly in renal replacement therapy. In addition to describing renal function in the elderly and addressing the most relevant points about the quality of life in the elderly in renal replacement therapy. It is a bibliographical research based on the scientific productions related to the theme in the last 10 years. For the analysis of the studies found for this review, the type of study, the objectives, the results and the conclusions will be considered. Will be included in the research: studies that address the quality of life of elderly people in renal replacement therapy in the period 2007 to 2017. As exclusion criteria: productions performed prior to 2007 and works that do not present full summaries in the databases and in the library researched. The data collection was carried out in the LILACS Bibliographic Database, SCIELO, accessible electronically in the Virtual Health Library (BVS-BIREME) and CAPES / MEC Portal of Periodicals, using the expressions "hemodialysis and the elderly", " dialysis and elderly "," renal replacement therapy "," quality of life, hemodialysis and the elderly "," renal function in the elderly ". These databases were chosen because they understand the literature published in the countries of Latin America and the Caribbean, as well as technical-scientific references and well-known journals in the health area.

Renal function in the elderly

Some patients are at increased susceptibility to CKD and are considered at risk groups, such as the elderly with a physiological decrease in glomerular filtration (GFR). Renal lesions that occur with age, secondary to chronic diseases common in elderly patients, make the elderly susceptible to CKD. Although the decrease in age-related GF may be due to the normal aging process, the decrease in GF in the elderly is an independent predictor of adverse disease evolution, such as death and cardiovascular disease (BASTOS; BREGMAN; KIRSZTAJN, 2010). Changes in kidney structure and function occur over the years, the consequence of these age-related renal changes is renal functional restriction. The renal cortex decreases by 10% per decade after 30 years of age. Some factors contribute significantly to the reduction of renal function in the elderly, such as glomerular sclerosis, tubular atrophy, interstitial fibrosis and atherosclerotic alterations (BASTOS; OLIVEIRA; KIRSTAJN, 2011). The DRC reaches all age groups and its prevalence has increased in recent years and is therefore considered a public health problem. It is necessary to identify patients with impaired renal function, in particular those with a greater chance of progression to chronic kidney disease, and to initiate treatment to avoid the more frequent complications of the disease and prevent the early evolution to death. In an epidemiological study on the health of the elderly in the city of Tubarão - SC, 13.6% of the study population had GFR of less than 60 ml / min / 1.73 m2 (DUTRA *et al*, 2014). The progressive reduction of GF is a characteristic of aging, which contributes to protein catabolism and worsening of general health. Comorbidities such as high blood pressure and diabetes mellitus contribute to this decline. In the study "Analysis of elderly patients with nutritional status, sarcopenia, renal function and bone density" showed that 20 elderly women (45.5%) had adequate renal function (GFR ≥ 60 ml / min / 1.73 m2); 22 (50%) had grade 3 CKD (15 in stage 3A and 7 in stage 3B), one (2.3%) had grade 4 CKD and one (2.3%) was in grade 5. The study that aging negatively influences renal function (SALMASO *et al*, 2014).

Quality of life of elderly patients undergoing dialysis treatment: According to the Brazilian Society of Nephrology, currently about 30% of patients on dialysis are elderly. These

patients have peculiar clinical characteristics that should be considered; in general, have a greater number of comorbidities, among them the most common are hypertension, diabetes and heart disease, and most present more than two chronic diseases, require more hospitalizations, consume more drugs and, proportionately, use more health services than the younger population. They present a decrease in physical functioning and general health (BRAGA *et al*, 2011). The rigorous dialytic treatment affects the quality of life of the elderly by several factors, as it causes food modifications, habits and work activities. The state of frailty due to the aging process associated with the dialysis treatment causes greater adverse reactions, alterations of body image, physical and mental limitations (BASTOS *et al*, 2012). DRC is a pathology that, in addition to impairing the health of the experiencing individual, causes psychological damage and alters their daily lives, even if older patients are able to adapt better to adverse conditions than younger people to their life experience, psychological losses are also characterized as a social problem, which interferes with the role that this individual plays in society. Hope has a beneficial effect on people's health by contributing to people's empowerment in dealing with crisis situations, maintaining quality of life, determining healthy goals and promoting health (Orlandi *et al*, 2012).

Patients over 60 years of age presented greater losses in functional capacity. According to several authors, the intensity of fatigue is associated with the higher age, the chronic condition of the disease and the time of hemodialysis treatment of the patient with CKD, thus decreasing even more the functional capacity. Among these three factors, the longer time of hemodialysis treatment interfered more with the sensation of fatigue in these patients (CUNHA *et al*, 2009). In a study by RIBEIRO *et al*, 2009, 41% of the elderly were mildly depressed and 2% very depressed. Depression increases the incidence of deaths among elderly people by 80% to 83%, deserving special attention, since it has negative consequences for the quality of life of the individuals affected. They aggravate other diseases, since depression makes treatment more difficult, also increases suicidal thinking and causes social isolation. The elderly undergoing hemodialysis had a low quality of life, with variations according to the analyzed domains. Because they are individuals with a chronic disease, the physical domain, which addresses issues related to the patient's health status, is the most impaired. On the other hand, the existence of good social relations, especially with family members, contributes to the continuity of these patients (TAKEMOTO, A. Y. *et al*, 2011). The work activity is an aspect that must be approached by health professionals, since this disease is manifested in the various age groups and many elderly people work to contribute to the family income. The time that the chronic renal patient uses to deal with the disease and the possible problems that the treatment causes, is a difficult factor in the work performance, since the physical compromise and the physiological changes resulting from the chronic kidney problems can also result in difficulties in fulfilling the required working day or in carrying out the required work activities (OLIVEIRA *et al*, 2012).

Conclusion

Advances in health technologies and improvements in socioeconomic conditions over the years have contributed to an increase in people's life expectancy. As a result, there was an increase in the elderly population worldwide, in parallel with an increase in chronic degenerative diseases in this population, with CKD being highlighted in its different stages, causing worsening of the general health status of these patients. The elderly patient is susceptible to develop CKD, due to progressive decrease of renal function with alterations in anatomy and function, associated to other cardiovascular diseases, especially diabetes mellitus and hypertension. The dialysis treatment performed in CKD has a considerable impact on the quality of life of the elderly, as physical, psychological and emotional changes occur in social and family relationships. The consequences to the elderly due to the treatment of CKD require the health team that accompanies these patients, cognitive abilities, experience and scientific knowledge to adequately follow up these patients, integrating the patient, family and health professional in the care process of health. Thus, it is necessary to develop specific public policies for the follow-up of these patients, based on optimization of the management of CKD, with appropriate treatment of comorbidities, identification and early treatment of impaired renal function, providing improvements in the quality of life of this population.

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