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Chronic Kidney Disease: a literature review

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Abstract: This paper aims to discuss what has been written about the treatment of patients with CKD in recent years. For this, it is intended: to make a simple bibliographic survey of articles published in the years 2018-2021, to perform a brief analysis about the results and to comment on the most used treatments. After the research, it was possible to find a total of 691 articles produced in Brazil. However, some of the findings corroborated the understanding that CKD treatment occurs from two main intervention models: dialysis and kidney transplantation. It was observed with the study that the treatment modalities (RRT and TR) can cause profound impacts on the quality of life of the subject, which makes attention and attention necessary and sensitivity of health teams to better align their practices and approximate patient demands.

Keywords: Chronic Kidney Disease.

1. Introduction

Chronic Kidney Disease (CKD) can be described as a disease with gradual and irreversible evolution. It causes decreased or altered kidney function, bringing complications with regard to blood filtration.

Chronic Kidney Disease is a general term for heterogeneous changes that affect both structure and renal function, with multiple causes and multiple prognostic factors. It was a disease of prolonged course, insidious and, in most of the time of its evolution, it is asymptomatic (BRASIL, 2014: p 8).

Some possible causes of CKD include: glomerular disease, hypertension, diabetes, and other causes that do not necessarily involve renal function, such as obesity. Among them, the main reason described in the study is hypertension, followed by diabetes. Because of many of these pathological conditions, the chronic characteristics of CKD still exist and renal involvement can be observed (PASSOS, 2021; NEVES, 2020; MALKINA, 2020).

In studies on CKD, when talking about the evolution and diagnosis of the disease, initially a classification composed of stages of disease evolution was proposed, portraying the condition in which renal function is found (PASSOS, 2021). The stages would be as follows:

I. Phase of normal function and no renal injury observed;
II. Phases with renal injury observed, but without impairment in kidney function;
III. Phases of functional or mild renal failure;
IV. Phase of laboratory renal failure, or moderate;
V. Phase of clinical or severe renal failure;
VI. Terminal phase of chronic renal failure.

Over time, change proposals were proposed that made the classification more practical and taking into account the glomerular filtration rate, being divided as follows (PASSOS 2021; AMMIRATI, 2020):

I. G1 - Filtration rate > 90
II. G2 - Filtration rate 60 -80
III. G3a - Filtration rate 45- 59
IV. G3b - Filtration rate 30- 44
V. G4 - Filtration rate 15-29
VI. G5 - Filtration rate < 15

The treatment of chronic renal patients occurs from two main intervention models: dialysis (divided into two types: hemodialysis and peritoneal dialysis) and kidney transplantation. In addition to these, we observe the need for treatment of comorbidities that arise due to CKD, such as anemias, mineral and bone disorders, mental health demands, depression, anxiety, self-image alterations, among other chronic diseases that can be caused by the patient's condition (PASSOS, 2021; ALVES, 2004; MALKINA, 2020).

Thus, it is important that the person who presents CKD is periodically performing medical examinations and consultations in order to monitor their health status and assess the risks and progression of their disease. These facts often overload the patient and reverberate negatively during the treatment of the disease, generating discouraged, demotivation, resistance to the new habits that need to be adopted (PASSOS, 2021; ROCHA *et al*, 2020).

In Brazil, a progressive increase in the number of occurrences of chronic kidney disease (CKD) has been observed. In data from the Brazilian Dialysis Census, for example, it is estimated that in 2018 we had an increase of about 54.1% in the registration of new cases in clinics and specialized offices, and that this number could have a growth of up to 6.4% in the following years (NEVES *et al*, 2020). The Ministry of Health states that

Currently, CKD has been considered a public health problem. Analysis by the National Health and Nutrition Examination Survey (NHANES) showed that about 13% of the population in the U.S. has some degree of loss of kidney function. An important study conducted in the city of Bambuí, in the state of Minas Gerais, where more than 2,000 individuals were evaluated, detected changes in serum creatinine, a marker of CKD, ranging from 0.48% to 8.19%, being more frequent in elderly individuals (BRASIL, 2014 p. 7).

According to Emirati *et al* (2020), CKD is more frequent among the adult population in general, associated with more pronounced risks of developing other chronic diseases, such as heart diseases, which may increase the severity of this pathology and also lead to death.

Due to this situation, it is important to conduct studies in order to promote information that allows greater clarification of the population, and that allow the practical reflection of health agents, deviling new care methodologies that bring to the chronic renal patient a higher quality of life.

Thus, the present study aims to discuss what has been written about the treatment of patients with CKD in recent years. For this, it is intended: to make a simple bibliographic survey of articles in the years 2018-2021, to perform a brief analysis about the results and to comment on the most used treatments.

2. Methodology

The present work is brief bibliographic research, using as research base the SciELO and articles found in the Virtual Health Library (VHL). The research used the following descriptors: chronic kidney disease and Treatments; Chronic Kidney Disease AND COVID-191; Dialysis; Kidney Transplantation; Dialysis AND Chronic patients; Renal Transplantation AND Chronic patients.

The inclusion criteria of the articles in the research were

as follows: Portuguese language, published in Brazil, article format, with time frame in the interval between 2018 and 2021. These criteria were defined by the factor of recent city of the studies and approximation of the Brazilian reality.

We excluded the works that did not meet the above requirements, and that did not bring in their abstract or title scores related to the theme addressed in this work.

Thus, the criteria defined for this work were raised in order to approximate the study of the national reality, worrying about the recent city of studies and language and places of publications, enabling a better analysis about the practices, experiences and theme that has been discussed in reference to the services and practices that make up the treatment of chronic renal patients in our country.

3. Results and Discussion

After the research carried out it is possible to recover the total of 694 articles produced in Brazil. As can be seen in TABLE 1 below:

Table 1. Results

KEYWORD	FINDINGS	VHL (%)	SCIELO (%)
Chronic Kidney Disease AND Treatments	15	60%	40%
Chronic Kidney Disease AND COVID-19	18	50%	50%
Dialysis AND Patients Chronic	39	86%	14%
Kidney Transplant AND Chronic patients	6	82%	18%
Dialysis	473	79%	21%
Kidney Transplantation	140	81%	19%
TOTAL	**691**	**79%**	**21%**

As can be seen, there are a greater number of results found in the Virtual Health Library. The tool is characterized as an integrated space with sources of scientific information in health, corroborating a greater democratization and expansion of knowledge, enabling access to technical information about health work in Latin America and Caribbean (REGIONAL PORTAL OF the VHL, Sc.D.).

Thus, a greater number of results in this platform reflects, in a certain way, in a closer approximation of studies to our reality and a concern to think about the health practices that are being developed by Latin American health systems, especially in Brazil.

Another important factor about the results is the multidisciplinary nature of the studies. Research can be found in the areas of nursing, pharmacy, psychology, dentistry, integrative practices, collective health, nutrition, among other perspectives of knowledge that offer important angles of view about Chronic Kidney Disease, pointing out the complexity of this phenomenon of study and indicating the complexity of this phenomenon of study and indicating the need for interdisciplinary practices in the care of chronic patients (SANTOS et al, 2021; CALICE-SILVA et al, 2020; LIMA et al, 2021; ROCHA et al, 2020; FRANCO *et al*, 2018; OLIVEIRA *et al*, 2018).

Regarding the treatment and care of chronic renal patients, the studies found talk about two main treatment modalities: Dialysis and Kidney transplant. Both therapeutic resources sometimes appear in dialogue with complementary practices, such as mindfulness, physical activities and work gymnastics, alternative nursing procedures, among other issues that can bring a higher quality of life to the subject under treatment (ELOIA *et al*, 2021; COSTA *et al*, 2021; PINTO *et al*, 2020; GAMA *et al*, 2020; ANDRADE *et al*, 2019; OLIVEIRA *et al*, 2018; FUKUSHIMA *et al*, 2018).

Dialysis and Kidney Transplantation processes

Currently, CKD is considered a public health problem on the rise in many regions of the world, including Brazil. Renal injury in severe states becomes irreversible and requires the use of Renal Replacement Treatment (RRT) for patient care (ELOIA *et al*, 2021).

Within RRT, the most commonly used resource is hemodialysis, which is characterized as a procedure in which a machine is responsible for blood filtration, assuming the role of the diseased kidney. In this modality of RRT, the filtration process removes from the body residues and substances harmful to health, controlling blood pressure and contributing to the balance of the organism (ELOIA *et al*, 2021; LIMA *et al*, 2021).

On the other hand, it is observed that the substitute procedure can present itself as a difficult experience to the patient, due to its impact on the daily life of the individual, such as changes in habit, diet, medications, treatment routine, side effects in procedures, dependence on clinical follow-up, among other factors (LEONE *et al*, 2021; ELOIA *et al*, 2021; LIMA *et al*, 2021; TAVARES *et al*, 2021; OAK; DINI, 2020).

Another treatment procedure for renal injury is Peritoneal Dialysis (PD). In this method, the process occurs without the use of a dialysis machine, but rather through a specific equipment that administers and drains a special solution in the patient's abdomen. According to Leone *et al* (2021: p. 2) this treatment modality is divided into two possibilities:

> Continuous Peritoneal Dialysis (CAPD), which is a manual method, in which the replacement of the dialysis solution of the peritoneal cavity is performed through gravity, every 4-5 hours, and the Automated. Peritoneal Dialysis (DPA), which is carried out by means of a machine responsible for the process of exchange of dialysis solution for 8 to 10 hours per night, leaving the patient free during the day for other activities.

Both procedures impact on patients' routines and lives in general, and may have consequences on their quality of life reverberating in anxiety, isolation, restlessness, hopelessness, mood swings, irritability, depression, among other consequences that can negatively affect treatment (LEONE *et al*, 2021; ELOIA *et al*, 2021).

Therefore, it is important to highlight the role of the health professional and the need for interdisciplinary action in patient care, highlighting the factors empathy and sensitivity in order to perceive the complexibility of this problem and to outline with the patient, strategies of coping with a better quality of life, such as physical activities, meditation, spirituality, among others (TAVARES *et al*, 2021; OAK; DINI, 2020).

In addition to RRT, another factor present in the studies is Renal Transplantation. Transplantation is a procedure that is closely linked to the advancement of medicine and health technologies, having a relatively recent history in Brazil. This therapeutic resource mobilizes patients in several areas of their lives, such as emotional, sentimental and perceptions about concepts such as life and death (SANTOS *et al*, 2018; LEITE *et al*, 2018).

RT is a complex and invasive surgical procedure that involves psychological, social and physical factors of the patient. It can happen through two possibilities: living or deceased donor, even if there is no nonblood loop (AVERSA-SANTOS *et al*, 2019; PAVAN *et al*, 2019; SANTOS *et al*, 2018; LEITE *et al*, 2018).

As in RRT, RT can cause profound impacts on the quality of life of the subject, which makes it necessary for health teams to care and sensitivity to better align their practices and approximate patient demands (SANTOS *et al*, 2018).

4. Conclusions

The aim of this study was to allow reflection on the treatment of Chronic Chronic Diseases, based on a brief review of the literature. From the results it is possible to notice the presence of the interdisciplinary perspective as an important driver of the discussions. The phenomenon of CRD presents itself in a complex way and requires networking to better serve the sick subject. It's from the dialogue between knowledge that new strategies and care methodologies may arise, cooperating with a higher quality of life for patients.

Another point noted is that many recent studies address the quality of life of chronic renal patients as the focus of intervention, pointing out isolation, loneliness, impacts on routine and dependence on medical follow-up as decisive factors in the progress of treatment and necessary to be taken into account by the responsible health team.

Moreover, it is also noticed the scarcity of research in the area of nephrology and the difficulty of finding epidemiological data from some regions of the country. Thus, we emphasize the importance of conducting more research on the subject and on the treatment of CKD and dialogue with areas of knowledge, such as pharmacy, psychology, physiotherapy, among others.

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