

Nursing care model for the management of complications of chronic kidney disease (CKD)

Modelo de atención en enfermería para el manejo de las complicaciones por enfermedad renal crónica (ERC)

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ABSTRACT

The aim was to analyze the nursing care model for the management of complications due to chronic kidney disease (CKD). A descriptive type of research with a non-experimental design was generated, with the intention of finding out the variable as it develops. The population consisted of eighty patients receiving hemodialysis. In relation to the nursing care model applied to patients on dialysis therapy, cramp was observed, which was treated by administering volume with 25%, a decrease in ultrafiltration rate represented 20%, followed by hypertension, and volume administration was also applied. Chronic kidney disease (CKD) has shown a progressive increase in prevalence in recent decades, which has led to state intervention plans.

Descriptors: disease control; health policy; life sciences. (Source: UNESCO Thesaurus).

RESUMEN

Se planteó el objetivo de analizar el modelo de atención en enfermería para el manejo de las complicaciones por enfermedad renal crónica (ERC). Se generó una investigación de tipo descriptiva con diseño no experimental, con la intención de conocer la variable tal como se desarrolla en la realidad. La población estuvo constituida por 80 pacientes que reciben hemodiálisis. En relación con el modelo de atención en enfermería aplicado en los pacientes en terapia dialíticas, se observó en calambre, este fue tratado mediante administrar volumen con el 25%, disminución de tasa de ultrafiltración representa el 20%, seguido de la hipertensión, así mismo aplicaron la administración del volumen. La enfermedad renal crónica (ERC) ha presentado un incremento progresivo en su prevalencia en las últimas décadas, que ha obligado incluso a planes de intervención estatales.

Descriptores: lucha contra las enfermedades; política de la salud; ciencias de la vida. (Fuente: Tesauro UNESCO).

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Research articles section



INTRODUCTION

Chronic kidney disease (CKD) is the progressive decline in kidney function (Glasscock et al. 2017), which is measured through the glomerular filtration rate, which defines chronic kidney disease when it is below 60 millilitres per minute per 1.73 of body surface area with a persistence of no less than three months, it is defined as having chronic kidney disease, the kidney ceases to perform its functions among them we have, regulate the acid-base balance, eliminate waste substances, control blood pressure (Lorenzo-Sellarés & Rodríguez, 2021).

Haemodialysis is the replacement treatment of choice for patients with end-stage renal failure. Since it first appeared as a treatment, its use has managed to prolong survival in a certain vulnerable group of people and at the same time it has become a therapeutic treatment. Renal failure is one of the health problems that has the greatest repercussions on a patient's lifestyle. Through this, an attempt is made to replace renal function through sessions in which the patient, through a permanent or temporary catheter, native or prosthetic arteriovenous fistula, undergoes a complex process in which their blood is filtered and purified by a machine of all harmful substances and waste products for the organism (Charles & Ferris, 2020).

It is important to bear in mind that patients with chronic kidney disease (CKD) suffer concomitant symptoms that weaken their quality of life, require high costs for their care (Gutiérrez-Sánchez et al. 2016), and it is necessary to have nursing care that is favourable to alleviating complications, which is why it is required that this health personnel act effectively to avoid complex situations to the detriment of the patient.

In accordance with the above, the aim is to analyse the nursing care model for the management of complications due to chronic kidney disease (CKD).

METHOD

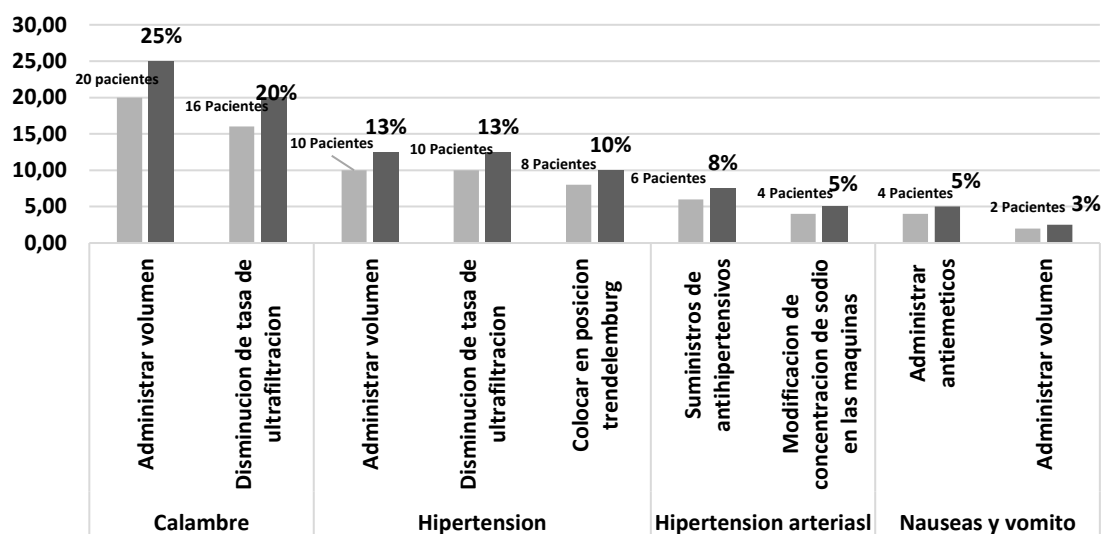
A descriptive type of research with a non-experimental design was generated, with the intention of knowing the variable as it develops in reality. The population consisted of 80 patients receiving haemodialysis, who met the inclusion criteria, both women and men between 30 and 70 years of age who agreed to participate in the research. Patients receiving peritoneal dialysis and those under 30 years of age were excluded.

Consent was obtained from all the people to be surveyed, informing them of the objective of the study to be carried out and the minimum risk of participating. The survey was applied as a technique for collecting information and a self-administered questionnaire-type instrument was used to ascertain their perception of the nursing care received. This consisted of 13 items with simple selection alternatives for response and was validated in content by content judgement and with a Cronbach's Alpha coefficient of 0.86, which was considered reliable for application.

The data collected were organised in a database, generating an analysis using descriptive statistics with the support of Excel 2016, by means of which they were processed to be presented in a graph with identification of the number of patients and percentage per indicator measured.

RESULTS

The following research result is proposed:



Graph 1. Nursing care model for the management of complications of chronic kidney disease (CKD).

In relation to the nursing care model applied to patients on dialysis therapy, cramp was treated by administering volume with 25%, decreased ultrafiltration rate accounted for 20%, followed by hypertension, followed by volume administration, decreased ultrafiltration rate and trendelenburg positioning (Arvizo et al. 2018), while arterial hypertension was observed 7.5% being managed by antihypertensive supplies and modification of sodium concentration in the machines, while nausea and vomiting responded with the percentage of 2.5%.

Discussion

The increase in the number of people suffering from CKD can be explained by the fact that they are diagnosed, detected and treated late, and there is also a lack of knowledge on the part of medical staff and patients that, by suffering from these pathologies, they are carriers of permanent renal damage that ends in the total loss of renal function, For these reasons, it is necessary to prepare for the confrontation of this epidemic and the only way to do so is by transmitting these new concepts to primary care doctors so that under nephrological supervision they can carry out the diagnosis, early treatment and adequate follow-up of this pathology (López-Catá et al. 2021).

The ageing of the population and secondly the alarming increase in the incidence of type 2 diabetes (type 2 DM) and consequently diabetic nephropathy (DN), is known to be the most important cause of patients starting renal function replacement therapy where they receive such treatment by spending one day a week through a vascular access either native fistula or a catheter where by means of the machine the treatment is performed and thus helps eliminating waste substances (Coitinho et al. 2015).

Chronic kidney disease (CKD) has shown a progressive increase in prevalence in recent decades, which has even forced state intervention plans (Webster et al. 2017). The incidence of new patients with end-stage renal disease (ESRD) has tripled in the USA in the last 20 years with an incidence of 340 patients per million population. In our country, these parameters are the same, and there are currently 149 patients receiving renal function purification treatment in our haemodialysis service in the province of Villa Clara, Cuba (Brito-Lima et al. 2021).



Chronic renal failure is considered, like AIDS, as the epidemic of the century, due to its high prevalence and incidence. It is known how many patients with CKD are on dialysis, but not how many suffer from it in its different stages. The prevalence, experts point out, increases with age, currently more than half of the patients are older than 65 years (Song et al. 2020).

Declining renal function, duration of mHD and inflammation may contribute to these aforementioned changes, which are probably factors to be taken into account when explaining the mechanisms of persistence of anaemia in haemodialysed patients. we found changes in the percentage contents of all Tf variants in the total Tf concentration and a significant decrease in the serum concentrations of Tf2, Tf3 and Tf4. In addition, we found that decreased renal function, duration of mHD and inflammation may contribute to these aforementioned changes, which are likely to be the factors that should be taken into account when explaining the mechanisms of anaemia persistence in haemodialysed patients (Formanowicz & Formanowicz, 2012).

Patient complications in haemodialysis treatment according to studies from around the world are due to two causes: Internal: Critical condition of the patient, i.e. pathological conditions that immediately affect the patient during haemodialysis sessions such as hypotension, imbalance syndrome, allergic reactions, hypertension, muscle cramps and hypoglycaemia. External: Physical manifestations that affect in a medium to late manner are related to the handling in the placement and manipulation of catheters such as: bacteraemia, pyrogen fever, which can develop due to not having a correct aseptic technique (Reyes-Rueda et al. 2021), (Yu-Ju et al. 2019).

Although it can also be due to dialysate temperature, excessive dialysis weight gain, excessive ultrafiltration below dry weight, intradialytic hypertension is also prevalent (Van-Buren & Inrig, 2016), which can vary depending on the number of haemodialysis treatments, The causes of hypertension can be several, such as extracellular volume overload, endothelial dysfunction, activation of the sympathetic nervous system, activation of the renin-angiotensin-aldosterone system, elimination of antihypertensives during haemodialysis, electrolyte changes (Mojtaba-Ghorbani et al. 2021).

CONCLUSION

In relation to the nursing care model applied to patients on dialysis therapy, cramp was treated by administering volume with 25%, decreased ultrafiltration rate with 20%, followed by hypertension, and volume administration. Chronic kidney disease (CKD) has shown a progressive increase in prevalence in the last decades, which has forced even state intervention plans. Declining renal function, duration of mHD and inflammation may contribute to the aforementioned changes, which are probably factors to be taken into account when explaining the mechanisms of persistence of anaemia in haemodialysed patients.

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CONFLICT OF INTEREST

There is no conflict of interest with persons or institutions involved in the research.

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