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ARTICLE CLINICAL CASE REPORT

IMPLEMENTATION OF NURSING PROCESS TO THE PATIENT SUBMITTED TO HEMODIALYSIS

IMPLEMENTAÇÃO DO PROCESSO DE ENFERMAGEM AO PACIENTE SUBMETIDO À HEMODIÁLISE

APLICACIÓN DEL PROCESO DE ENFERMERÍA AL PACIENTE SUMETIDO A LA HEMODIÁLISIS

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ABSTRACT

Objective: to apply the nursing process in chronic renal patients undergoing hemodialysis. ***Methods:*** a descriptive study with a patient with chronic kidney disease on hemodialysis for more than 15 years. The study was conducted in a dialysis clinic, located in the city of Natal, Rio Grande do Norte, Northeastern Brazil, in April 2012, with a screenplay by interview and physical examination, after approval by the Ethics Committee on Research with CAAE 0139.0.051.000-11. After the interview, was held a clinical reasoning and the establishment and implementation of the care plan. ***Results:*** three nursing diagnosis were charted: Altered nutrition less than body requirements, excessive volume of fluid and insomnia. It was established and executed a plan of nursing care. ***Conclusion***: the use of the nursing process provided assistance targeted to the real needs of the customer, providing the means to propose interventions and achieve expected results. ***Descriptors:*** Nursing Care; Chronic Kidney Failure; Renal Dialysis.

RESUMO

***Objetivo*:** aplicar o processo de enfermagem em paciente renal crônico submetido à hemodiálise. ***Método*:** estudo descritivo, com um paciente doente renal crônico em hemodiálise há mais de 15 anos. O estudo foi realizado em uma clínica de diálise, localizada no município de Natal, Rio Grande do Norte, Nordeste do Brasil em abril de 2012, com roteiro de entrevista e de exame físico, após a aprovação do Comitê de Ética em Pesquisa com CAAE nº 0139.0.051.000-11. Após a entrevista, realizou-se o raciocínio clínico e o estabelecimento e a aplicação do plano de cuidados. ***Resultados*:** traçaram-se três diagnósticos de enfermagem: Nutrição desequilibrada menos que as necessidades corporais, Volume de líquido excessivo e Insônia. Foi estabelecido e executado um plano de cuidados de enfermagem. ***Conclusão*:** a utilização do processo de enfermagem proporcionou a assistência direcionada para as reais necessidades do cliente, fornecendo meios para propor intervenções e alcançar resultados esperados. ***Descritores*:** Cuidados de Enfermagem; Falência Renal Crônica; Diálise Renal.

RESUMEN

Objetivo: aplicar el proceso de enfermería en pacientes renales crónicos sometidos a hemodiálisis. ***Métodos:*** se realizó un estudio descriptivo con un paciente con enfermedad renal crónica en hemodiálisis desde hace más de 15 años. El estudio se realizó en una clínica de diálisis, que se encuentra en la ciudad de Natal, Rio Grande do Norte, noreste de Brasil, en abril de 2012, con un guion de entrevista y examen físico, después de la aprobación del Comité de Ética en Investigación con CAAE 0139.0.051.000-11. Después de la entrevista se llevó a cabo el razonamiento clínico y el establecimiento y la aplicación del plan de cuidados. ***Resultados:*** tres diagnósticos de enfermería fueran trazados: nutrición alterada inferior a las necesidades del cuerpo, volumen excesivo de líquidos y el insomnio. Se estableció y ejecutó un plan de cuidados de enfermería. Conclusión: El uso del proceso de enfermería proporcionó ayuda específica a las necesidades reales del cliente, proporcionando los medios para proponer intervenciones y lograr los resultados esperados. ***Descriptores:*** Atención de Enfermería; La Insuficiencia Renal Crónica; Diálisis Renal.

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INTRODUCTION

In Brazil and around the world, chronic kidney disease (CKD) has increased steadily each year in epidemic proportions, constituting a public health problem. In 2010, the estimated number of patients with CKD on dialysis in Brazil was approximately 92,091. Among the treatment options, hemodialysis (HD) stands out in quantitative terms, encompassing about 90% of patients.[1]

The HD consists in the extraction of nitrogenous substances toxic blood and removal of excess fluid accumulated in the body tissues. The blood filled with toxins and nitrogenous wastes, is passed from the patient to a dialyzer, which is filtered, making it clean and then be returned to the patient. [2] The HD is usually performed three times per week on average sessions lasting 4 hours.

For most patients undergoing HD treatment represents a hopeful sign of life, since the disease is incurable. However, they are notorious difficulties in adherence to treatment, as many are related to non-acceptance of the disease, the restrictions imposed, the perception of himself and his interpersonal relationships with family and social life. Also, given the high morbidity and mortality of CKD, the physical and psychological aspects of this committed clientele, and a nursing care directed at this population, it is necessary to implement a differentiated methodology care as the Nursing Process (EP).

The EP is a humanized care in order to obtain desired results cost effectively through a systematic method consisting of steps: research, diagnosis, planning, implementation and evaluation. In the first step of PE, research should make an inventory of information, using tools like the interview and physical examination so that, when interpreting these data, the nurses have to identify needs subsidies or phenomena on which will act. By identifying, mapping the nursing diagnoses (DE), plan interventions to be implemented by the nursing staff and analyze the results obtained with the actions taken, feeding back the scientific process of care.[4]

Glimpsing this context, it is apparent the importance of using standardized language systems, both for diagnostics and for interventions and outcomes. Thus, with the advent of the models for the process were emerging classification systems, such as the Classification System of Nursing Diagnosis NANDA-International (NANDA-I), the Nursing Interventions Classification (NIC) and Ranking Results Nursing (NOC).[5]

Therefore, the implementation of the PE sector hemodialysis allows the nurse record the data, prepare a care plan that specifically covers patient care from the identification and monitoring of adverse effects of treatment, such as complications arising from the disease itself, beyond the possibility of development of educational promotion, prevention and treatment.[6] It also provides nurses to the planning, coordination and evaluation of their actions prioritizing customer service with its own language category. In this perspective, the PE sector implemented in hemodialysis nurses will provide guidance to provide integral care, humane and facing the real needs of each patient.

OBJECTIVE

• To apply the nursing process to patients undergoing hemodialysis.

METHOD

This descriptive study in a dialysis clinic in reference located in the city of Natal, Rio Grande do Norte, in April 2012, and the population was composed of patients undergoing hemodialysis and sample of an individual who has met the following selection criteria: be chronic kidney disease on hemodialysis for over 15 years.

Data collection began with the identification of the real needs of the patient through the combination of interviews and physical examinations. This tour was organized according to domains of NANDA-I. Then there was the clinical reasoning and judgment diagnosed as NANDA-I, according to NIC interventions and goals to be achieved through the evaluation indicators for the NOC. After these steps, we applied the plan of care, taking three days off assessment assistance implemented.

In compliance with Resolution no. 196/96 of the National Health Council of the Ministry of Health7, which regulates research involving humans, this study was approved by the Ethics Committee of the Federal University of Rio Grande do Norte (Protocol 115/11 and Certificate Presentation Ethical Consideration (CAAE) in 0139.0.051.000-11). The patient expressed his acceptance to participate by signing the consent form. The data collected were worked without identifying the customer, ensuring their anonymity and right to privacy.

RESULTS

The following patient data and nursing care will be elucidated on two topics, namely: case presentation and plan of nursing care.

♦ Presentation of the Case

SMGV, female, 49 years old, born and raised in Natal / RN, married, Catholic, with elementary education and retired. Diagnosed with CKD and underwent hemodialysis for 16 years.

It is hypertensive, non-diabetic. Do not have surgical history and allergic processes. He denied alcohol consumption and reported abstinence from smoking a year ago.

Performs hemodialysis three days a week, for four hours, and its vascular access to arteriovenous fistula. Drug therapy consisting of antihypertensives, vitamins, chelating phosphorus and erythropoietin.

Condition reports having decreased appetite, for failing to meet specific dietary restriction for chronic kidney disease on dialysis, prefer unhealthy foods. And states ingest about 1500 ml of fluid per day, not meeting prescribed fluid restriction.

He said that relates well with family and neighbors and lives with her husband and two children.

Reported having problems in sleep patterns and sleep, reporting and agitation interruption of sleep and wake up tired. You cannot perform activities of daily living such as down stairs, walking and bathing due to pain and shortness of breath.

On physical examination, performed hypothermic (35.5ºC), normocardic (74 beats per minute), hypertension (160/90mmHg) and tachypneic (24 breaths per minute), body weight of 40.8 kg (being with 2kg above of its dry weight) and height 1.58 m, with a BMI of 16.32 kg/m2, indicating underweight. He was conscious, oriented, pale (hemoglobin = 11.3 g / dl and hematocrit = 33.9%), anicteric, acyanotic and hydrated. With bilateral visual deficit in correcting glasses and hearing acuity preserved. Absence of infarcted lymph nodes. Presence of dental flaws, cavities and halitosis. Peripheral pulses were palpable. Thorax and abdomen unchanged. Cardiac auscultation and normal. Lower limb edema (3 + / 4 +). Proper posture and gait.

♦ Plan nursing care

After investigation by interview and physical examination identified three priority nursing diagnoses and interventions and goals established for implementation of the plan of care, as shown by the figures 1, 2 and 3, respectively.

Nursing diagnosis: imbalanced Nutrition: less than body requirements related to biological factors evidenced by the lack of interest in food and report of inadequate food intake.					
Meta: Nutritional Status					
Indicators:					
A) Nutrient intake	1	2	3	4	5
B) Food intake	1	2	3	4	5
C) Energy	1	2	3	4	5
Intervention: Nutritional Advices					
Activities A) Discuss the patient's knowledge about the four basic food groups, as well as the perceptions of need of diet modification. B) Offer referrals/queries to other members of the healthcare team, when appropriate.					

Figure 1. Care plan established to the first nursing diagnosis prioritary in patients undergoing hemodialysis. Natal-RN, 2012

The first priority route shown in Figure 1 was imbalanced nutrition less than body requirements related to biological evidenced by a lack of interest in food and report inadequate food intake.

To this end, the result was set to be achieved nutritional status, encompassing three indicators, nutrient intake, food intake and energy. And aiming maximum score for these indicators a total of 15 points.

Meanwhile, the intervention was adopted nutritional counseling, implemented with the following activities: discussing the patient's knowledge about the four basic food groups, as well as perceptions of the need for dietary modification and offer consultations and referrals to other team members' Health care as appropriate.

Thus, it can be noticed in the course of implementing the plan of care, which on the first day of evaluation, the patient reported mild improvement in dietary pattern, being in the moment, "eating well and everything," says the preference but not food nutrients, such as chocolates and soft drinks, and showing little energy for the daily activities. The sum of the indicators was a total of nine points.

On the third day of intervention, after being asked about the consultation with the dietitian, the patient reports still have not gone to work recently, but is following guidance from a nutritionist before. Is struggling to reduce the intake of foods and non-nutritive showing slight improvement in

energy for daily activities. Getting 10 points in the framework of indicators.

On the last day of the assessment, after five days of the initial evaluation, the patient reports have scored consultation with nutritionist, having more energy for daily activities and eating habits have improved, with the intake of most nutrients. Establishing a total of 11 points before the indicators.

Nursing diagnosis: excessive fluid Volume related to the excessive intake of liquids and compromised regulatory mechanisms evidenced by edema, ingesting more than the debt, changes in blood pressure, hematocrit, and hemoglobin decreased and diminished weight gain in short period.					
Goal: water balance					
Indicators					
A) Blood pressure	1	2	3	4	5
B) Stable body weight	1	2	3	4	5
C) Peripheral Edema	1	2	3	4	5
Intervention: Water Control					
Activities					
A) Monitor vital signs: blood pressure. B) To weigh the patient daily and monitor the trends. C) Assess the location and extent of edema, if any.					

Figure 2. Care plan established to the second nursing diagnosis prioritary in patients undergoing hemodialysis. Natal-RN, 2012.

Figure 2 shows the plan of care for the second priority established DE: Volume of excess fluid, which factor related stroke was excessive intake of liquids and regulatory mechanisms compromised. And the symptoms were edema, intake greater than the debt, changes in blood pressure, decreased hematocrit, decreased hemoglobin and weight gain in a short period.

Thus, in order to achieve the expected result, fluid balance, we adopted water control and intervention activities: monitoring vital signs-blood pressure, daily weight measurement and monitoring trends, and assessing the location and extent edema, if any. Like, we applied the NOC indicators: blood pressure, peripheral edema and weight stable. With the desired score of 15 points.

When during the execution of the care plan, the first day of evaluation, the patient had a hypertensive crisis (160 x 80 mmHg), weight gain of 1.5 kg interdialisis and with considerable improvement of peripheral edema of the lower limbs (1 + / 4 +). And said that the doctor prescribed exchange of antihypertensive medications. Was oriented to reduce fluid intake and salt and the sum of the indicators was a total of nine points.

On the third day of intervention, using the new antihypertensive medications prescribed by the doctor, blood pressure showed a little more controlled (150 x 80 mm Hg); the patient had no peripheral edema and maintaining interdialytic weight gain of 1, 5 kg. Oriented exchanging salt for food natural seasonings, and reduce fluid intake, getting 12 points under the indicators.

On the last day of the assessment, blood pressure patient was controlled (130 x 80 mmHg), interdialytic weight gain of 1.5 kg and remained with the absence of peripheral edema. Establishing a total of 13 points before the indicators.

Nursing diagnosis: Insomnia related to periodic hormonal changes evidenced by patient reporting in trouble staying asleep and restorative sleep.					
Meta: Sleep					
Indicators					
A) Hours of sleep	1	2	3	4	5
B) Sleeping pattern	1	2	3	4	5
C) Feeling of rejuvenation after sleep	1	2	3	4	5
Intervention: Improvement of sleep					
Activities					
A) To adapt the environment to promote sleep. B) To guide the patient on the way to progressive muscle relaxation or other non-pharmacological ways of inducing sleep.					

Figure 3. Care plan established to the third nursing diagnosis prioritary in patients undergoing hemodialysis. Natal-RN, 2012.

The care plan for the third priority DE: Insomnia related to hormonal changes evidenced by periodic reporting of patient difficulty staying asleep and restless sleep is contemplated in figure 3. And has as goal to be achieved Sleep, featuring three indicators: hours of sleep, sleep patterns and feeling of rejuvenation after sleep. Therefore, the intervention improved sleep was adopted, with the following activities: adapt the environment to promote sleep and counsel patients on how to do progressive muscle relaxation or other non-pharmacological ways

of inducing sleep. Seeking to reach a sum of 15 points against indicators.

One can evaluate the course of implementing the plan of care, which on the first day of evaluation, the patient reported sleeping only two hours a day, and these two uninterrupted hours, waking up tired the day after and highlights that the problem is "too hot overnight." Being established scoring three points against indicators.

On the third day of intervention, after being driven to shower before bed and use air conditioners, the client remains with difficulty staying asleep. Reporting that thermal sensation is the "heat of menopause", having gone to a gynecologist who prescribed hormone replacement, however it is not making use of. Staying with the three points in the question of indicators and was counseled about the use of medications prescribed by a gynecologist.

On the last day of evaluation, after five days of initial evaluation, the patient says is sleeping more hours (five hours), making the cold showers and using air conditioner. However, reveals not be making use of hormone replacement therapy and the symptoms of menopause still makes sleep being interrupted. Before this revelation, the customer was advised to make an appointment with the gynecologist and the sum of indicators got five points.

DISCUSSION

In the implementation of the nursing process, highlight the DE, which are interpretations of scientific data collected, used to guide nursing planning, implementation and evaluation. This step is of singular importance because depending on the correct diagnosis and identification of priority becomes a care efficiently inferring the success of the other stages.

The DE Altered nutrition: less than body requirements, is included in domain 2 (nutrition) in Class 1 (intake) and is setting the intake of nutrients insufficient to meet metabolic needs.[8] And among related factors, biological factors, in agreement when installed anemia was present in our patient.

Most people with renal anemia develop, since this condition can occur early in development failure and worse as the kidneys lose their ability to work well and produce the hormone - erythropoietin. It can also happen when there is lack of healthy food intake with sufficient levels of vitamin B12, folic acid and iron.[9]

The goal for the first DE stroke, nutritional status, the domain is understood physiological health, digestion and nutrition in class, and has by definition the extent of availability of nutrients to meet the metabolic needs. To be evaluated for the grading scale presented in levels, wherein the first, presents as a serious deviation from the normal range and the latter as no deviation from the normal variation, comprising eight indicators: nutrient intake, food intake, intake net energy ratio height/weight, hematocrit, muscle tone and hydration.[10]

The outcomes and nursing indicators allow the realization of measures responses of the patient, family or community at any point along a continuum, from negative to positive, and at different points of time. For this, we use a Likert scale with formatting the score of five points. Therefore, when measuring the outcome before the intervention, the nurse establishes a score based on the result and can sort the result after the intervention.[10]

For the intervention, in pursuit of the goal nutritional status, selected nutritional advice that has by definition the use of interactive process to help focus the need for diet modification.[11] So focused on the changing bad eating habits presented by the studied patient and referral to a nutritionist.

Excessive fluid volume, said second priority, is defined as the increased retention of fluids isotonic. It lays in the domain 2 (nutrition) and Class 5 (hydration). And has as factors related: excessive fluid intake, sodium and regulatory mechanisms compromised.[8]

A study aiming to identify the profile of nursing diagnoses in patients hemodialysis, noted that about 70% of the sample had the DE fluid volume excess. In relation to defining characteristics, 73.3% had weight gain in a short period and changes in blood pressure. And that 90% had factor related, regulatory mechanisms present.[12]

The intervention adopted for the DE fluid volume was excessive water control in order to get the expected result, fluid balance, because the patient had as factors related regulatory mechanisms involved (renal failure) and excessive intake of liquids.

Controlling fluid intake in hemodialysis patients is an important predictor of outcomes, yet it is difficult to obtain a restriction. Thus, to encourage better adherence of patients to follow the guidelines is offered role of the nursing staff.[13]

The last priority DE stroke, Insomnia, is inserted in the field 4 (activity and rest) in Class 1 (sleep / rest) and has by definition a

disorder in the quantity and quality of what affects normal functioning of a person.[8]

Study revealed that 80% of hemodialysis patients had poor sleep quality or some kind of sleep disorder. Sleep-related disorders, such as poor sleep quality, excessive daytime sleepiness and restless legs syndrome are common in patients undergoing hemodialysis, however no relation to the dialysis shift.

The factor related to the respective DE Insomnia was the periodic hormonal changes and in this respect, sought to achieve the goal, sleep.

The result sleep is defined as the extent and pattern of natural, periodic suspension during which the body is restored. It is contemplated in the domain functional health and energy conservation in the class. And for evaluation, there is the relationship of indicators included in a scale ranging from extremely engaged with the value of 1 by not compromised, the value of five.[10]

Thus, in order to establish the goal sleep and intervention activities related to improvement of the same were prescribed. Nursing interventions include direct and indirect care, aimed at individuals, families and community. And the activities are specific behaviors or actions performed by nurses to implement the intervention and help the patient achieve the desired goal. [11]

In this respect, it is believed that the implementation of PE in patients undergoing hemodialysis is necessary to subsidize the direction the planning of nursing care, contributing to an improved quality of life for these clients.

CONCLUSION

The use of PE for the patient undergoing hemodialysis provided a targeted assistance to the real needs of the customer, providing the means to propose interventions and achieve results.

Were assessed through indicators that after the interventions adopted, the three results were plotted progress, but did not achieve the maximum score you want.

Accordingly, further studies regarding the application of PE should be performed looking for new ways to provide care, the nurse offering grants for nursing care from a language of its own, assuming the strengthening of professional acting, demonstrating the true extent of care practice.

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