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Proposal for a model for the implementation of the systematization of nursing care in a Hemodialysis unit of a Public Hospital in the Federal District: Experience report

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ABSTRACT

The Systematization of Nursing Care (SNC) is a methodological instrument aimed at the development of the nursing process, offers support and scientific basis for nursing actions, ensures safe and quality care for the patient, and the nurse plays a fundamental role in its implementation, which is mandatory and provided for by law, in every unit where nursing actions take place. Based on this, the objective of this study was to develop a proposal for a SNC model for possible implementation in the Hemodialysis (HD) unit of the GAMA Regional Hospital in the Federal District. The methodological procedure applied to develop this initiative, described in the format of an experience report, was observational, regarding the profile of the patients and the main complications during the HD sessions, and descriptive in the elaboration of nursing diagnoses and interventions based on the NANDA and findings in the literature pertinent to the theme. As a result, 17 priority nursing diagnoses for chronic kidney disease (CKD) and 28 interventions according to the unit's clinical routine were obtained. At the end, the model was presented to nurses and unit heads, who showed good adherence to the proposal and began to use it in their evolution.

Keywords: Systematization of nursing care, Hemodialysis, Nurse.

INTRODUCTION

Nursing is a profession that has existed for decades, even before it actually becomes a profession, over time great names such as the English Florence Nigthingale, the pioneer of nursing and creator of the Systematization of Nursing Care (SNC), in the twentieth century, emerges in nursing. who defended the assumptions of the profession and prioritized the implementation of SNC in the country in the 70s. The SNC is a methodological instrument that supports nursing actions and values the profession. It has become so important for the quality of care that since 2002 its performance in public and private hospitals has become mandatory by resolution 272 of the Federal Nursing Council (COFEN). (RODRIGUES et al, 2013).

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SNC consists of using methods to organize, plan and execute nursing actions, through which it is possible to operationalize the nursing process (NP), which consists of five stages: data collection, nursing diagnoses, planning, implementation and evaluation. (BRAZIL, 2018)

SNC is important in the clinical routine of nurses, as well as in specific treatment units, such as Hemodialysis. Hemodialysis (HD) is a type of renal replacement therapy (RRT), in which patients with acute kidney injury in dialysis emergency or chronic renal patients need to undergo therapy in order to purify the blood, eliminate liquids and toxins through a blood circuit, dialysis solution and the hemodialysis machine. (SILVA, et al, 2017)

Hemodialysis is the most used type of RRT in the country, 91% of patients who need dialysis are receiving this treatment in Brazil. HD is indicated when renal failure reaches the milestone between 10-15% of glomerular filtration or when renal function is abruptly interrupted by injury. Patients undergoing HD are predisposed to develop several adverse effects to treatment, and it is of great importance that the team is aligned to intervene and provide the best care.

According to knowledge, chronic renal is defined as the slow and progressive loss of renal function characterized by a reduction in the glomerular filtration rate for more than 03 months, until the patient needs RRT to survive. Whereas acute kidney injury consists of abrupt loss of renal function within hours or days, culminating in hydroelectrolytic and acid-base imbalance and a decrease in the rhythm of the glomerular fitraction rate, renal function can be recovered as long as the cause is quickly reversed. Patients on hemodialysis, regardless of the cause, are subject to risks and adverse effects that can be mitigated by the application of SNC as a powerful instrument to incorporate patient safety during the execution of nursing care. (SBN, 2017; REILLY AND PERAZELLA; 2015).

As seen, it is necessary to adopt and apply SNC where nursing actions take place, including in hemodialysis, from this a problem arises: Develop a SNC model for a hemodialysis unit.

Therefore, the objective of this experience report was to develop a model proposal for the application of the systematization of nursing care in the Hemodialysis unit at the Gama Regional Hospital. To list the main nursing diagnoses directed to chronic kidney patients on HD; Establish nursing diagnoses and interventions according to the reality of nursing care developed by the HD team; Present the SNC model to the head of the unit as a proposal for implementation in the unit.

Based on the above, this proposal for a SNC model to be used in HD is justified by the fact that SNC is among the nurse's attributions, its application is mandatory, and because it certifies compliance with nursing actions with a theoretical basis, which makes nursing care something grounded and coherent, in addition to being an instrument for supervision and evaluation of the services provided. (SILVA, et al, 2017)

To carry out this project, it was structured into 06 dimensions: Introduction, methodology, results, discussion, conclusion and references.

METHODOLOGY

This is an experience report regarding the elaboration of a SNC model to be applied in the HD unit of the Regional Hospital of Gama, located in the administrative region of Gama-DF, the HD unit attends about 20 patients, divided into 02 shifts (morning and afternoon), in 3 sessions per week (Monday, Wednesday and Friday or Tuesday, Thursday and Saturday), patients are hospitalized in the medical clinic or in a specific clinic depending on the case until they get a place in a hemodialysis clinic that can serve them. The SNC model was developed by the nursing residents of the nephrology program - SES/DF Joyce do Carmo Campos and Romário de Sousa Gonçalves under the supervision of the staff and preceptor of the program Andrea Morais Texeira.

This model was developed through the observation of the homogenity of the clinical cases presented by the patients, the most common complications and recurrent conducts, the main nursing diagnoses that can be used in HD and also the main conducts were elaborated in accordance with NANDA (2017-2021), resulting in the elaboration of a check list of nursing diagnoses and interventions to be presented in the results of this work. Research of its own funding, without conflict interests in order to contribute to the application of the SNC in the rotation scenario, respecting the ethical and legal precepts implied in the research.

The elaboration of the nursing diagnoses according to the NANDA occurred after the observation of the Hemodialysis service, the predominant profile of the patients, the intercurrences, and through the search in the literature according to the theme. The diagnoses were divided into real and risk, with a check-list scheme in the defining characteristics for the nurse to mark according to the individuality of the patient being cared for. The same structure (check-list) was developed for the interventions, which leaves the nurse free to evaluate the patient individually, following a SNC model that contemplates the diagnoses and interventions most likely to be applied in the Hemodialysis unit. And the implications pertinent to SNC were discussed based on findings in the literature that contemplated the theme.

RESULTS

The results of this proposal for a SNC model were distributed in four tables, chart 01 describes the proposal for data collection, chart 02 presents data pertinent to therapy (HD), chart 03 presents the most prevalent nursing diagnoses in HD according to observation and literary findings, and chart 04 the nursing interventions according to the service routine. At first, the model in the form of a checklist was presented to the head of the unit and to clinical nurses, who showed interest in using it during the routine

of the service. Immediately after the presentation, it was observed that in fact the nurses had a positive adherence to the SNC model, because when accessing the patient's electronic medical record, it is possible to see the SNC being applied by the unit's nurses in their evolution. It is inferred that for the SNC to be applied in this HD unit, the only thing missing was a facilitated script for the nurses to have their care supported.

Table 01: Data collection

Early history	Current history	Vital signs
Sedation	Devices	DVA

Source: Author of the research, 2021.

Table 02: HD Data

Initiation of therapy: **end therapy:** **UF:** **Therapy time:** **FBS:**	**Starting weight:** **Final Weight:** **PA:** **HGT:**	**Complications:**

Source: Research author, 2021

Chart 03: Nursing diagnoses

NURSING DIAGNOSES
EXCESSIVE FLUID VOLUME RELATED TO COMPROMISED REGULATORY MECHANISMS AND EXCESSIVE FLUID INTAKE CHARACTERIZED BY: ( ) EDEMA/ ( ) INTRADIALYTIC WEIGHT GAIN.
VOLUME OF DEFICIENT FLUIDS RELATED TO THE THERAPY INSTITUTED EVIDENCED BY ( ) HYPOTENSION, ( ) TACHYCARDIA, ( ) ASPECTS OF DEHYDRATION
HYPOTHERMIA RELATED TO EXPOSURE TO A COLD ENVIRONMENT EVIDENCED BY ( ) VERBAL REPORT OF COLD ( ) PERIPHERAL CYANOSIS; ( )BODY TEMPERATURE BELOW THE PARAMETERS.
ACUTE PAIN RELATED TO AN INVASIVE PROCEDURE EVIDENCED BY ( ) VERBAL REPORT ( ) FACIAL EXPRESSION OF PAIN
IMPAIRED URINARY ELIMINATION RELATED TO MULTIPLE CAUSES EVIDENCED BY ( ) POLYSISURIA; ( ) OLIGURIA, ( ) URINARY RETENTION.
UNBALANCED NUTRITION: LOWER THAN BODY REQUIREMENTS, RELATED TO DIETARY RESTRICTION EVIDENCED BY ( ) ANEMIA, ( ) BMI <18.5 ( ) SIGNIFICANT WEIGHT LOSS.
NAÚSEA RELATED TO HARMFUL ENVIRONMENTAL STIMULUS, EXPOSURE TO TOXINS EVIDENCED BY VOMITING.
IMPAIRED SOCIAL INTERACTION RELATED TO THE ENVIRONMENTAL BARRIER EVIDENCED BY: ( ) IMPAIRED SOCIAL FUNCTION ( ) DISSATISFACTION WITH SOCIAL INVOLVEMENT, ( ) DYSFUNCTIONAL INTERACTION WITH OTHER PEOPLE.
LOW SITUATIONAL SELF-ESTEEM RELATED TO DECREASED CONTROL OVER THE ENVIRONMENT, EVIDENCED BY ( ) ABSENCE OF PURPOSE; ( ) INDECISIVE BEHAVIOR, ( ) NON-ASSERTIVE BEHAVIOR, ( ) SITUATIONAL CHALLENGE TO ONE'S OWN WORTH, ( ) HELPLESSNESS, ( ) UNDERESTIMATES THE ABILITY TO DEAL WITH THE SITUATION, ( ) SELF-NEGATIVE VERBALIZATIONS.
IMPAIRED COMFORT RELATED TO TREATMENT REGIMEN EVIDENCED BY ( ) FEELING OF DISCOMFORT ( ) FEAR ( ) ANXIETY ( ) IRRITABILITY ( ) CRYING ( ) NON-ACCEPTANCE.
RISK OF INFECTION RELATED TO ( ) HD CATHETER ( ) AVP/STROKE ( ) EXCESSIVE MANIPULATION ( ) AVF PUNCTURE ( ) SVD ( ) VM.
RISK OF BLEEDING RELATED TO THERAPY REGIMEN.
RISK OF UNSTABLE BLOOD GLUCOSE RELATED TO DIALYSATE SOLUTES.
RISK OF ELECTROLYTE IMBALANCE RELATED TO KIDNEY DISEASE.

RISK OF ASPIRATION RELATED TO THE BARRIER TO ELEVATION OF THE UPPER PORTION OF THE BODY.
RISK OF FALLS RELATED TO ( ) DECREASED MUSCLE STRENGTH; ( ) INTOLERANCE TO ACTIVITY; ( ) PRESCRIBED RESTRICTIONS ON MOVEMENTS ( ) TRANSFERS/TRANSPORTATION.
RISK OF IMPAIRED TISSUE INTEGRITY RELATED TO: ( ) MECHANICAL FACTORS; ( ) CHANGE IN WATER STATUS; ( ) UNBALANCED NUTRITION; ( )TURGOR'S CHANGE.

Source: Author of the research, 2021.

Table 04: Nursing interventions

Patient identification checked	**( ) YES ( ) NO ( ) N/A**
Monitoring and recording of vital signs was performed before, during and after HD session	( ) YES ( ) NO ( ) N/A
Dialysis prescription check	( ) YES ( ) NO ( ) N/A
Double check of the medical prescription	( ) YES ( ) NO ( ) N/A
BP measurement every hour/shorter interval if necessary	( ) YES ( ) NO ( ) N/A
Initial blood glucose measurement and 2/2 hours	( ) YES ( ) NO ( ) N/A
Maintained O2 support	( ) YES ( ) NO ( ) N/A
Heparinization of the system was performed	( ) YES ( ) NO ( ) N/A
Washing with 0.9% DES every 20 minutes and/or 30 minutes	( ) YES ( ) NO ( ) N/A
Medications were taken as prescribed by the doctor/antibiotics	( ) YES ( ) NO ( ) N/A
Tests were collected: ( ) serology ( ) blood culture ( ) urea pre and/or post ( ) TAP/TTpa ( ) blood typing ( ) blood count ( ) biochemical	( ) YES ( ) NO ( ) N/A
Compression performed in post-therapy AVF	( ) YES ( ) NO ( ) N/A
Headboard raised at 30-45°	( ) YES ( ) NO ( ) N/A
Elevated Grades	( ) YES ( ) NO ( ) N/A
Glucose administered	( ) YES ( ) NO ( ) N/A
Iron administered	( ) YES ( ) NO ( ) N/A
Administered KCL at 10% in the acid bath as prescribed by the doctor	( ) YES ( ) NO ( ) N/A
- Administered Alphapoetin	
Administered alteplase lock	( ) YES ( ) NO ( ) N/A
Administered vitamin C lock	( ) YES ( ) NO ( ) N/A
CATHETER LUMEN OCCLUSION	( ) YES ( ) NO ( ) N/A
Aspiration performed;	( ) YES ( ) NO ( ) N/A
Installed diet per SNE;	( ) YES ( ) NO ( ) N/A
Oriented on water restriction	( ) YES ( ) NO ( ) N/A
Oriented about self-care with AVF	( ) YES ( ) NO ( ) N/A
Counseled about bleeding risk	( ) YES ( ) NO ( ) N/A
Guided under preserve clean and dry catheter dressing	( ) YES ( ) NO ( ) N/A
Performed catheter ostium dressing	( ) YES ( ) NO ( ) N/A

Source: Author of the research, 2021.

DISCUSSION OF THE RESULTS

The importance of applying the systematization of nursing care (SNC) becomes unquestionable, and its implementation in specific units such as Hemodialysis is essential so that patients with chronic kidney disease (CKD) or acute kidney injury (AKI) receive it individually, recognizing the basic human needs changed in this patient profile as well as risks that are predisposed so that they can receive all necessary and specific care for their patients. syndromic picture. (PAIVA, et al, 2015)

The dialysis renal patient is submitted to several procedures and runs frequent risks related to the continuous therapeutic regimen and to changes and stressors caused by the environment, such as

infection, pressure disorders, glycemic instability, hemorrhage, and fluid and electrolyte imbalance. In this context, SNC applied correctly can be used as an error barrier by systematizing the identification of these factors, applying immediate preventive and corrective measures aimed at optimizing care and supporting nursing actions. (ARREGUY et al, 2018)

Therefore, the nursing diagnoses most frequently applied to chronic kidney patients according to the literature are: risk of infection, risk of fluid and electrolyte imbalance, impaired skin integrity, impaired urinary elimination, impaired dentition, deficient knowledge, low self-esteem, fear, anxiety, acute pain and ineffective sexuality pattern, which are in agreement with diagnoses elaborated in this production. (SOUSA, 2017)

Knowledge for the development of SNC encompasses the need to know and master the priority nursing diagnoses to implement effective and/or anticipatory interventions, because despite the uniqueness of the profile of patients with CKD on dialysis, these patients require specific conducts for each case to be defined by the team involved in their care. Priority diagnoses should be developed respecting the routine and specificity of each service and interventions according to the reality of the unit. (GUIMARÃES et al, 2011).

Nurses have a fundamental and indispensable role in the application of SNC in their scope of action, as they are the ones who exclusively prepare diagnoses, prescribe interventions, evaluate and supervise the rest of the nursing team in the participation and execution of SNC. However, in order to perform this assignment, it is necessary to have adequate clinical reasoning, knowledge and recognize the importance of performing the nursing process. (SCHAPKO, et al, 2019)

Nurses should be aware that the implementation and application of SNC plays a great role both in cure, rehabilitation and treatment, as well as in humanization practices, preparation for self-care and patient health education, and reaffirms the scientific assumptions of the profession in which nurses are encouraged to perform since graduation. (PEREIRA et al, 2013).

The importance of applying the SNC in any environment where nurses work is clear, not only to intervene in a coherent and grounded manner in day-to-day actions, but also to provide the patient with safe and error-free care, in which it is possible to intervene with anticipation, coherence and awareness in the possible problems that may occur in the profile of chronic kidney patients on Hemodialysis. (SILVA et al, 2017)

CONCLUSION

Through the elaboration of a proposed SNC model in the form of a cheklist, it was possible to contribute satisfactorily to the improvement of nursing care, since the implementation of SNC, in

addition to being mandatory, has pertinent implications regarding the effectiveness and efficiency of the nursing team's actions, and especially about the nurse who is the leader and manager in this process.

An assertive contribution is made, as it was possible to observe adherence to the proposed SNC model, interest of both the nurses and the head of the unit in using the model to develop SOPs (standard operating procedure).

It is also worth noting that the model is as the name implies; model, and nurses have total independence to change it according to the patient's clinical condition and judgment.

Facilities of the study: Small staff with low turnover, committed nurses, opportune time between dialysis sessions.

Difficulties of the study: High patient turnover, despite the similarity of profiles.

Strengths: Appreciation of the nurse as a fundamental part of the application of SNC.

Relevant points: Where there is nursing, there must be SNC, for proof, scientific and legal support of nursing actions, in addition to ensuring safe and quality care for the patient.

Suggested Points: It is necessary not to let nurses and their team forget the importance and priority of SNC for the growth of the profession. It is proposed to recycle and continuously approach the subject, especially from those who play the role of leadership.

Finally, it is concluded that this initiative, described in this case report, achieved its objectives by presenting a proposal for the implementation of the SNC, which was well accepted.

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