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INTEGRATIVE REVIEW ARTICLE

NURSING DIAGNOSES IN THE POSTOPERATIVE PERIOD OF CARDIAC SURGERY DIAGNÓSTICOS DE ENFERMAGEM NO PERÍODO PÓS-OPERATÓRIO DE CIRURGIA CARDÍACA DIAGNÓSTICOS DE ENFERMERÍA EN EL POSTOPERATORIO DE CIRUGÍA CARDÍACA

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ABSTRACT

Objective: to know the main nursing diagnoses used in the postoperative period of cardiac surgery. **Method:** integrative review, descriptive, which used nursing scientific publications indexed in the Virtual Health Library, between 2012 and 2017. **Results:** following the inclusion criteria, four articles were selected for analysis, of which two articles were published in national journals and two published in foreign journals. The main nursing diagnoses found and their respective frequencies were: risk of infection, present in three of the four studies, followed by decreased cardiac output, acute pain, spontaneous ventilation impaired, risk of hydroelectrolytic imbalance, impaired mobility in bed, risk of constipation, risk of falling and risk of bleeding, which were found in two of the four articles. **Conclusion:** the nurse must relate nursing diagnoses in accordance with each client's individualization, providing adequate interventions and solution of problems encountered. **Descriptors:** Nursing; Nursing Diagnosis; Nursing Care; Thoracic Surgery; Postoperative Period; Nursing Professional's Role.

RESUMO

Objetivo: conhecer os principais diagnósticos de enfermagem utilizados no período pós-operatório de cirurgia cardíaca. **Método:** revisão integrativa, descritiva, em que foram utilizadas publicações científicas de enfermagem indexadas na Biblioteca Virtual em Saúde, entre 2012 e 2017. **Resultados:** seguindo os critérios de inclusão, totalizaram-se 4 artigos selecionados para análise, dos quais dois artigos foram publicados em periódicos nacionais e 2 publicados em periódicos estrangeiros. Os principais diagnósticos de enfermagem encontrados e suas respectivas frequências foram: risco de infecção, estando presente em 3 dos 4, seguido por: débito cardíaco diminuído, dor aguda, ventilação espontânea prejudicada, risco de desequilíbrio hidroeletrólítico, mobilidade no leito prejudicada, risco de constipação, risco de queda e risco de sangramento, que foram encontrados em 2 dos 4 artigos. **Conclusão:** é de grande importância que o enfermeiro relacione diagnósticos de enfermagem de acordo com a individualização de cada cliente, proporcionando intervenções adequadas e resolutividade dos problemas encontrados. **Descritores:** Enfermagem; Diagnóstico de Enfermagem; Cuidados de Enfermagem; Cirurgia torácica; Período Pós-Operatório; Papel do Profissional de Enfermagem.

RESUMEN

Objetivo: conocer los principales diagnósticos de enfermería utilizados en el postoperatorio de cirugía cardíaca. **Método:** revisión integradora, descriptiva, utilizandose las publicaciones científicas de enfermería indexadas en la Biblioteca Virtual en Salud, entre 2012 y 2017. **Resultados:** de acuerdo con los criterios de inclusión, fueron encontrados cuatro artículos seleccionados para el análisis, de los cuales dos fueron publicados en revistas nacionales y dos publicados en revistas extranjeras. Los principales diagnósticos de enfermería encontrados y sus respectivas frecuencias fueron: riesgo de infección, presente en tres de los cuatro, seguido por: disminución del gasto cardíaco, dolor agudo, ventilación espontánea menoscabada, riesgo de desequilibrio hidroelectrolítico, movilidad en la cama menoscabada, riesgo de estreñimiento, riesgo de caídas y riesgo de sangrado, que fueron encontrados en dos de los cuatro artículos. **Conclusión:** es de gran importancia que los enfermeros relacionen diagnósticos de enfermería en conformidad con la individualización de cada cliente, ofreciendo intervenciones adecuadas y la solución de los problemas planteados. **Descritores:** Enfermería; Diagnóstico de Enfermería; Cuidados de Enfermería; Cirugía Torácica; Período Postoperatorio; Papel del Profesional de Enfermería.

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INTRODUCTION

Cardiac surgery is one of the main forms of treatments for clients with major cardiovascular dysfunctions. Since it is a high-complexity procedure, its post-operative is critical, even though, currently, there are several methods of hemodynamic monitoring and other technological advances with respect to the techniques of surgical and clinical procedures, requiring the presence of a multidisciplinary team empowered to take care of these.¹

The purpose of this type of surgery is to restore the functionality of the heart by decreasing the symptoms, providing the individual the resumption of his/her capacity and autonomy. It is a major procedure that has three purposes - correction, reconstruction and replacement - and is used when the patient has a chronicity of cardiovascular diseases, in which the clinical treatment does not maintain its effectiveness, or in emergency situations.²⁻⁵

The time after the surgery requires actions of the health team, ensuring quality care for the client, resulting in rapid recovery and dehospitalization. In this way, the nurse is responsible for planning and organizing an individualized assistance, based on the needs not only in the postoperative period, but during the whole trans-operative. Nursing care must be qualified, individualized and performed through the nursing diagnosis (ND), and, for this reason, the nurse must have the knowledge of the pathology, the scenario and the clinical reasoning about the patient's situation.^{1,5}

The nurse must have the ability to recognize the pathophysiological process that is associated with the postoperative period of cardiac surgery and, with this, identify the ND of each client, also being able to plan interventions for each situation. It is restricted to the competence of the nurse, in which he/she uses his/her scientific knowledge and clinical reasoning, recognizing the potential ND and appropriate interventions, predicting possible complications and allowing implementing actions that contemplate the assistance to individuals in a holistic way and with quality.¹

The nursing care systematization (NCS) has the role of guiding the team regarding the care particularized for each individual, provided by nurses through the junction of judicious, methodological and planned sense, followed by individual practices and scientific knowledge.⁶

The ND consists on one of the steps of the NCS that, through this, provides for the recognition of actual and potential problems so as to provide a good service. It consists of clinical assessments performed by nurses, based on the answers to health confrontations experienced by the individual, thus promoting interventions to achieve goals.⁷

Due to the diversity and possibilities of the various types of ND that are used during the construction of the nursing process (NP), in which they should be constructed individually and in a systematized way by considering each client's needs, whether actual or potential, the premise of knowing which diagnoses are often used during the provision of such assistance emerges.

The study intends to seek information that will serve as a direction for nursing professionals. With this, the guidance to this research is the demand in the scientific literature by the most prevalent nursing diagnoses in the postoperative period of cardiac surgeries.

OBJECTIVE

- To know the main nursing diagnoses that are used in the postoperative period of cardiac surgery
- To list the prevalent nursing diagnoses in the selected articles.

MÉTODO

Integrative review in national and international scientific production, by adopting the following six steps: choice of theme and selection of hypothesis or guiding question; imposition of inclusion and exclusion criteria and search in the databases; definition of what will be used for the study construction; evaluation of what is included for review; understanding of results; display of review.

The guiding question was: << Which are the most prevalent/used nursing diagnoses by nurses in the postoperative period of cardiac surgeries? >> the search was performed in the period from March to May 2017, using the descriptors "Nursing Diagnosis", "Nursing Care" and "Heart Surgery", during the search for articles to enlarge the amount, the association between the descriptors using the Boolean operator AND.

To achieve the goals proposed in this study, there were searches in the virtual database "Virtual Health Library (VHL)", using the descriptors. For this search, the following inclusion criteria were established to select the articles: literatures with up to five years

of publication (between 2012 and 2017), texts in Portuguese and English available online, full texts, articles with prevalence language of the taxonomy North American Nursing Diagnosis Association (NANDA), linked to the research theme and discussing matters of nursing diagnoses in patients in the postoperative period of cardiac surgery, review articles were excluded from the review.

For data tabulation, a data collection instrument was prepared, containing: authors, article name, journal, year of publication and nursing diagnoses, which are referenced in this text. For the descriptive analysis of the results, a table prepared on the program Microsoft Office Word 2007 version was used, in accordance with the instrument elaborated for data collection.

In the research development, 124 articles were found through the use of descriptors; of these, after applying the selection criteria, four remained for analysis of the contents and subsequent discussion. From the obtained material, the reading of the articles was performed, highlighting those that responded to the study goal, in order to organize them on the table.

RESULTS

After the search, 124 articles were found, leaving only 6 that met the inclusion criteria. From this quantitative, with analysis of the objectives, two were removed: one for being a systematic review and another for being repeated, leaving 4 (100%) for the elaboration of the results and discussion, which were published in the following magazines: *Revista Rene*, *Revista Brasileira de Enfermagem*, *Revista Mineira de Enfermagem* and *Revista de pesquisa: cuidado é fundamental online*.

The research analyzed the most frequent diagnoses among the four articles (100%), namely: risk of infection, present in 3 (75%), followed by decreased cardiac output, acute pain, impaired spontaneous ventilation, risk of hydroelectrolytic imbalance, impaired mobility in bed, risk of constipation, risk of falling and risk of bleeding, which were found in 2 articles (50%). The diagnoses that had the lowest frequencies were present in only 1 article (25%), but do not cease to be important, because each patient is evaluated according to his/her need and individuality (Graph 1).^{3,8,9,10}

Figure 1. Most common nursing diagnoses. Aracaju (SE), Brazil, 2017.

The ND presented during the construction of the results show the importance of the nurse in individualized care during the postoperative period of cardiac surgery, evidencing that the care plan incorporates an

implementation of quality assistance that contributes to patient recovery. Table 1 shows the ND found by the author during the research:

Author	Title	Journal/Year	Nursing Diagnosis
Carvalho IM de, Ferreira DKS, Nelson ARC, Duarte FH da S, Prado NC da C, Silva RAR da.	Systematization of nursing care in mediate post-operative of cardiac surgery.	Rev Fund Care Online, 2016.	Impaired skin integrity; Impaired mobility in bed; Mood for increased control of the therapeutic regimen; Risk of constipation; Risk of hydroelectrolytic imbalance; Risk of imbalance in body temperature; Risk of infection; Risk of falling.
Cavalcante AMRZ, Brunori EHFR, Lopes CT, Silva ABV, Herdman TH.	Nursing diagnoses and interventions for a child after cardiac surgery in an intensive care unit.	Rev Bras Enferm, 2015.	Decreased cardiac output; Risk of infection; Risk of bleeding; Impaired spontaneous ventilation.
Ribeiro CP, Silveira CO, Benetti ERR, Gomes JS, Stumm EMF.	Nursing diagnoses in the perioperative period of cardiac surgery	Rev Rene, 2015.	Anxiety; Impaired recreation activities; Ineffective health self-management; Self-neglect; Impaired verbal communication; Impaired Comfort; Constipation; Ineffective family control of the therapeutic regimen; Impaired walking; Decreased cardiac output; Impaired swallowing; Mood for improved self-concept; Mood for improved family processes; Acute pain; Fatigue; Hyperthermia; Insomnia; Impaired social interaction; Fear; Impaired physical mobility; Impaired mobility in bed; Dysfunctional gastrointestinal motility; Impaired oral mucosa; Nausea; Unbalanced nutrition: less than bodily needs; Impaired sleep pattern; Ineffective respiratory pattern; Ineffective peripheral tissue perfusion; Delayed surgical recovery; Risk of shock; Risk of acute confusion; Risk of constipation; Risk of electrolyte imbalance; Risk of unstable glycemia; Risk of infection; Risk of impaired skin integrity; Risk of perioperative positioning injury; Risk of ineffective renal perfusion; Risk of decreased cardiac tissue perfusion; Risk of falls; Risk of impaired religiosity; Risk of bleeding; Risk of spiritual suffering; Risk of vascular trauma; Change stress syndrome; Ineffective thermoregulation; Impaired gas exchange; Impaired spontaneous ventilation; Volume of liquids deficient.
Faria Filho GS de, Caixeta LR, Stival MM, Lima LR de.	Acute pain: nurses' clinical judgement in postoperative cardiac surgery	Rev Min Enferm, 2012.	Acute pain.

Figure 2. Description of results identified in the researched articles and summary of the nursing diagnoses found. Aracaju (SE), Brazil, 2017.

DISCUSSION

The construction of one ND requires a data collection instrument. This should contain the patient's history and physical examination, when collected and recorded properly, besides allowing building and implementing the steps of the nursing process (NP), which include anamnesis and physical examination, nursing diagnosis and prescription, implementation and evaluation.⁹

From these data analysis, the ND construction can begin, and is of paramount importance that the nurse is attentive to the patient's clinical manifestations, being paramount their identification through expressions and behavior, thus being able to validate the information reported by the patient.¹⁰

A good identification of ND will also be a good assistance, thus being able to subsidize an elaboration of plans of individual care, improving patient care and safety and autonomy of the team. The incorporation of these types of ND favors the development of a care plan that covers the most affected biological, physical and emotional needs.³

One of the actual ND most frequently found during the research was the decreased cardiac output, which is the insufficient or decreased amount of blood volume released by the heart,¹¹ requiring intensive care team for possible amendment and resolution; also among the mentioned diagnoses, impaired spontaneous ventilation is characterized by insufficiency presented by the patient to sustain the proper breathing for life preservation,⁷ often evidenced through pulmonary auscultation and physical examination.

Acute pain was in the diagnoses found during the research with prevalence of 2 in 4 in the postoperative period of cardiac surgery, being regarded as a relation of unsatisfactory emotion along with a sensory experience, representing the fifth sign,¹² and should be evaluated and treated.

Impaired mobility in bed is conceptualized as a limitation to move independently from one position to another in bed.⁷ It is characterized by the client's restriction in the postoperative period due to the surgical procedure and the presence of multiple devices resulting from the same.

The research also evidenced the presence of the nursing diagnoses of risks, such as of infection, bleeding, fall, hydroelectrolytic imbalance and constipation, which are characterized by the probability of occurrence

of such unwanted event along with its severe form or not, without quantitative representation.¹³

In order to standardize the ND, NANDA is used, which incorporates a method based on scientific theory and evidence, promoting visibility of knowledge and clinical judgment, leading to proper nursing intervention.⁸ The knowledge of nursing practice in the postoperative period of cardiac surgery is important to identify gaps in this care provision, proposing coping strategies, with consequent care improvement.¹⁴

This moment reveals the importance of knowing risks and of co-morbidities. With the aim of preventing potential complications, nurses should invest efforts in NCS, aiming at the construction of a good ND, thus providing assistance in a holistic, individualized and humanized way, emphasizing the importance of the NP in the assistance to the patient who undergoes cardiac surgery, with a view to provide a good care.³

During this entire post-operative period, the identification of ND aims at assisting in the planning of nursing care, adapting to each patient's needs, resulting in effective actions for the improvement or even the resolution of the problem; another contribution is for growth and scientific advancement of the profession.⁹

CONCLUSION

This study observed the great importance of nurses using Nursing Diagnoses according to each client's needs and individually, providing adequate interventions and solving the problems encountered, in addition to using a standard language, thus allowing a standardized communication.

The nurses needs to have the ability, technical capacity, scientific knowledge and learn to use the NANDA instrument with consistency, tracing actual and potential diagnoses based on the need of the individual in a systematized and individualized way.

This study evidenced the small amount of articles, thus suggesting a new search with a larger time interval, or a field research that seeks to confirm the relationship and the frequency of nursing diagnoses.

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