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RESEARCH ARTICLE

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NURSING CARE IN PERIOPERATIVE COMPLICATIONS AT THE SURGICAL CENTER

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ABSTRACT

It is an integrative literature review to assess national scientific productions about nursing care in perioperative complications. The search took place in the MEDLINE, LILACS and BDNF databases, using the descriptors: nursing care, surgical nursing and operating rooms. The sample consisted of 20 articles and analyze in 2 thematic categories. The following criteria were chosen for inclusion of the studies: full texts and available in full, free of charge; published from 2009 to 2019, in portuguese, english and spanish. This study is justified because it is essential for the nursing care area in view of the complications that occurred with patients in the perioperative and transoperative periods. Perioperative nursing has numerous responsibilities and activities, since its assistance ranges from the mediate preoperative to the mediate postoperative period, through the transoperative period, in which adequate assistance is essential for the patient's recovery, emphasizing the potencial of the category for surveillance, monitoring and handling of events relevant to complications.

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INTRODUCTION

The Surgical Center (SC) is a unit within the hospital universe that performs both diagnostic and therapeutic procedures, comprising an emergency and elective need. Very dynamic, stressful and hostile, it presents a cold and closed physical environment, or encourages silence and distance between a multidisciplinary team and the patient, transforms care into mechanical work, suspends the great effort, the demand for trained human resources and hard technologies (RIBEIRO; FERRAZ; DURAN, 2017; PSALTIKIDIS, 2016). This environment, marked by invasive interventions and material resources with high precision and effectiveness, requires qualified professionals to meet different user needs in view of the high technological density and the variety of situations that give it a peculiar dynamic of health care. In addition, it is considered a high-risk scenario, where work processes are complex, interdisciplinary practices, with a strong dependence on individual and team performance in environmental

conditions dominated by pressure and stress (MARTINS; DALL'AGNOL, 2016). The surgical environment is one of the spaces with the greatest number of adverse events that affect the individual during hospitalization and its origin is multifactorial, which can be attributed to the immense complexity of the procedures, the mutual influence of the teams and the tasks under pressure. In this sense, planning presents itself as an essential tool, conferring decision-making with greater chances of success, through the identification of short, medium and long term goals, ensuring necessary changes to achieve the proposed objectives (MANRIQUE *et al.*, 2015). The professional practice of nurses broadly contemplates nursing management, being present at all levels of health care, as it is a tool for organizing services that has as its primary objective the quality of care provided to the individual, family and community. Therefore, Perioperative Nursing (PN) actions, aimed at assisting individuals in the anesthetic-surgical phase, need a reflective approach regarding their teaching method, in view of the intentions arising from the globalized world (FERREIRA; PÉRICO; DIAS, 2018;

AVELAR; SILVA, 2005). NP covers the preoperative, transoperative and postoperative work processes related to the surgical patient. The nurse systematizes the information about the patient, expands and practices a nursing care plan and analyzes the responses to the effects of the care provided. In other expressions, nursing makes use of the Nursing Process as an auxiliary method for the idealization and practice of care, considering the patient's biopsychosocial aspects (GALVÃO; SAWADA; ROSSI, 2002; GRITTEM, 2007). In this perspective, the SC nurse is a key part of the team, being responsible for planning, managing, leading, controlling, coordinating, educating and researching within the scope of care, requiring technical and scientific basis, and his skills in more humanized relationships are notorious. Thus, it is justified to be paramount the study of nursing care in the face of complications that occurred in the perioperative period, especially in the perioperative period, the moment of greatest potential in the involvement of adverse effects. Therefore, this article aims at national scientific productions about nursing care in perioperative complications that occur in the SC, based on the following guiding question "what is the current scientific evidence regarding the role of nurses in the face of surgical complications in the SC?".

METHODOLOGY

It is an integrative literature review, characterized as an exploratory, descriptive, quantitative and qualitative study. The integrative review (IR) is therefore a type of review of the bibliography that brings together findings from studies developed using different methodologies, allowing reviewers to synthesize results without hurting the epistemological affiliation of studies based on the experience contained (SOARES *et al.*, 2014). The present study was carried out through research carried out in national and international databases. The articles were searched in the Virtual Health Library (VHL), in the following databases: Latin American and Caribbean Literature in Health Sciences (LILACS); Nursing Database (BDENF); and Medical Literature Analysis and Retrieval System Online (MEDLINE). The research and data collection were carried out using the descriptors, interspersed by the Boolean operator AND: "nursing care, surgical nursing, and operating rooms" and the keyword transoperative. The sample consisted of scientific articles that answered the research question and met the established inclusion and exclusion criteria. Thus, the present sample consisted of 20 articles. The following eligibility criteria were considered: full texts, in the format of a scientific article, available electronically and free of charge, published between 2000 and April 2019, in a journal, of the type original article, field research, case report, experience report, reviews, in Portuguese, English and Spanish. Duplicate studies were excluded, those whose production was located in fields other than the researched one, those that did not correspond to the objective of the research, paid productions, thesis works, dissertation and monograph. After data collection, a careful analytical reading of the studies was performed, using an instrument consisting of the following information: title, authors, periodical (scientific journal), abstract, descriptors, type of research, objectives, main results and final considerations. It should be noted that thematic analysis was used for the analysis because it is the one that best adapts to a qualitative research. Thematic analysis is developed in three phases: pro-analysis; exploration of the material; and data processing, inference and interpretation.

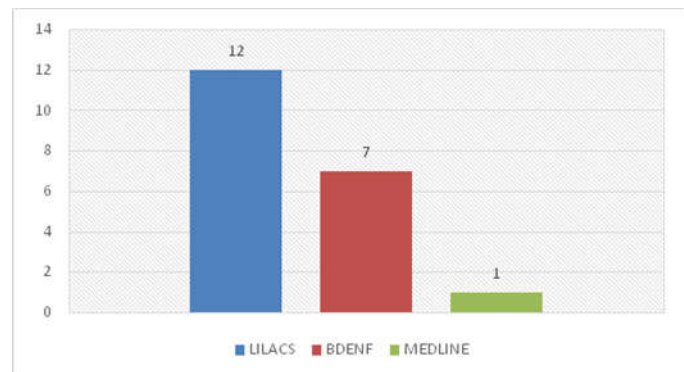
RESULTS

The final sample of the research resulted in 20 studies. Table 1 shows the steps of the articles found using the descriptors in the databases. The articles were searched in different databases and among the findings it is possible to observe the preference to publish on the theme, as shown in graph 1. The data obtained from the studies were described and presented in Table 2.

Table 1. Description of the article search steps, according to the combination of descriptors. João Pessoa-PB. (n=20)

Combination of descriptors	Identification	Screening	Eligibility
"cuidados de enfermagem"			
"enfermagem cirúrgica" "salas cirúrgica" "transoperatório"			
LILACS	17	07	04
BDENF	08	04	02
MEDLINE	02	00	00
"enfermagem cirúrgica" "salas cirúrgica" "transoperatório"			
LILACS	20	10	08
BDENF	13	08	04
MEDLINE	05	02	01
TOTAL	65	31	20

Source: survey data, 2019.



Source: survey data, 2019.

Graph 1. Presentation of publications according to the researched bases. João Pessoa-PB. (n=20)

Regarding the year of publication, it was possible to observe a predominance in the years 2016, 2012 and 2011 with 3 articles each year. The years 2019, 2014, 2013 and 2009 had 2 publications each, followed by 2018, 2017 and 2008 with 1 publication each. The distribution of the years of publication shows greater concern with the theme from 2011 onwards, reducing again later and, being resumed, in the last five years. The studies were published in different national and international journals. The journals with the largest number of publications were the Latin American Journal of Nursing with 6 articles, followed by SOBECC journals with 4, USP School of Nursing Magazine with 3, Brazilian Journals of Nursing and Nursing Electronics, both with 2 and the Brazilian Journal of Pulmonology, Anna Nery School of Nursing, British Journal of Anesthesia and Revista Brasileira de Anestesiologia with 1 publication each.

DISCUSSION

With the characterization of the articles, two Thematic Categories (CT) were selected to describe the results found: CT1 - Main perioperative complications occurred in the operating room and CT2 - Nursing care in the face of complications during the operation.

Table 2. Presentation of authors and titles of studies found. João Pessoa-PB. (n=20)

N	AUTHORS	TITLES
1	Cruz et al	Fatores clínicos e cirúrgicos e as complicações intraoperatórias em pacientes que realizaram ceratoplastias penetrantes
2	Ribeiro; Peniche; Silva	Complicações na sala de recuperação anestésica, fatores de risco e intervenções de enfermagem: revisão integrativa
3	Terra et al	Robotic pulmonary lobectomy for lung cancer treatment: program implementation and initial experience
4	Martins et al	Jejum inferior a oito horas em cirurgias de urgência e emergência versus complicações
5	Cruz et al	Influence of socio-demographic, clinical and surgical variables on the Aldrete-Kroulik scoring system
6	Lopes et al	Escala de avaliação de risco para lesões decorrentes do posicionamento cirúrgico
7	Moysés et al	Prevenção da hipotermia no transoperatório: comparação entre manta e colchão térmico
8	Mattia et al	Infusão venosa aquecida no controle da hipotermia no período intraoperatório
9	Motta; Turrini	Perioperative latex hypersensitivity reactions: an integrative literature review
10	Poveda; Martinez; Galvão	Métodos ativos de aquecimento cutâneo para prevenção de hipotermia no período intraoperatório: revisão sistemática
11	Carneiro; Leite	Lesões de pele no intraoperatório de cirurgia cardíaca: incidência e caracterização
12	Poveda; Galvão	Hipotermia no período intraoperatório: é possível evitá-la?
13	Grigoletto et al	Complicações decorrentes do posicionamento cirúrgico de clientes idosos submetidos à cirurgia de quadril
14	Pereira; Rocha; Mattia	Infusão venosa aquecida relacionada à prevenção das complicações da hipotermia intraoperatória
15	Poveda; Galvão; Santos	Factors associated to the development of hypothermia in the intraoperative period
16	Potério et al	Reação anafilática durante transplante renal intervivos em criança alérgica ao látex: relato de caso
17	Carvalho et al	Estudo retrospectivo das complicações intraoperatórias na cirurgia de revascularização do miocárdio
18	Faria; Turrini	Repercussões do uso de fitoterápicos no processo anestésico cirúrgico: uma revisão integrativa
19	Grigoletto; Avelar	Posicionamento cirúrgico de clientes submetidos à cirurgia de quadril: eventos adversos
20	Kolawole et al	Use of simulation to improve management of perioperative anaphylaxis: a narrative review

Source: survey data, 2019.

Main perioperative complications in the operating room: The studies showed the main complications resulting from surgical positioning, reactions to latex and hypothermia. However, it is noteworthy the lack of studies regarding surgical complications related to pain and respiratory impairment. Regarding the cases of hypothermia, research reveals that passive heating methods are not effective in maintaining the temperature of patients in the perioperative period, highlighting the effectiveness of the thermal mattress when compared to the thermal blanket, based on the fact that the amount of heat transferred to the patient is the main determinant in prevention (MOYSÉS et al, 2014; MATTIA et al., 2013). The passive skin heating method, such as the use of cotton sheets and the bandaging of the lower limbs, were the most used measures in the sample investigated by Poveda, Galvão and Santos (2009), opposing the use of the active skin heating method, in addition to in addition, monitoring and adjusting room and patient temperatures lessens risks for clients to develop hypothermia. The use of general and combined anesthetic techniques represent situations of greater risk for the development of unintentional hypothermia, having its effect summed up. Thus, the implementation of measures to maintain the patient's body temperature in the intraoperative period is crucial to improve the quality of care provided to the surgical patient (RIBEIRO; PENICHE; FÜRBRINGER E SILVA, 2017). Pereira, Rocha and Mattia (2014) concluded that the isolated use of heated venous infusion to prevent complications related to hypothermia is not able to maintain normothermia in the investigated patients. The nurse has an important role in the prevention or treatment of hypothermia in the perioperative period, resulting in reduced costs for the hospital and the patient. Complications resulting from surgical positioning cause skin lesions, and there are also associations with several other risk factors, such as age, body weight, nutritional status, chronic diseases (diabetes mellitus, neuropathies, arterial hypertension and anemia) and extrinsic factors such as type and time of surgery, type of anesthesia, surgical position adopted and the resources and measures used for protection (BEZERRA et al., 2019). In addition, it is necessary in clinical practice to implement the use of scales and tools that have the potential to guide nurses' decision-making about the best care for surgical patients, related to positioning (LOPES et al., 2016).

The areas of pressure of the skin occur more frequently in the supine position, being the most common used in the surgical procedure when exerting greater pressure in places with bony prominence, such as sacral, cranial, thoracic, abdominal and gluteal regions. The positioning of the client must be treated with due scientific knowledge, in order to reduce the occurrence of possible adverse events (GRIGOLETO et al., 2011). Hypersensitivity to latex is an adverse event and can be considered rare, therefore, the knowledge of specific, standardized therapeutic approaches, enables prompt care and, therefore, more effective treatment. Reports of anaphylactic reactions associated with latex sensitivity emerged from 1989, with an increasing incidence from 0.5% before 1980 to 19% in the 1990s, it is estimated to be the cause of death in 3 to 9% of cases (MOTA; TURRINI, 2012). It is necessary that the multidisciplinary teams involved in patient care seek more and more knowledge about prevention and diagnosis and be able to adopt multidisciplinary approaches that, when brought together in protocols, contribute to reduce the risk of allergic accidents, as a result of exposure to latex (COELHO et al., 2014). Thus, there is a need for a latex-free environment, leading to the replacement of instruments and materials with similar ones made from vinyl and other petroleum products, metal or glass. In addition, it is the role of nurses to identify possible risks of hypersensitivity to latex when composing perioperative care planning (POTERIO et al., 2009).

Nursing care in the face of complications during the operation: Nursing care in the perioperative period can be similar to that of many hospital institutions, reinforcing its important role, since patient safety and the reduction of complications resulting from the anesthetic-surgical procedure are goals of nursing care (PEREIRA; ROCHA; MATTIA, 2014). This reality demonstrates that the quality of nursing care provided in the perioperative period directly interferes with the results of the surgical procedure performed. Thus, the actions that nurses present in the SC are configured as a significant function in the execution of concepts, since they contribute to boost the performance of correlated behaviors (RIBEIRO; PENICHE; FÜRBRINGER E SILVA, 2017). The studies show the competence of nurses in the planning and implementation of nursing interventions to prevent perioperative events and to reduce possible complications, emphasizing that the care performed during the intraoperative

period will reflect in the postoperative period (BEZERRA *et al.*, 2019). The nurse has an important role in the implementation of methods that protect the patient from hypothermia, effectively resulting in patient safety, through passive heating measures with sheets and blankets and the minimum possible exposure of the body surface (MATTIA *et al.*, 2013).

Finals Considerations

Perioperative nursing has several activities and activities, since its assistance ranges from the preoperative to the postoperative period, through the transoperative period, in which assistance is essential for the patient's recovery. For this, the present integrative review evaluated nursing care in view of the main complications that affect patients in the perioperative period within the operating room, that is, during the operation. This research identified that among the complications, the ones that most occur are: hypothermia, anaphylactic reaction and injuries due to positioning. It highlights the potential of the nursing category for cancer patients, monitoring and managing events related to complications, as an integral part of the multiprofessional team that assists the patient during the operation. Thus, it is worth highlighting the longitudinal character of the care provided by this professional, giving quality, heredity, safety and humanization to the care offered. In addition, the nurse must establish a care plan for the surgical patient in order to avoid the main complications. For this, there are several instruments that assist in this process, among them, or the patient's safe surgery protocol. It contains items that, when observed and used by surgical team professionals, have great potential to avoid errors and complications. On the other hand, it is worth noting that the nurse requires a large number of activities and duties within the surgical environment and sometimes ends up not having time to develop a complete and quality care. Therefore, it is necessary to reimburse the dimensioning of nursing professionals in this sector, which are often not met by hospitals. Finally, the present integrative review makes the consequence of the results achieved very important, making clear the need for the presence of nurses in the face of complications occurring in the perioperative period within the Surgical Center, revealing that there are still occurrences in the nursing process and these can cause harm to the health of the client / patient.

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