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ORIGINAL ARTICLE

POSTOPERATIVE PATIENT SAFETY IN CARDIAC SURGERY

SEGURANÇA DO PACIENTE NO PÓS-OPERATÓRIO EM CIRURGIA CARDÍACA

SEGURIDAD DEL PACIENTE EN EL POSTOPERATORIO EN CIRUGÍA CARDÍACA

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ABSTRACT

Objective: to evaluate nursing care according to the postoperative safety indicators in cardiac surgery at a public hospital in the municipality of Caruaru-PE. ***Methods:*** this is a cross-sectional, descriptive study with a quantitative approach, collected from the application of a semi-structured questionnaire with questions about the sociodemographic and labor profile, as well as factors related to patient safety in the postoperative period in cardiac surgery. ***Results:*** it is informed that 25 nursing professionals participated in the study, which identified a deficit related to specialization in the area of critical care, participation in training and use and exchange of gloves, factors that can lead to complications in the postoperative period. ***Conclusion:*** it was possible to evaluate the staff's knowledge about patient safety and to understand the importance of implementing actions aimed at promoting patient safety.

Keywords: Cardiac Surgery; Patient Safety; Nursing; Postoperative Care; Intensive Care Unit; Health.

RESUMO

Objetivo: avaliar a assistência de Enfermagem segundo os indicadores de segurança no pós-operatório em cirurgia cardíaca de um hospital público no munícipio de Caruaru-PE. ***Métodos:*** trata-se de um estudo transversal, descritivo, com abordagem quantitativa, coletado a partir da aplicação de um questionário semiestruturado com perguntas referentes ao perfil sociodemográfico e laboral, além de fatores relacionados à segurança do paciente no pós-

operatório em cirurgia cardíaca. ***Resultados:*** informa-se que participaram do estudo 25 profissionais de Enfermagem, o qual identificou um déficit relacionado à especialização na área de cuidados críticos, participação em capacitações e uso e troca de luvas, fatores esses que podem acarretar complicações no período pós-operatório. ***Conclusão:*** possibilitou-se avaliar o conhecimento da equipe a respeito da segurança do paciente e compreender a importância da implantação de ações voltadas para a promoção da segurança do paciente.

Descritores: Cirurgia Cardíaca; Segurança do Paciente; Enfermagem; Cuidados Pós-Operatórios; Unidade de Terapia Intensiva; Saúde.

RESUMEN

Objetivo: evaluar el cuidado de Enfermería según indicadores de seguridad en el postoperatorio en cirugía cardíaca en un hospital público de la ciudad de Caruaru-PE. ***Método:*** se trata de un estudio descriptivo transversal con abordaje cuantitativo, recolectado a partir de la aplicación de un cuestionario semiestructurado con preguntas sobre el perfil sociodemográfico y laboral, además de factores relacionados con la seguridad del paciente en el postoperatorio en cirugía cardíaca. ***Resultados:*** se informa que participaron del estudio 25 profesionales de Enfermería, los cuales identificaron un déficit relacionado con la especialización en el área de cuidados críticos, la participación en la formación y el uso e intercambio de guantes, factores que pueden derivar en complicaciones en el periodo postoperatorio. ***Conclusión:*** fue posible evaluar el conocimiento del equipo sobre la seguridad del paciente y comprender la importancia de implementar acciones dirigidas a promover la seguridad del paciente.

Descriptores: Cirugía Cardíaca; Seguridad del Paciente; Enfermería; Cuidados Postoperatorios; Unidad de Terapia Intensiva; Salud.

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INTRODUCTION

Chronic Non-Communicable Diseases (CNCDs) are characterized as a set of pathologies classified as cardiovascular diseases, respiratory diseases, cancer and Diabetes Mellitus, caused mainly by modifiable risk factors, such as sedentary lifestyle, smoking, alcohol consumption and inadequate diet, potentiated by sociocultural, economic and environmental factors.[1]

It is detailed that, according to the World Health Organization (WHO), CNCDs are responsible for 70% of all deaths worldwide, estimating a number of 38 million deaths annually; of these deaths, 16 million occur early, that is, before the age of 70, and about 28 million are in low and middle-income countries.[2]

Among them, cardiovascular diseases are characterized worldwide as the leading causes of morbidity and mortality, being responsible for one third of all deaths.[3] It is known that in Brazil, in 2017, according to the Brazilian Society of Cardiology (BSC), there were 383,961 of the total deaths caused by cardiovascular disease, which stands out as the leading cause of mortality over the age of 30 and for increasing the number of hospitalizations and hospital expenses.[4]

It is described that cardiac surgeries are complex interventions and require specific care in all operative phases, usually requiring the use of cardiopulmonary bypass because they are considered major surgeries. The postoperative period in cardiac surgery is distinguished as the period in which we observe the patient's recovery from post-anesthesia and after surgery, indicated by the patient's instability, being necessary specific care due to the complexity of the clinical picture.[5]

It is pointed out, in turn, that the World Health Organization (WHO) describes patient safety as the reduction of risks that can cause unnecessary damage, considered as a factor linked to patient care. Patient safety is influenced by iatrogenic events caused by health professionals, which is

linked to the quality of life of patients, causing consequences for patients, professionals and the service.[6]

The Ministry of Health created the National Program for Patient Safety (NPPS), through Ordinance MH/GM No. 529 of April 1, 2013, in order to contribute to the improvement of the health service, implementing educational and care measures in all care networks, organized actions and reorientation of the system through risk management.[7]

It is informed, therefore, that the Nursing Care Systematization (NCS) is an essential tool for the organization and planning in order to promote patient safety, aiming to act on all the patient's needs not only in the postoperative period, but in all phases of the patient in the hospital environment, besides contributing to the construction of knowledge of the Nursing team.[8]

It is the intention of this study, given the lack of studies related to this topic, to contribute to the explanation of knowledge about nursing care in the postoperative period in cardiac surgery. Thus, it is added that Nursing professionals will be aware of possible patient complications, promoting strategies that can be adopted in order to provide patient safety and, consequently, decrease the number of adverse events. Based on the above, the question is: "What is the quality of nursing care to postoperative patients undergoing cardiac surgery?".

OBJECTIVE

To evaluate nursing care according to the postoperative safety indicators in cardiac surgery at a public hospital in the municipality of Caruaru-PE.

METHOD

This is a cross-sectional, descriptive study with a quantitative approach. The research was conducted in July 2019, in a Coronary Unit of a public hospital in the city of Caruaru-PE, composed of 25 Nursing professionals (nurses and nursing technicians) of both genders, in a private room of the institution. The inclusion criteria were: being a nursing professional (nurse and technician) and working in the Coronary Care Unit. The exclusion criterion was being on vacation or maternity leave during the data collection period.

The data was collected through the application of a semi-structured questionnaire adapted according to validated questionnaires existing in the literature[9,10], with questions regarding the sociodemographic and labor profile, as well as a checklist with factors necessary for the promotion of patient safety in the postoperative period in cardiac surgery. The tabulation and descriptive analysis of the data were performed using Microsoft Office Excel®, version 2018, where the data were double-typed to avoid errors and/or omissions.

It was requested, initially, the authorization of the research by the health institution, submitting the study, later, to the Research Ethics Committee (REC) of the University Center of the Ipojuca Valley (UNIFAVIP/WYDEN), obtaining approval under Opinion No. 3.436.316 protocol CAAE: 16042619.0.0000.5666, meeting the requirements of the National Health Council (Resolution No. 466/2012 and 510/2016) relating to research involving human beings, ensuring confidentiality and fidelity in data collection.

RESULTS

The research was composed of 25 Nursing professionals from the Coronary Intensive Care Unit (CICU), composed of six (24%) nurses and 19 (76%) nursing technicians, being 18 (72%) female and seven (28%) male, with a mean age of 33 years. Table 1 presents the labor data of the nursing professionals related to the time of work in nursing, with a prevalence of subjects with more than five years of experience, time of work in the sector, specialization in the area, showing that 84% did not have specialization in the area of cardiology and hemodynamics and/or ICU and 68% affirmed having two jobs.

Table 2 shows a checklist applied to evaluate the patient safety culture in the postoperative period in cardiac surgery in the Coronary ICU of the study institution. The checklist identified nursing care related to bed identification, ICU equipment testing, collection of the patient's personal history, information about the surgical procedure, and assessment of operative characteristics.

It was also identified, by means of the checklist, that 92% of the Nursing professionals claimed to elevate the bed rails, 80% elevated the bed from 30º to 45º, and that all research participants showed to have knowledge regarding the change of decubitus every two hours, when indicated.

It was also found that 84% of the nursing team professionals stated they knew and followed the right nine for medication administration. It was observed that the data collection instrument also allowed the evaluation of nursing care aimed at providing emotional support to the patient/family during the hospitalization period, in which 68% of the professionals mentioned offering this support to the patient and family members.

Table 3 shows, in relation to the hand hygiene culture, the knowledge of Nursing professionals related to hand hygiene described in five dimensions. It was also verified, by means of figure 1, the culture of sterile glove exchange/procedure among the nursing professionals of the sector, as well as the knowledge about the use and exchange of sterile gloves.

Table 1 - Labor data of nursing professionals in a Coronary ICU at a public hospital. Caruaru-PE, 2019. (N=25)

TIME OF PERFORMANCE IN NURSING	**N**	**%**
1 – 5 years	9	36,00
More than 5 years	16	64,00
TIME OF PERFORMANCE IN THE ICU	**N**	**%**
Between 2 and 6 months	2	8,00
6 months and 1 year	2	8,00
1 – 5 year	17	68,00
More than 5 years	4	16,00
FIELD EXPERTISE	**N**	**%**
Yes	4	16,00
No	21	84,00
EMPLOYMENT RELATIONSHIPS	**N**	**%**
One	7	28,00
Two	17	68,00

Three	1	4,00

Source: Research data (2019).

Table 2 - Assessment of patient safety in the postoperative period of cardiac surgery in a Coronary ICU. Caruaru-PE, 2019. (N=25)

NURSING CARE	N	%
What identifies the bed?		
Patient name	23	92.00
Date of birth	17	68.00
Type of surgery	21	84.00
Do you test equipments?		
Multiparameter monitor	24	96.00
Mechanical ventilator	14	56.00
Infusion Pump	24	96.00
Emergency cart with intubation and defibrillator equipment	18	72.00
Do you check personal priors?		
Pre-existing diseases	15	60.00
Continuous Use Medications	20	80.00
Allergy to medication/other	25	100.00
Is there information about the surgical process?		
Type of procedure	23	92.00
Anesthesia	7	28.00
Drugs used	20	80.00
Blood transfusion	17	68.00
Cardiopulmonary bypass	13	52.00
Do you evaluate the characteristics?		
Surgical wound	20	80.00

nsertion of vascular catheters	16	64.00
Drained liquid	24	96.00

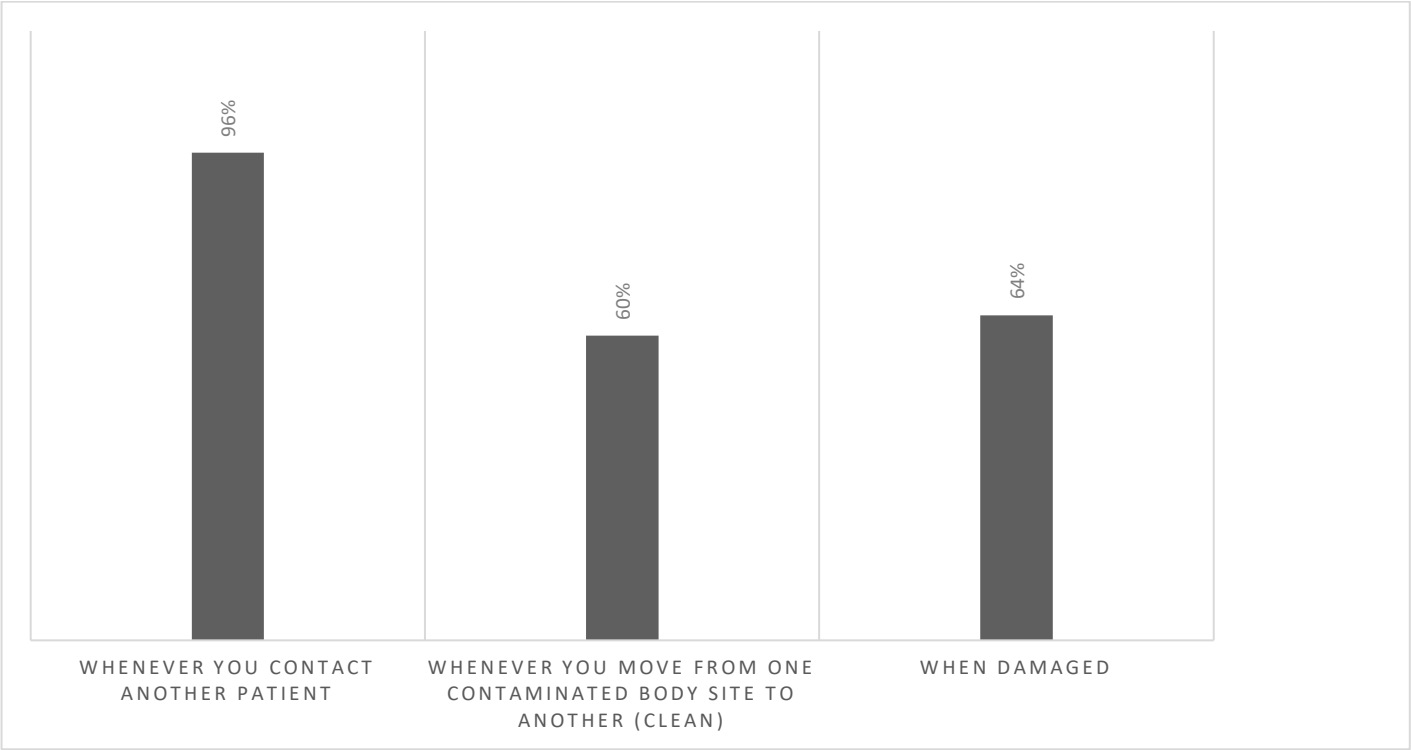
Source: Research data (2019).

Table 3 - Hand hygiene culture among nursing professionals in a Coronary ICU of a public hospital. Caruaru-PE, 2019. (N=25)

HAND HYGIENE	N	%
Before touching the patient	20	80.00
Before performing procedure clean/aseptic	20	80.00
After the risk of fluid exposure extracorporeal	19	76.00
After touching the patient	22	88.00
After removing sterile gloves or procedural	22	88.00

Source: Research data (2019).

Figure 1 - Culture of glove exchange among nursing professionals in a Coronary ICU of a public hospital. Caruaru-PE, 2019.



Source: Research data, 2019.

DISCUSSION

Regarding the profile of the professionals, the predominance of the female gender and the average age of the Nursing team corroborated the data presented by the Federal Council of Nursing, in 2015, in which Nursing is composed of 20% nurses and 80% Nursing technicians, 84.6% being women. According to the COFEN, the prevalence of age is between 31 and 35 years old.[11]

It is revealed that the results obtained related to the time of nursing practice agreed with an existing study in the literature in which the prevalence related to the time of professional practice was up to 14 years; as for the time of work in the ICU, it was incompatible, in which the majority (65%) reported that it corresponded to a decade.[12]

It is shown, with regard to professional specialization, that 16% had experience in cardiology and/or intensive care. It is known that nursing professionals should always be up to date, being necessary the professional improvement in order to provide comprehensive care to patients in the postoperative period, ensuring patient safety.[13,14] It is understood, in relation to the amount of employment ties, that many professionals tend to be dissatisfied with their work and, therefore, have more than one job, and can be influenced by many variables, among them, the salary.[15]

It is also evident that the nursing professionals of the Coronary ICU had difficulties related to participation in continuing education activities, considering that most of them did not know the frequency of the training sessions. It is recalled that continuing education aims to enhance knowledge and contribute to the professionals to improve their interventions based on reflections on teaching and learning from the service routine and its difficulties.[16]

Thus, the use of a checklist in the postoperative period contributes to improving the quality of life of both the nursing professional and the patient, since it allows the development of preventive actions for the control of warning signs and symptoms; however, professionals need changes in behavior and a continuous search for knowledge and development of their skills.[14]

The Nursing team is seen as the most qualified to test the equipment, considering that these professionals handle the equipment frequently; thus, the programming of multi-parameter monitors, continuous infusion pumps, mechanical ventilators and other equipment, such as the unit's emergency cart, when not evaluated, can interfere with patient safety and cause undesirable events. Strategies should also be implemented for the training of all professionals in the team focused on the correct handling of technologies.[13]

Regarding the identification of the personal health history, the search for pre-existing diseases, continuous use medications, and possible allergies of the patient stands out. Among the main pre-existing diseases found in the patients are systemic arterial hypertension and Diabetes Mellitus and, consequently, the patient will be taking anti-hypertensives, insulin therapy and/or oral hypoglycemic agents.[15]

The Extracorporeal Circulation (ECC) is widely used in cardiac surgeries and, as seen in table 2, only 52% of professionals seek information about the use of this method during the surgical procedure. The risks of complications by ECC increase, such as arrhythmias, ischemia and changes in blood pressure levels related to the time of exposure to ECC, that is, the longer the time on ECC the greater the risk of patients developing some neurological deficit.[13]

It is observed that 80% paid attention to the inspection of the surgical wound, 64% checked the insertion of vascular catheters and 96% observed the aspects of the drained fluid. It is inferred, therefore, that complications related to the surgical wound are common, being the main causes

of mediastinitis, endocarditis, sternal infection and saphenous vein withdrawal site, besides infections related to vascular access and sepsis.[17,18]

Alert, regarding the risk of falls, professionals should always guide the patient, the family and the team about the risks of falls and its consequences, identifying the risks of patients in bed and always keeping the bars high and the wheels of the stretcher locked[8,15]. Furthermore, it is oriented in relation to the prevention of PUs, because, as seen in the literature, PUs are characterized as preventable events when preventive measures that promote skin integrity are used, such as daily monitoring and inspection of the skin, and changing the decubitus every two hours.[15]

It is explained that hand hygiene is the act of removing dirt, oil, sweat and microbiota from the skin in order to prevent the risks of care-related infections, and should be performed before and after contact with the patient, before and after aseptic procedures, after contact with biological material and after contact with furniture and equipment that are close to the patient.[19]

It is detailed that the results obtained through the study and presented in table 3 about hand hygiene corroborated existing studies that mentioned that professionals, most of the time, abandon the act of sanitizing their hands before touching the patient, before performing procedures and after the risk of exposure to fluids, however, they sanitize after touching the patient and equipment.[6-20,21]

A considerable frequency of lack of knowledge about glove use and infection control was found regarding the use in indicated situations, as shown in Chart 1. The use of gloves has become an essential tool for the provision of safe care, knowing that the decision to use gloves or not consists of evaluating the risks of exposure to body fluids and reducing the risk of transmission of pathogens, however, the fact of using gloves does not eliminate the risk of infection.[22]

Administration errors are considered the main adverse events in the hospital area, in addition, patient vigilance, maintenance of skin integrity and lack of material resources are also observed as factors for the error. It was verified, according to the nurses, that the reason for the occurrence of these events is work overload. Thus, the reduced number of professionals and the excessive workload contribute to the lack of attention when performing tasks.[23]

It is understood that heart surgery is a trigger of multiple feelings, and anxiety, pain, fear and stress are some examples, especially coming from caregivers, who have limited knowledge about the surgery, and also the need for admission to the ICU, since there are several beliefs that associate the fact of being in the intensive care sector to be between life and death. It is noticed, in this context, that a factor that was presented as extremely important for the patient's experience is religiosity. Thus, the act of faith is considered essential to the process of coping with the disease, and prayer is associated with fewer postoperative complications.[24] Thus, through the educational actions developed by nurses for patients and family, it helps to reduce feelings of anxiety, encouraging self-care, which is important from the preoperative to the postoperative period. Thus, by adhering to self-care, an improvement in rehabilitation is provided together with the patient, who is aware of the surgical procedure to which he/she will be submitted and of the entire recovery process until hospital discharge.[25]

CONCLUSION

According to the analysis of the results, the sociodemographic and labor profile of the nursing professionals was identified, evaluating the knowledge of the team about patient safety and understanding the importance of the implementation of actions aimed at promoting patient safety in order to reduce the rates of adverse events, as well as the factors that can lead to complications in the postoperative period.

The Coronary ICU studied presented a good result regarding patient safety, with a good structure and adequate material and technological resources. It was observed, however, a deficit of professionals specialized in cardiology and/or ICU, knowing that patients in the ICU sector demand specific care.

It was also observed that a good number of nursing professionals were unaware of the frequency of continuing education trainings held at the hospital. It is known that the training courses aim to contribute to the teaching-learning process of professionals related to interventions that can be applied in the service routine. It is also pointed out that the nursing professionals still had difficulties regarding hand hygiene and, especially, the use and exchange of gloves.

It is recommended, therefore, that the health institution motivates its employees to seek professional improvement, because, as presented in the study, specializations contribute to a better performance in the ICU along with the time of professional experience. It is also emphasized the need for training on the use and exchange of gloves in order to promote safe care to patients in the postoperative period of cardiac surgery. Studies with the ICU multidisciplinary team are suggested, knowing that the theme of patient safety must be worked out among all health professionals.

CONTRIBUTIONS

We inform that all authors contributed equally in the design of the research project, data collection, analysis and discussion, as well as in the writing and critical review of the content with intellectual contribution and in the approval of the final version of the study.

CONFLICT OF INTERESTS

Nothing to declare.

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