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## CASE REPORT ARTICLE

### SYSTEMATIZATION OF NURSING CARE IN PERIOPERATIVE OF PULMONARY SEGMENTECTOMY: CASE STUDIES

#### SISTEMATIZAÇÃO DA ASSISTÊNCIA DE ENFERMAGEM NO PERIOPERATÓRIO DE SEGMENTECTOMIA PULMONAR: RELATO DE EXPERIÊNCIA

#### SISTEMATIZACIÓN DE LA ATENCIÓN DE ENFERMERÍA EN EL PERIOPERATORIO DE SEGMENTECTOMÍA PULMONAR: ESTUDIOS DE CASO

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#### ABSTRACT

**Objective:** reporting the experience about nursing care during the perioperative pulmonary segmentectomy. **Method:** a descriptive study of experience report type conducted in a public and teaching hospital in the city of Campina Grande/PB, in which subjects not actively participated in the data collection. **Results:** prescriptions and nursing results were performed according to the nursing diagnoses established for perioperative: anxiety, deficient knowledge, and disturbed sleep pattern, risk of perioperative positioning injury, disturbed sensory perception, and risk for infection, skin integrity impaired and acute pain. **Conclusion:** the experience gave acquisition of knowledge referring to the full perioperative nursing care (pre, intra and postoperative). It must be aware about the nurse's role in the team and perform it with excellence, prioritizing care and safety of the patient and the family. **Descriptors:** Nursing Process; Perioperative Nursing; Adult Health.

#### RESUMO

**Objetivo:** relatar a experiência sobre a assistência de enfermagem durante o período perioperatório de segmentectomia pulmonar. **Método:** estudo descritivo, tipo relato de experiência, realizado em um hospital público e de ensino, no município de Campina Grande/PB, no qual os sujeitos não participaram ativamente da coleta de dados. **Resultados:** as prescrições e os resultados de enfermagem foram realizados de acordo com os diagnósticos de enfermagem estabelecidos para o perioperatório: ansiedade, conhecimento deficiente, padrão de sono prejudicado, risco de lesão por posicionamento perioperatório, percepção sensorial perturbada, risco de infecção, integridade da pele prejudicada e dor aguda. **Conclusão:** a experiência proporcionou aquisição de conhecimentos referentes à assistência de enfermagem perioperatória integral (pré-, intra- e pós-operatória). Deve-se ter ciência da função do enfermeiro na equipe e desempenhá-la com excelência, priorizando a assistência e a segurança do paciente e da família. **Descritores:** Processos de Enfermagem; Enfermagem Perioperatória; Saúde do Adulto.

#### RESUMEN

**Objetivo:** presentar la experiencia acerca de los cuidados de enfermería durante el periodo perioperatório de la segmentectomia pulmonar. **Método:** estudio descriptivo, del tipo estudios de caso, realizado en un hospital público y de enseñanza en la ciudad de Campina Grande/PB, en el cual no sujetos participaron activamente en la recolección de datos. **Resultados:** los requisitos y los resultados de enfermería fueron conducidos de acuerdo con los diagnósticos de enfermería establecidos para el perioperatório: la ansiedad, conocimientos deficientes, patrón de alteración del sueño, riesgo de lesiones por el posicionamiento perioperatório, percepción sensorial perturbada, riesgo de infección, la integridad de la piel deteriorada y dolor agudo. **Conclusión:** la experiencia dio adquisición de conocimientos que se refieren a la atención de enfermería perioperatória integral (pre, intra y postoperatoria). Se debe tener ciencia de la función de las enfermeras en el equipo y llevar a cabo con excelencia, dando prioridad a la atención y a la seguridad del paciente y la familia. **Descriptores:** Proceso de Enfermería; Enfermería Perioperatória; Salud del Adulto.

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## INTRODUCTION

The thoracic surgery may have diagnostic purpose, therapeutic or diagnostic-therapeutic.<sup>1</sup> In this context, pulmonary segmentectomy is a surgical procedure indicated in cases of involvement of the pulmonary parenchyma small extent. The method consists of resection of a lung segment and/or surrounding structures, being a common procedure in the treatment of benign pulmonary nodules, cancer and tuberculosis.<sup>2</sup> The procedure is indicated in cases of patients with borderline cardiopulmonary reserve, and severe functional limitations or isolated presence of small pulmonary nodules.<sup>3</sup>

It is known that segmentectomy as thoracic surgery, provides risk to the respiratory system; such as decreased lung compliance, increased work of breathing, decrease in forced vital capacity, forced expiratory volume in one second (FEV1) and functional residual capacity, patient difficulty in coughing with consequent decrease in removal of pulmonary secretions, as well atelectasis.<sup>4</sup>

Pulmonary segmentectomies have lower post-surgical risks; however, the possibility of recurrence of lung cancer cases is higher when the mode is segmentectomy surgical treatment.<sup>5,6</sup>

During the undergraduate nursing and the realization of practical classes for the Curriculum Component "Attention to surgical patient," the authors of this study followed and developed guided activities in nursing care during the perioperative period of a client who underwent surgical procedure of pulmonary segmentectomy.

Nursing uses a variety of tactics in order to watch over quality and safety subjects seeking care in health. Among the tools and technologies used in nursing care during the perioperative period, there is the use of the nursing process, which begins with the collection of data and physical examination, extremely relevant, since this step has information collected from the patient and family, identifying actual or potential problems of health that will help to elaborate the plan of care; the following steps are: nursing diagnosis, care planning (outcomes and interventions), nursing implementation and evaluation of nursing.<sup>1,7-9</sup>

The report for Nursing Care (SAE) is a prerogative of the nurse, which by means of a method and scientific work strategy identifies health situations, supporting the prescription and implementation of nursing actions, contributing to the promotion, prevention ,

recovery and rehabilitation health of the individual, family and community. The SAE requires nurses commitment to meet the patient as an individual, employing to this their knowledge and skills, as well as orientation and training of nursing staff to implement systematic actions.<sup>1,7-9</sup>

The present study aims to report the experience about nursing care during the perioperative pulmonary segmentectomy.

## METHOD

This is a descriptive study of type experience report conducted in a public and teaching hospital in the city of Campina Grande/PB, in which subjects not actively participated in the data collection.

The experience report is an instrument of descriptive research that reflects on an action or set of actions that address a situation experienced in the professional sphere of scientific interest. Comprises a qualitative perspective that addresses the issue from descriptive and observational methods.<sup>10</sup>

It was based on the experience that occurred during the course of practical classes for the Curriculum Component "Attention Surgical Patient" the course of Bachelor of Nursing, Federal University of Campina Grande, along with the teaching of the discipline of that institution, in April 2013. the report was developed from conducting activities related to nursing care during the perioperative period, observation, experience acquired by contact with the physical structure of the operating room, central sterile material, surgical hospital sector and the dynamics of working together to surgical patients.

## RESULTS AND DISCUSSION

The dynamics of the practical activities of the course was given by the surgical patient. Initially, data collection and physical examination during the pre, intra and postoperative period was performed, confirming to detect problems that subsidized nursing diagnoses and care planning, namely the expected results and nursing interventions.

The SAE applied in the perioperative period of a patient who underwent segmentectomy is described in Figure 1:

	Nursing diagnosis	Expected results	Interventions
PREOPERATIVE	– Environmental change-related anxiety and lack of information about the surgical procedure, evidenced by nervousness and increased blood pressure;	– Anxiety diminished;	– Clarify about the surgical procedure; listen carefully; encourage the verbalization of feelings; offer activities aimed at reducing the tension;
	– Deficient knowledge about the surgical procedure, related to lack of clear explanations beforehand and lack of familiarity with the information, evidenced by verbalization of the problem;	– Present knowledge improvement;	– Clarify about the surgical procedure; listen carefully;
	– Degraded sleep pattern related to strange environment (hospital), evidenced by verbal complaints of not feeling well rested.	– Improved sleep pattern;	– Teach the patient relaxation technique; observe the physical conditions (pain/discomfort); monitor the sleep pattern and amount of hours overnight stays; provide a safe and quiet environment;
INTRA-OPERATIVE	– Environmental change-related anxiety and risk of death, evidenced by nervousness, increased blood pressure, cardiovascular arousal;	– Will improve anxiety;	– Talk to the patient, touch his hands and keep eye contact; listen carefully; encourage the verbalization of feelings;
	– Risk of injury by perioperative positioning, immobilization and related sensory disorders/perceptive stemming from anesthesia;	– Will be free from injury for perioperative positioning;	– Use auxiliary resources to mobilize the patient on operating table; keep the body aligned; apply pillows and cushions the bony prominences; apply security bandage;
	– Sensory perception (hearing) disturbed related to anesthesia, evidenced by change in sensory acuity.	– Will improve sensorial perception;	– Maintain physical comfort, privacy during anesthetic effect; use varying methods to stimulate the senses;
POSTOPERATIVE PERIOD	– Risk of infection related to invasive procedures (venous catheter, surgical incision and chest tube);	– Will be free of infection related to the presence of chest tube, AVC and surgical incision during the period of need to use the devices.	– Use aseptic technique during the manipulation of invasive devices; perform cleaning, evaluate and watch for signs of infection; register on the chart the aspect of skin invasive device; properly sanitize your hands and wear gloves when handling the devices; promote adequate nutritional intake;
	– Impaired skin integrity related to surgical procedure, evidenced by rupture of layers of skin (wound in the midaxillary line the lateral right breast);	– Will surgical wound healing in eight days;	– Assess the wound daily and document developments; offer diet rich in nutrients and promote hydration; perform dressing with aseptic technique once a day; avoid unnecessary exposure and manipulation of the wound;

– Acute pain related to disruption of skin integrity, evidenced by verbal report of pain;	– Provide pain relief in the first 24 hours of postoperative.	– Determine characteristics of pain; promote comfort; and provide relaxation activities; evaluate the efficacy of analgesic administered.
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**Figure 1.** Diagnoses, interventions and expected results of nursing care to the patient undergoing a pulmonary segmentectomy resection. Campina Grande, 2013.

\*Source: NANDA<sup>11</sup>; NIC<sup>12</sup>.

When the nursing staff does not collect data and physical examination satisfactory preoperative or does not implement nursing interventions necessary for that period, it is not able to detect anxiety or use mechanisms to his relief, so the problem persists during the intraoperative period. In this sense, when the/nurse/provides information to the patient and family during the preoperative period, reduces potential problems that could occur during the intra and/or postoperative period.

Regarding the diagnostic set for intraoperative and postoperative periods, other studies<sup>1,13-4</sup> also reported it. The establishment of nursing diagnoses is essential to develop reasoned and appropriate nursing care according to the needs of each patient, contributing to implement efficient and effective actions to solve the identified problems.

To undergo any surgical procedure comprises a framework of critical moments, such as fear of the unknown and anesthesia. The lack of information about surgery and complications related to the disease also generate fear and anxiety, and may cause changes in the body, such as hypertensive crisis and hyperglycemia.<sup>1,15</sup> It is essential that during the preoperative period/nurse/ notify the patient and family about the procedure, since the nursing diagnoses that have been established are common to this population.

Thus, for this surgical procedure, patient positioning should be the lateral position, allowing exposure of the chest area to be manipulated. This position requires strategies to preserve the integrity of the skin, preventing perioperative positioning injury, such as the use of resources for immobilizing and supporting the ends of the head; maintain the patient's body alignment; protect bony prominences; apply security bandage.<sup>16</sup>

Removing patient surgical site after the procedure also requires some care, it is necessary that the professional slowly handles the patient, since the sudden change of position can cause a drop in blood pressure; the head should be kept lateral and Guedel airway in the mouth in order to prevent aspiration. Pulmonary segmentectomy was

longer than two hours, that period is enough to cause damage to skin integrity.<sup>16-7</sup>

Anesthesia was generally administered by inhalation and intravenous use. The airway was maintained for a tracheal tube, requiring the following precautions: observe chest expansion; listening for breath sounds bilaterally; observed changes in oxygen saturation (SaO<sub>2</sub>); monitor the adverse effects of mechanical ventilation; positioning the patient to facilitate ventilation/ perfusion; necessary intubation.<sup>15</sup> when vacuum is important in anesthesia, in that it guarantees adequate oxygenation during this phase, in which there is a depression of mechanical ventilation.

No surgical/anesthetic procedure is risk-free. When you have associated comorbidities, the risk is even greater and requires caution to allergic reactions, cardiac arrhythmias, respiratory failure, excessive or deficient sedation, hypoxia or hypercapnia, laryngeal or oral trauma, hypothermia or malignant hyperthermia. The patient and family should be informed as to what to expect from the anesthesia. During the anesthetic procedure is essential that the patient is safe on the operating table, vital signs monitored properly and neurological status. Anesthesia and some surgeries can lead to changes in respiratory function, lung volumes and gas exchange, requiring a more careful monitoring of vital functions.<sup>12,18</sup>

According to the lived experience, the skin antisepsis was performed as a strategy to reduce the resident flora on the skin, as well as the incidence of surgical site infection; surgical incision was located in the middle axillary lateral line right breast, there was need for insertion of a chest tube water seal, allowing better visualization of the cavity, and finally occurred resection of the pulmonary nodule, which was sent for histopathological analysis.

Diagnoses, nursing interventions and expected results for a patient during the perioperative period may vary, since the SAE is individual and dependent on several conditions intrinsic to the customer, they are: prior information about the procedure, level of education, type of surgery, previous



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surgical experience, physical and psychological conditions and especially the explanations offered during the preoperative period.

In the institution where the practical classes were developed, the nursing process is not implemented in healthcare practice to surgical patients, not also occurring comprehensive care, since the division of labor is made up of tasks, which contributes to a fragmented care. Thus, this work so cooperates with the dehumanization of care, as it conflicts with the National Humanization Policy of Care and SUS management (PNH).<sup>19</sup>

Postoperative can occur in the Surgical Ward and intensive care unit depending on the procedure and the patient's evolution, does not occur when the same industry, it was observed that there is good communication between the teams, contributing to a discontinued care.

### FINAL REMARKS

The experience was of great importance, since it provided the acquisition of knowledge related to care for the patient as a whole, enabling the pre experiences, intra and postoperative, and the connection between the theoretical and practical notions.

According to the reality experienced in the city, public health institutions are scarce where the nursing professionals play an integral patient care during the perioperative period and may contribute to a fragmented assistance. The work of nurses in practice experienced during surgery is quite different and shall often just bureaucratic issues, the most care activities and related directly to the patient, developed by the nursing team (nursing technicians).

Being the surgical center a restricted sector, remaining the client, often, under the influence of sedatives and anesthetics, it was observed the disregard by the part of professionals, regarding customer's privacy, and the lack of dialogue between team members and patients, as a strategy to relieve anxiety.

The opportunity to experience nursing care during the perioperative period, see the central sterile material, the operating room, the operating room, the wards of the Surgical Ward, promoted an association between the knowledge acquired in theory and in practice situations experienced. In this sense, it was observed that it is not always possible to implement all the theoretical notions in practice, since it does not depend only on nursing, but the dynamics of the sector, other health team members and especially the

management of the institution where the care is provided. It is up to us, future nurses, science terms of our role within the multidisciplinary team and play our part with excellence, focusing primarily on the tour and safety of the patient and the family.

It is hoped that this presentation can contribute to new studies and debate not only about nursing care, as well as all staff involved in care for surgical patients, aiming at improving the care provided, the establishment and maintenance of quality of life of users of health services.

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