Post-operative oncological patients in prolonged fast: nursing diagnosis and interventions

Pós-operatório de paciente oncológico em jejum prolongado: diagnósticos e intervenções de enfermagem

Postoperatorio del paciente oncológico bajo ayuno prolongado: diagnósticos e intervenciones de enfermería

Sara Soares Ferreira da Silva[I] ; Rosiane Santos Ferreira[I] ; Ana Cristina Silva Pinto[I] ;
Lidiane Bonin de Andrade[I] ; Priscilla Manhães Gomes[I] ; Janaína de Medeiros Tavares[II]

[I]Universidade Federal do Estado do Rio de Janeiro, Rio de Janeiro, RJ, Brazil;
[II]Hospital dos Servidores do Estado do Rio de Janeiro, Rio de Janeiro RJ, Braz]il

ABSTRACT
Objective: to identify the main nursing diagnoses and respective interventions in a population of cancer patients undergoing prolonged postoperative fasting. **Method:** descriptive, cross-sectional, documentary study. The study scenario was a federal teaching hospital in Rio de Janeiro, characterized as a high-complexity oncological facility. Data were collected for 60 days from medical records for the years 2016 to 2018. In the 61 medical records that met the inclusion criteria and were analyzed, cancer patients presented 208 complications. **Results:** eight diagnoses were established, the most in evidence being: nutrition imbalance: less than body requirements; and risk of unstable blood glucose level. Eleven nursing interventions, designed to be easily applied in nursing care practice, were specified in line with the NANDA-I Taxonomy. **Conclusion:** the wide range of nursing diagnoses and interventions evidenced are recommended for adoption in the nursing process.
Descriptors: Perioperative Nursing; Fasting; Surgical Oncology; Nursing Process.

RESUMO
Objetivo: identificar os principais diagnósticos de enfermagem e suas respectivas intervenções em uma população de pacientes oncológicos submetidos a jejum prolongado no pós-operatório. **Método**: estudo descritivo, documental e transversal. O cenário do estudo foi um hospital federal de ensino no Rio de Janeiro, caracterizado como UNACON. Os dados foram coletados durante 60 dias em prontuários referentes aos anos de 2016 a 2018. Foram analisados 61 prontuários que atendiam aos critérios de inclusão e 208 complicações foram apresentadas pelos pacientes oncológicos. **Resultados**: Foram definidos oito diagnósticos de enfermagem, entre os quais os mais evidentes foram: Nutrição desequilibrada: menor que as necessidades corporais e Risco de glicemia instável. Onze intervenções de enfermagem foram definidas em consonância com a Taxonomia de NANDA-I e buscaram ser de fácil aplicação na prática assistencial de enfermagem. **Conclusão**: foi evidenciada uma ampla gama de diagnósticos e intervenções de enfermagem a qual se recomenda sua adoção no processo de enfermagem.
Descritores: Enfermagem Perioperatória; Jejum; Oncologia Cirúrgica; Processo de Enfermagem.

RESUMEN
Objetivo: identificar los principales diagnósticos de enfermería y sus respectivas intervenciones en una población de pacientes oncológicos sometidos a ayuno postoperatorio prolongado. **Método:** estudio descriptivo, transversal, documental. El escenario de estudio fue un hospital universitario federal en Río de Janeiro, caracterizado como una instalación oncológica de alta complejidad. Se recolectaron datos durante 60 días de las historias clínicas de los años 2016 a 2018. En las 61 historias clínicas que cumplieron con los criterios de inclusión y fueron analizadas, los pacientes con cáncer presentaron 208 complicaciones. **Resultados:** se establecieron ocho diagnósticos, siendo los más evidentes: desequilibrio nutricional: menor que los requerimientos corporales; y riesgo de niveles inestables de glucosa en sangre. Once intervenciones de enfermería, diseñadas para ser fácilmente aplicadas en la práctica del cuidado de enfermería, fueron especificadas de acuerdo con la Taxonomía NANDA-I. **Conclusión:** la amplia gama de diagnósticos e intervenciones de enfermería evidenciados se recomiendan para su adopción en el proceso de enfermería.
Descriptores: Enfermería Perioperatória; Ayuno; Oncología Quirúrgica; Proceso de Enfermería.

INTRODUCTION

According to the WHO, in 2018, 18.1 million people worldwide developed some type of cancer and, of these, 9.6 million evolved to death. The forecast for 2040 is that these numbers will almost double[1]. In Brazil, according to the National Cancer Institute (*Instituto Nacional de Câncer*, INCA), there is a forecast of 625,000 new cases for each year of the 2020-2022 triennium[2]. For the management of the disease once established, strategies such as radiotherapy, chemotherapy and/or surgery are used. According to the INCA, the surgical approach as a form of treatment for neoplasms is of utmost importance, being able to promote control or even cure when performed in the initial stages, and is also a strategy for palliative management of this condition. Abdominal surgeries are included in this context[3].

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Within the scope of the surgical approach, there is an interest in considering the relevance of adequate peri-operative preparation, as well as the precepts of safe surgery, which it values by reducing the risk of unnecessary harms related to health care to an acceptable minimum, being an important agenda in the pre-, intra- and post-operative periods[4].

In this context, patient nutrition in the peri-operative period has been widely discussed, since authors present the paradox generated by the benefit of fasting, such as the prevention of bronchoaspiration during the anesthetic effect and the negative impacts generated for surgical recovery, such as metabolic stress[5,6].

According to the Acceleration of Total Post-operative Recovery (*Aceleração da Recuperação Total Pós-operatória*, ACERTO) project, the nutritional approach of surgical patients must be initiated as soon as their hospitalization is promoted, in order to ensure adequate nutrition throughout the operative process. It is also evidenced that cancer patients are included as a group strongly affected by hospital malnutrition[7].

In this context, corroborated by the ERAS (Enhanced Recovery After Surgery) Protocol, one of the issues raised is the proposal for post-operative fasting and its impacts, and it is stated that early post-operative oral diet is related to the reduction of complications and acceleration of recovery. In the ACERTO Guidelines on Perioperative Nutritional Interventions in Elective General Surgery, it is strongly recommended that the post-operative diet (oral or enteral) in abdominal surgeries must be started within 24 hours, as long as the patient does not present hemodynamic instability[8–11].

It is noteworthy that, associated with such a discussion, it is necessary to prepare the Nursing professional to act in face of the possible outcomes arising from prolonged fasting, since this practice is still adopted in several care services in the surgical context, despite the existing evidence in the literature about its impact on the patient[11].

In addition, based on COFEN Resolution 358/2009[12], which provides for Nursing Care Systematization (NCS) and the implementation of the Nursing Process as a practice that must be performed in all environments where the nurse's performance is present and, considering that the diagnosis, delineation of the results and interventions are components of this process, the need to think about the post-operative period from this perspective is reinforced. Thus, the study aims to identify the main Nursing diagnoses and their respective interventions in a population of cancer patients undergoing prolonged post-operative fasting..

Its impact is revealed by contributing with a scientific basis for Nursing professionals in the preparation of the planning and implementation of their activities, so that they attain greater achievements and the patient is the most benefited.

METHOD

A cross-sectional, descriptive and documentary study. The study scenario consisted of a teaching hospital in the federal network of Rio de Janeiro categorized as a High-Complexity Assistance Unit in Oncology (*Unidade de Assistência de Alta Complexidade em Oncologia*, UNACON), which performs medium and high complexity procedures, with a view to implementing Nursing Care Systematization.

Data collection took place from January to March 2019, with analysis of the medical records of the general surgery sector from 2016 to 2018, using a semi-structured instrument developed by the authors of the present study. Such instrument had the following questions: date of birth, gender, medical diagnosis, type of surgery, fasting period stipulated for the patient, real time of fasting performed and complications presented by such patients in the immediate and mediate post-operative period, the first 24 hours from the end of the surgical intervention being considered as immediate and, as mediate, the period of 24 hours after the surgical intervention until the discharge moment.

In a first stage, the medical records (from the general surgery sector) of patients undergoing abdominal surgery in the years 2016 to 2018 were evaluated, with 126 medical records listed. In the second stage, this number was re-evaluated according to the inclusion and exclusion criteria, where the sample was reduced to 61.

Patients undergoing surgical intervention in the gastrointestinal tract as a form of intervention for the neoplastic condition and undergoing prolonged fasting, that is, longer than 24 hours in the post-operative period, were included. The death outcomes were excluded. With regard to the complications presented by the patients, a total of 208 were identified and used as a basis for the design of the Nursing Diagnoses.

The theoretical frameworks used for the definition of the Nursing Diagnoses, Outcomes and Interventions were as follows: NANDA International Taxonomy (2018-2020)[13], Nursing Outcomes Classification - NOC (2016)[14], Nursing Interventions Classification - NIC (2016)[15] and the NANDA-I NOC and NIC Clinical Conditions: Support for Critical Reasoning and Quality Assistance (2012)[16].

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In the construction phase of the nursing diagnoses, the terminologies used in the medical records of patients by health professionals were considered, as well as the recommendations of the NANDA-I taxonomy. Thus, the statements of nursing diagnoses, outcomes and interventions were listed, related to the needs of hospitalized cancer patients for health care.

Therefore, for the composition of the diagnoses, the following guidelines were used: mandatorily including a focus axis term and an additional term, as needed. For the construction of statements related to nursing interventions, the following guidelines were used: mandatorily including an action axis term and a target term, in addition to allowing the inclusion of additional terms, as needed, from the other axes.

After the construction of the statements, they were submitted to a content validation process by specialists in the areas of surgical oncology, peri-operative nursing and nursing care systematization. In turn, two instruments were developed: one for validating the statements of Diagnoses and Outcomes and the other for validating the Nursing Interventions. In these instruments, the nurses were asked to collaborate in order to point out the feasibility of applying the statements to the area of oncological surgery and in the professional practice. In case of disagreement regarding the statements, a judge was requested for suggestions and/or adequacy.

The research followed the rules of Resolution No. 466/12[17], Operational Standard No. 001/2013[18] and Resolution No. 510/2016 of the National Health Council and complementary[19]. The project was submitted to the Ethics Committee of the proposing institutions and approved under opinion No. 3,039,912.

RESULTS

The total number of patients analyzed according to the inclusion and exclusion criteria was 61, with 10 corresponding to the year 2016, 18 to 2017 and 33 to 2018. The fasting time, counted in all the years analyzed to which the patients were submitted, obtained a mean of 64 h 40 min (σ=2.22) and a median of 42 h 16 min; it is noteworthy that the maximum fasting time was 136 h 23 min (5 days). There was a median of 3 complications per patient, and a mean of 3.4 (σ=1.85).

Table 1 shows the main complications presented by the patients studied, as well as their distributions.

TABLE 1: Frequency distribution of the complications presented by the patients in prolonged fasting during the post-operative period (2016-2018). Rio de Janeiro, RJ, Brazil, 2020.

Complication	n	f (%)
Hypoglycemia	45	21.63
Hypokalemia	21	10.09
Other complications with one occurrence	21	10.12
Nausea	19	9.13
Emesis	17	8.17
Hypertension	11	5.28
Pain (general)	11	5.28
Hyponatremia	9	4.32
Hyperglycemia	9	4.32
Hypotension	8	3.84
Abdominal pain	5	2.43
Surgical site infection	5	2.43
Anxiety	3	1.44
Asthenia	3	1.44
Flatulence	3	1.44
Lypothymia	3	1.44
Sweating	3	1.44
Cephalea	2	0.96
Change in mental state	2	0.96
Fever	2	0.96
Hypovolemia	2	0.96
Tachycardia	2	0.96
Diarrhea	2	0.96
Total	208	100

In the analysis, hypoglycemia is observed as the most frequent complication, which may suggest that prolonged fasting time contributed to its development.

Table 2 shows the distribution of the Nursing Diagnoses listed, according to the NANDA Taxonomy.

Table 2: Nursing Diagnoses listed according to the NANDA - International 2018-2020 Taxonomy, its domains and frequency distribution, Rio de Janeiro, RJ, Brazil, 2020.

NANDA-I Domains	Diagnoses (NANDA-I)	n	f (%)
02 - Nutrition	(00002) Imbalanced nutrition: less than body requirements, related to insufficient food intake evidenced by food intake lower than the recommended daily intake.	61	100%
	(00179) Risk for unstable blood glucose level, evidenced by insufficient food intake.	61	100%
	(00195) Risk for electrolyte imbalance, evidenced by diarrhea and vomiting.	19	31.15%
03 - Elimination and exchange	(00197) Risk for dysfunctional gastrointestinal motility, evidenced by change in the eating habits, stressors and malnutrition.	61	100%
11 - Safety/protection	(00246) Risk for delayed surgical recovery, evidenced by malnutrition and pain.	61	100%
09 - Coping/stress tolerance	(00146) Anxiety related to stressors, evidenced by nausea, diarrhea, hypotension and abdominal pain.	32	52.50%
04 - Activity/rest	(00032) Ineffective breathing pattern related to pain and anxiety, evidenced by dyspnea.	21	34.40%
12 - Comfort	(00132) Acute pain related to harmful physical agent, evidenced by facial expression and self-report of pain.	17	27.90%

Based on the complications presented, 8 diagnoses were identified, with 3 (37.5%) belonging to the Nutrition domain and 1 (12.5%) attributed to each one of the other domains: Safety/protection, Elimination and exchange, Activity/rest, Comfort, and Coping/stress tolerance. Also regarding the frequency distribution of the diagnoses: Risk for electrolyte imbalance, Ineffective breathing pattern, and Acute pain obtained the lowest frequencies.

Figure 1 shows the expected outcomes for each diagnosis identified and their respective Nursing interventions.

Nursing Diagnoses (NANDA-I)	Expected Nursing Outcomes (NOC)	Nursing Interventions (NIC)
(00002) Imbalanced nutrition: less than body requirements, related to insufficient food intake evidenced by food intake lower than the recommended daily intake.	(1005) Nutritional Status: Biochemical Measures (1008) Nutritional Status: Food & Fluid Intake	(1160) Nutritional Monitoring
(00179) Risk for unstable blood glucose level, evidenced by insufficient food intake.	(1005) Nutritional Status: Biochemical Measures (1008) Nutritional Status: Food & Fluid Intake	(1160) Nutritional Monitoring (2130) Hypoglycemia Management
(00132) Acute pain related to harmful physical agent, evidenced by facial expression and self-report of pain.	(1605) Pain Control	(1400) Pain Management
(00195) Risk for electrolyte imbalance, evidenced by diarrhea and vomiting.	(2305) Surgical Recovery: Immediate Post-Operative (1015) Gastrointestinal Function	(1450) Nausea Management (1570) Vomiting Management (2080) Fluid/Electrolyte Management (1400) Pain Management (0430) Bowel Management
(00197) Risk for dysfunctional gastrointestinal motility, evidenced by change in the eating habits, stressors and malnutrition.	(2305) Surgical Recovery: Immediate Post-Operative (1008) Nutritional Status: Food & Fluid Intake	(1450) Nausea Management (1570) Vomiting Management (2080) Fluid/Electrolyte Management (1400) Pain Management (1160) Monitoração nutricional (0430) Bowel Management
(00246) Risk for delayed surgical recovery, evidenced by malnutrition and pain.	(2305) Surgical Recovery: Immediate Post-Operative (1008) Nutritional Status: Food & Fluid Intake (1605) Pain Control	(1400) Pain Management (1160) Nutritional Monitoring (2080) Fluid/Electrolyte Management
(00032) Ineffective breathing pattern related to pain and anxiety, evidenced by dyspnea.	(0402) Respiratory Status: Gas Exchange (0410) Respiratory Status: Airway Patency (1605) Pain Control	(3350) Respiratory Monitoring (5820) Anxiety Reduction (1400) Pain Management
(00146) Anxiety related to stressors, evidenced by nausea, diarrhea, hypotension and abdominal pain.	(1211) Anxiety Level (0004) Sleep (1618) Nausea &Vomiting Control (2102) Pain Level (1605) Pain Control	(5880) Calming Technique (5380) Security Enhancement (1450) Nausea Management (1570) Vomiting Management (1400) Pain Management

FIGURE 1: Nursing diagnoses and the respective Nursing outcomes (NOC) and Nursing interventions (NIC) - Rio de Janeiro, RJ, Brazil, 2020 (Continued)

DISCUSSION

When analyzing the sample group, it is evident how fundamental factors for physical and psychological well-being were impaired. In order to find possible solutions, in this study, nursing diagnoses, expected outcomes and their respective nursing interventions are proposed.

From the diagnoses identified, it is possible to perceive that half of them is categorized as risk diagnoses, demonstrating their relevance in health care. This finding is corroborated in other studies[20–22], in which this category was predominant, showing that the nurse's performance is notable both for solving established problems and for preventing them.

It is known that the nutritional approach is of great relevance in the peri-operative period due to its potential to generate changes in several organic systems. In a study[23] performed on nursing diagnoses in the Nutrition domain in post-operative patients, in which 70% of the surgeries were abdominal, it was concluded that most of the patients (58.8%) had the diagnosis of Imbalanced nutrition: less than body requirements[23].

It is also emphasized the relevance of the nurses' performance in this context, due to their potential to prevent such complication, contribution to an adequate post-operative recovery and, consequently, to the reduction of the patient's hospital stay, since they perform a timely identification of the patient's nutritional weaknesses and have a prolonged contact time with the patient.

Thus, in the diagnosis of Imbalanced nutrition: less than body requirements, the following outcomes are proposed: Nutritional Status: Biochemical Measures (1005) and Nutritional Status: Food & Fluid Intake (1008). As an intervention, Nutritional Monitoring (1160) is proposed, with its activities being: Weigh the patient; Monitor skin turgor; Identify abnormalities in the hair; Monitor nausea and vomiting; Identify bowel abnormalities; Conduct laboratory tests to monitor results and monitor mental status[13–16].

Also in the context of nutrition, glycemic levels are highly esteemed markers for evaluating patients in the peri-operative period, with studies showing that glucose metabolism undergoes a broad modification. Although in the present study the evaluated population showed mostly hypoglycemia as a post-operative complication, some studies also relate the development of hyperglycemia with triggering favored by prolonged fasting[5,11]. Therefore, in the post-operative context, guidance through the Risk for unstable blood glucose diagnosis is of great value, and this fact was reinforced in a similar study in which there was 80% agreement between evaluators of a theoretical material aimed at peri-operative nursing diagnoses[20].

Thus, in order to contribute to effective planning and intervention in this physiological destabilization, it is recommended to apply the Risk for unstable blood glucose diagnosis and its respective interventions already partially discussed previously, since it shares the Nutritional Monitoring (1160) outcome and its interventions with other diagnoses. However, the activities of the Hypoglycemia Management (2130) intervention are added, as it has prevention measures appropriate to the context of a patient at risk, namely: Identify the patient at risk for hypoglycemia; Determine the recognition of signs and symptoms of hypoglycemia; Monitor blood glucose levels, and Administer glucose intravenously, as indicated[13–16].

Another evident complication in this study is pain, where 17 records of pain reports were recorded. In a study[24] conducted with patients in a context similar to the one in this article, the presence of pain was largely related to the development of anxiety and depression, being also indicated as a predisposing factor for worsening sleep quality[24]. It is also noteworthy that such symptom is recurrent in cancer patients throughout their trajectory with the disease and not only in the peri-operative period, being extremely important that nurses have the preparation and resources to meet the needs related to pain in order to provide for the well-being of the client and avoid such negative repercussions[22].

Thus, for the Acute pain diagnosis, the Pain Control (1605) outcome was listed as a priority outcome and its respective Pain Management (1400) intervention, the following activities being listed: Make a comprehensive pain assessment to include location, onset/duration, frequency, quality, pain intensity and precipitating factors; Observe non-verbal signs of discomfort; Explore with the patient factors that improve/worsen pain; Evaluate with the health team the effectiveness of the measures that were listed for pain relief; Guide on the use of non-pharmacological techniques; Control the environmental factors that interfere with the response to pain (such as lighting, noise and temperature); Use pain control measures before the pain becomes severe; Promote adequate sleep and rest for the patient[13–16].

Such interventions are corroborated by an integrative review[25] that demonstrated the convergence of studies to the fact that, for pain management, it is indicated to evaluate, intervene and re-evaluate after each intervention

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implemented, indicating factors such as pupillary diameter, movement, respiratory changes, facial expression and anxiety, and the use of scales validated for that purpose.

Regarding hydroelectrolytic changes, their strong correlation with emesis and diarrheal conditions is well-known. In the present article, 32 patients (15.38%) presented electrolyte imbalances, including potassium, magnesium and sodium, and 19 (9.1%) presented emesis and diarrheal conditions. In a review study on post-operative complications[26], the occurrence of emesis was reported in eight articles (23.3%), being pointed out that, together with nausea, such complication was the main one in the category of complications of the gastrointestinal tract. This study also demonstrated that, among other factors, there is a relationship between these complications and previous treatment using chemotherapy and radiotherapy, a context in which the population of the present article is inserted for being cancer patients.

Consequently, the Risk for electrolyte imbalance diagnosis is suggested for better handling of this situation, having Gastrointestinal Function (1015) as one of its expected outcomes and Bowel Management (0430) as a proposed intervention. Yet another outcome selected is Surgical Recovery: Immediate Post-Operative (2135), with the following being listed as possible interventions: Pain Control (1605), already analyzed in previous diagnoses; Nausea Management (1450); Vomiting Management (1570) and Fluid/Electrolyte Management (2080)[13–16].

For the Bowel Management outcome, the following activities are proposed: Observe the date of the last evacuation; Evaluate consistency, format, volume and color; Monitor intestinal noises; Report increase or decrease in the frequency of intestinal noises and/or intestinal noises with loud sound; and Monitor the occurrence of signs and symptoms of diarrhea, constipation and impaction[14–16].

In Nausea Management, the activities listed were the following: Perform a complete assessment of nausea including duration, intensity, frequency and precipitating factors; Control the environmental factors that can cause nausea; Promote adequate rest and sleep to facilitate the relief of nausea; and Ensure the effectiveness of antiemetic drugs that are prescribed[14–16].

The proposed activities for Vomiting Management are the following: Evaluate emesis in relation to color, consistency, presence of blood, time and force used; Measure or estimate the volume of emesis; Suggest using a plastic bag for the patient to vomit; Control environmental factors that may cause vomiting; Position the patient to prevent aspiration; Provide physical support during vomiting; Perform oral and nose hygiene; Monitor fluid/electrolyte balance; and Encourage rest[14–16].

The following is evidenced for Fluid/Electrolyte Management: Monitor for abnormal electrolyte serum levels, according to availability; Monitor for pulmonary or cardiac changes indicative of excess fluid or dehydration; Monitor manifestations of electrolyte imbalance; Observe the patient's oral membranes, sclera and skin for indications of changes in fluid or electrolyte balance (e.g., dryness, cyanosis and jaundice); Administer prescribed supplementary electrolytes, as appropriate; and Administer electrolyte excretory binding resins, as appropriate.

Also in the face of prolonged fasting, there are several changes in peristalsis, the Risk for dysfunctional gastrointestinal motility diagnosis being relevant. To this end, the Surgical Recovery: Immediate Post-Operative (2305) and Nutritional Status: Food & Fluid Intake (1008) were adopted, which have already been elucidated in previous diagnoses[13–16].

In view of the aforementioned factors, the attention of the Nursing professional to the vulnerability of such patients regarding effective surgical recovery is necessary. In the present article, 61 (100%) patients were contemplated with the Risk for delayed surgical recovery diagnosis, being mainly related to the condition of prolonged fasting to which all were subjected with consequent damage to their nutritional status[27]. Such conduct is supported by a study[21], conducted with patients in the trans-operative period, mostly of general surgery (40%, n=26), with such diagnosis limited to 23% (n=15) of the patients in the sample group.

Consequently, for the Risk for delayed surgical recovery diagnoses, the following expected outcomes were listed: Surgical Recovery: Immediate Post-Operative (2305); Nutritional Status: Food & Fluid Intake (1008) and Pain Control (1605), with their respective interventions already stated above[13–16].

Regarding the respiratory system, in a study carried out aiming to build theoretical material with nursing diagnoses, outcomes and interventions for the trans-operative period[20], the Ineffective breathing pattern diagnosis was presented as a composition element of the material, with an agreement greater than 80% among the specialists who evaluated it. In addition, in a review study on post-operative complications[26], those related to the respiratory system were presented in 13 articles (43.3%), the following being pointed out as the main manifestations of the patients: inability to breathe deeply; mild to moderate hypoxemia; dyspnea; severe hypoxemia and desaturation, therefore demonstrating great importance in this context.

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Thus, the Ineffective respiratory pattern diagnosis has the following expected outcomes: Respiratory Status: Gas Exchange (0402); Respiratory Status: Airway Patency (0410) and Pain Control (1605)[13–16].

As interventions aimed at the Respiratory Status: Gas Exchange and Respiratory Status: Airway Patency outcomes, the following Nursing interventions were listed: Respiratory Monitoring (3350); Anxiety Reduction (5820) and Pain Management (1400). The activities are listed below, clearly indicating that the Pain Control outcome and its interventions are described in previous paragraphs[13–16].

In Respiratory Monitoring, the following activities are highlighted: Monitor frequency, rhythm, depth and effort of breaths; Observe chest movements, noting symmetry, use of accessory muscles and retraction of supraclavicular and intercostal muscles; Monitor for noisy breaths, such as stridor and snoring; Monitor breathing patterns ;and Determine the need for aspiration after auscultation of rales or snores over the large airways[14–16].

The following are possible activities in Anxiety Reduction: Use a clear and reassuring approach; Explain the procedures, including sensations that are likely to be experienced during the procedure; Stay with the patient to promote safety and reduce fear; Encourage the family to remain with the patient, as indicated; Provide objects that symbolize security; Massage the back/neck, as appropriate, Encourage the verbalization of feelings, perceptions and fears; Identify changes in the level of anxiety; Provide fun activities aimed at reducing tension; and Assist the patient to identify situations that precipitate anxiety[14–16].

In a study[24] conducted with patients in the immediate post-operative period of oncological surgeries, when addressing the themes of anxiety and depression, it was reported that most patients presented mild to moderate anxiety in the post-operative period (40% to 50%) and this was presented as one of the contributing factors for the deterioration in sleep quality. Therefore, the importance of nurses acting on this factor in the entire peri-operative period is understood. In addition, in a study[20] focused on the construction of theoretical material on Nursing diagnoses and interventions for the trans-operative period, the Anxiety diagnosis was listed as an important constituent of the material, obtaining agreement from more than 80% of the expert evaluators.

Thus, in Anxiety the following expected outcomes are proposed: Anxiety Level (1211); Nausea & Vomiting Control (1618); Sleep (0004); Pain Level (2102) and Pain Control (1605). Their respective interventions being the following: Calming Technique (5880); Security Enhancement (5380); Nausea Management (1450); Vomiting Management (1570) and Pain Management (1400)[13–16].

In the Calming Technique intervention, the following activities were listed: Maintain eye contact with patient; Identify significant people whose presence can help the patient; Massage the patient's forehead, as appropriate; Guide the patient on methods to decrease anxiety (e.g., slow breathing techniques, distraction, visualization, meditation, progressive muscle relaxation, listening to soft music), as appropriate. As a strategy elucidated in studies, the use of social and spiritual support is also added, given its benefits such as reduced hopelessness and anxiety, and improved health and spiritual well-being[15,16,28–30].

The interventions aimed at increasing safety are very similar to those recommended as a Calming Technique, with the addition of the following activities: Stay close to the patient and ensure protection and safety during periods of anxiety; Present changes gradually; Discuss the next changes (e.g., ward transfer) before the event itself; and Avoid causing intense emotional situations[14–16].

CONCLUSIONS

The study evidenced the vulnerabilities of a group of cancer patients who underwent prolonged fasting in the post-operative period, seeking to demonstrate that Nursing actions, both for solving an already established problem as well as to prevent it, are of utmost relevance, and can be decisive for recovery in this group of patients.

Thus, based on this specific context, a wide range of Nursing diagnoses and interventions was identified and recommended for application in the clinical practice during the Nursing process in the stages of diagnosis, care planning and Nursing assessment. The aforementioned, in order to facilitate and promote Nursing care with greater specificity and quality for this group of patients, in addition to contributing with new knowledge about the care of cancer patients.

As limitations, the study did not use hypothesis tests to develop the proposed diagnoses, being carried out through inference with agreement between the researchers. In addition, the sample size may not be sufficient for data reliability; therefore, it is recommended to conduct studies with a larger sample size in order to extrapolate the findings of this article.

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