RESEARCH

Diagnósticos de enfermagem do domínio eliminação e troca identificados em pacientes em pós-operatório

Nursing diagnoses of disposal area and exchange in patients identified in postoperative period

Diagnósticos de enfermería del dominio eliminación y cambio identificados en pacientes en puestoperatorio

Objective: To characterize the nursing diagnoses domain Disposal and Exchange of taxonomy NANDA-I in patients in the postoperative period at a university hospital in the city of Natal-RN. Method: This was a descriptive, cross-sectional, whose sample consisted of 80 patients. Data collection occurred in November and December 2012, by history, physical examination and application on a form prescribed based the domains of NANDA-I Taxonomy. Approved by the Ethics Committee and Research CAAE 07614812.6.0000.5537. Results: The diagnoses were identified: dysfunctional gastrointestinal motility (55.8%), Constipation (20.9%) and (23.3%) had both diagnoses. Conclusion: Thus, it is important that nurses adopt measures relating to resolving Disposal and Exchange domain for patients in the postoperative period in order to provide adequate assistance. Descriptors: Nursing diagnosis, Postoperative period, Gastrointestinal motility, Constipation.

RESUMEN

Objetivo: Caracterizar los diagnósticos de enfermería del dominio Eliminación y Troca, de la taxonomía NANDA-I en pacientes en el periodo pós-operatorio internados en un hospital universitario, localizado en el municipio de Natal-RN. Método: Se realizó un estudio descriptivo, de tipo transversal, cuya muestra estuvo constituida por 80 pacientes. A coleta de dados ocorreu em novembro e dezembro de 2012, por meio de anamnese, exame físico e aplicação de um formulário elaborado com base nos domínios da Taxonomia da NANDA-I. Aprovado pelo Comitê de Ética e Pesquisa CAAE 07614812.6.0000.5537. Resultados: Los diagnósticos identificados fueron: Motilidad gastrointestinal disfuncional (55,8%), Constipación (20,9%) y (23,3%) presentaron los dos diagnósticos. Conclusión: De esta forma, es importante que los enfermeros adopten intervenciones resolutivas referentes ao dominio Eliminación y Troca para los pacientes en pós-operatório de manera a proporcionar una asistencia adecuada. Descriptores: Diagnóstico de enfermagem, Período pós-operatório, Motilidad gastrointestinal, Constipación intestinal.

ABSTRACT

Objective: To characterize the nursing diagnoses domain Disposal and Exchange of taxonomy NANDA-I in patients in the postoperative period at a university hospital in the city of Natal-RN. Method: This was a descriptive, cross-sectional, whose sample consisted of 80 patients. Data collection occurred in November and December 2012, by history, physical examination and application on a form prescribed based the domains of NANDA-I Taxonomy. Approved by the Ethics Committee and Research CAAE 07614812.6.0000.5537. Results: The diagnoses were identified: dysfunctional gastrointestinal motility (55.8%), Constipation (20.9%) and (23.3%) had both diagnoses. Conclusion: Thus, it is important that nurses adopt measures relating to resolving Disposal and Exchange domain for patients in the postoperative period in order to provide adequate assistance. Descriptors: Nursing diagnosis, Postoperative period, Gastrointestinal motility, Constipation.

RESUMO

Objetivo: Caracterizar os diagnósticos de enfermagem do domínio Eliminacão e Troca, da taxonomia NANDA-I em pacientes no período pós-operatório internados em um hospital universitário, localizado no município de Natal-RN. Método: Tratou-se de um estudo descritivo, do tipo transversal, cuja amostra foi constituída por 80 pacientes. A coleta de dados ocorreu em novembro e dezembro de 2012, por meio de anamnese, exame físico e aplicação de um formulário elaborado com base nos domínios da Taxonomia da NANDA-I. Aprovado pelo Comitê de Ética e Pesquisa CAAE 07614812.6.0000.5537. Resultados: Os diagnósticos identificados foram: Motilidade gastrointestinal disfuncional (55,8%), Constipação (20,9%) e (23,3%) apresentaram os dois diagnósticos. Conclusão: Dessa forma, é importante que os enfermeiros adotem intervenções resolutivas referentes ao domínio Eliminacão e Troca para os pacientes em pós-operatório de maneira a proporcionar uma assistência adequada. Descritores: Diagnóstico de enfermagem, Período pós-operatório, Motilidade gastrointestinal, Constipação intestinal.
The postoperative period is considered a decisive stage in the recovery of the patient’s health, and therefore requires effective assistance by the health team, with emphasis on nursing in perspective to be present longer in assistance during this period. Thus, when considering the importance of the organization of care for safe and effective recovery, emphasized the role of systematization of nursing care.¹

The intestinal elimination is a function of relevance, because their absence may cause gastrointestinal complications such as constipation, disease involving decreased stool frequency, increased stool consistency and difficulty of disposal of feces. Thus the patient may experience discomfort, abdominal distension, obstruction and even perforation of the intestine.² ³ In particular patients in the postoperative period due to the use of opioid analgesics, decreased oral intake and bowel trauma during surgery that can inhibit bowel movement. Therefore, nursing should focus on conducting operations in accordance with the problems encountered thus should encourage early ambulation, oral intake promote progressive and administer prescribed emollient possible.¹

In this sense the Systematization of Nursing Care (SNC) was placed as a possibility to provide an identity to nursing. The SNC can be understood as a way of carrying out the planned assistive care to the patient.⁴ The nursing process (PE) is inserted into the SNC as a methodological instrument consisting of the following interrelated steps: data collection; Nursing Diagnosis (ND), planning, prescription of nursing and assessment.⁴ ⁵

The operationalization of SNC, thus proposes to watch human beings by means of specific actions of promotion, recovery and rehabilitation of the health of the individual, the family and the community and prevention of diseases. In addition, involves a set of systematized actions and interrelated, which make it possible to apply the scientific method in health care practice, relate the health problem, manifested the intervention of nursing and the nursing assistance results produced in the change of State of patient’s health.⁶

For that, the taxonomies as nursing diagnoses from NANDA-I⁷, the Nursing Intervention Classification (NIC)⁸ and the Nursing Outcomes Classification (NOC).⁹ Such classifications allow to demonstrate the range of interventions consistent with the nursing practice and guide the evaluation of interventions implemented. These ratings also enable standardization of language and favor the development of computerized information systems, data storage uniformed and evaluate the effectiveness of nursing actions.⁶

The taxonomy (2013) NANDA-I is composed of 13 domains, 47 classes 217 and diagnostics, with emphasis in this study for the domain 3, disposal and return the set to the secretion and excretion of waste products from the body, consisting of 4 classes and 17 diagnoses.⁷
Due to the significant presence of at-risk patients presenting postoperative clinical manifestations present in this domain, as verified in previous studies\(^{13,15-17,18,20}\), it becomes necessary to describe them and, thereby, perhaps, contribute to a more focused nursing care and integral to the patient in postoperative period.

Therefore, the objective of this study was to characterise the nursing diagnoses, the domain and Exchange, Elimination of the NANDA Taxonomy-I in postoperative patients admitted to a teaching Hospital in Natal-RN/Brazil.

**METHOD**

It is a descriptive, transversal type study, conducted in a teaching hospital, reference in surgeries in the State of Rio Grande do Norte, located in the municipality of Christmas.

The population was composed of postoperative patients admitted to clinical-surgical units and, therefore, the sample consisted of 80 patients, calculated in the following formula: \(N=(Z_\alpha^2 \cdot P \cdot Q)/E^2\), where \(N\) = sample size, \(Z_\alpha\) = the confidence level, \(P\) = prevalence of patients seen in clinical-surgical units, \(Q\) = complement of prevalence (1- \(P\)), \(E\) = the sample error. The level of trust established was 95%, whereas the sampling error was 5%. Sampling followed consecutively, so that individuals in the sample were selected, sequentially, to be considered the presence of these patients in inpatient units at the same time of data collection.

The inclusion criteria used in the selection were: be hospitalized in surgical clinic units referred to hospital; be in postoperative period; age greater than or equal to 18 years; present physical and emotional conditions to answer the questions and be subjected to the physical examination. By contrast, patients who had emergency situations in the course of data collection were excluded from the sample. It should be noted the implementation of the Mini Mental State Examination (MMSE) to evaluate cognitive ability of participants, which varies in scores according to the level of education; in this way the patients included obtained the following scores: > 15 (if illiterate); > 22 (from 1 to 11 years of study) and > 27 (if study time over 11 years). With regard to emotional conditions, patients who felt and mentioned being emotionally capable of realizing it at the time of data collection, were those included in the search.

The data were collected in a time span of two months-November to December of the year of 2012. After being provided the necessary explanations about the study and following authorization and signature of informed consent, data collection was performed by means of anamnesis and physical examination, by applying a screenplay based on the fields of Taxonomy NANDA-I (2013), with emphasis on disposal and return.
Then, the data collected were organized into a database to record demographic information, nursing diagnoses, the defining characteristics and related factors.

For inference of nursing diagnoses and their defining characteristics and related factors, we used the Gordon diagnostic reasoning process, which calls for the collection of information; interpretation of information, in which they were observed and identified the needs of the patient; grouping of information and finally, the name of the grouping, i.e. the formulation of nursing diagnosis. Descriptive statistical analysis was employed, with obtaining frequencies, averages, standard deviation and confidence intervals, in addition to applying the Kolmogorov-Smirnov test to determine the normality of the distribution. The data were presented in tables.

It should be noted that, prior to the start of data collection, this investigation has obtained approval by the ethics and Research Committee of the Universidade Federal do Rio Grande do Norte under opinion number 121.028 in 10/26/2012 and CAAE 07614812.6.0000.5537, in accordance with the provisions of resolution nº 196/96 updated by resolution No. 466 December 2012 National Health Council.

Of the total of 80 patients interviewed, 43 submitted domain Diagnostics disposal and return of these 65,1% corresponded to the male. Most (81,4%) declared live with companion and 51,2% were from Natal-RN. With respect to religion, 74,4% considered himself a practitioner. The most prevalent type of surgery according to the surgical site was abdominal (65,1%) followed by (14%) thoracic head/neck (11,6%) and vascular (9,3%).

The average age consisted of 47,63 (±16,474) years and 6.03 (± 4,869) years of study. Family income in minimum wages earned median of two salaries (1,0-3,0). Therefore, it is formidable to explain that as household income variable presents an asymmetric distribution, was the median value. The other variables showed a symmetric distribution (p>0,05).

In table 1 below, are listed the sociodemographic characteristics and clinics of the patients participating in the study.

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Socio-demographic and clinical characteristics of patients in postoperative situation. Christmas, 2014.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
<td>N</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>28</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
</tr>
<tr>
<td>With partner</td>
<td>35</td>
</tr>
<tr>
<td>Without partner</td>
<td>8</td>
</tr>
</tbody>
</table>
From the collection of data, identified two Domain Diagnostics elimination and Exchange. The ND dysfunctional gastrointestinal Motility was the most frequent (55.8%) patients; 23.3% showed the two diagnoses, dysfunctional gastrointestinal Motility and constipation; and in 24% of customers was present only the Constipation. Such results can be observed in table 2.

**TABLE 2** - Nursing diagnoses included in Elimination and Exchange domain identified in postoperative patients. Christmas, 2014.

<table>
<thead>
<tr>
<th>Nursing diagnoses</th>
<th>N</th>
<th>%</th>
<th>IC (95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dysfunctional gastrointestinal motility</td>
<td>24</td>
<td>55.8</td>
<td>40.0-71.0</td>
</tr>
<tr>
<td>Dysfunctional gastrointestinal motility +</td>
<td>10</td>
<td>23.3</td>
<td>10.0-36.0</td>
</tr>
<tr>
<td>Constipation</td>
<td>09</td>
<td>20.9</td>
<td>0.8-34.0</td>
</tr>
</tbody>
</table>

CI - Confidence interval.

Tables 3 and 4 following express the defining characteristics and related factors that led the development of the above in table 2 reported.

**TABLE 3** - Defining characteristics identified in postoperative patients. Christmas, 2014.

<table>
<thead>
<tr>
<th>Defining characteristics</th>
<th>N</th>
<th>%</th>
<th>IC (95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypoactive bowel sounds</td>
<td>24</td>
<td>55.8</td>
<td>40.0-71.0</td>
</tr>
<tr>
<td>Hyperactive bowel sounds</td>
<td>10</td>
<td>23.3</td>
<td>10.0-36.0</td>
</tr>
<tr>
<td>Effort to evacuate</td>
<td>7</td>
<td>16.3</td>
<td>5.0-28.0</td>
</tr>
<tr>
<td>Hard stools and formed</td>
<td>6</td>
<td>14.0</td>
<td>3.0-25.0</td>
</tr>
<tr>
<td>Decreased frequency</td>
<td>5</td>
<td>11.6</td>
<td>2.0-22.0</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>3</td>
<td>7.0</td>
<td>-1.0-15.0</td>
</tr>
<tr>
<td>Pain on evacuation</td>
<td>2</td>
<td>4.7</td>
<td>-2.0-11.0</td>
</tr>
<tr>
<td>Vomit</td>
<td>1</td>
<td>2.3</td>
<td>-2.0-7.0</td>
</tr>
</tbody>
</table>

CI - Confidence interval.
TABLE 4 - Related Factors identified in postoperative patients. Christmas, 2014.

<table>
<thead>
<tr>
<th>Related factors</th>
<th>N</th>
<th>%</th>
<th>IC(95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgery</td>
<td>43</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>Sedentary lifestyle</td>
<td>26</td>
<td>60,5</td>
<td>45,0-76,0</td>
</tr>
<tr>
<td>Anxiety</td>
<td>10</td>
<td>23,3</td>
<td>10,0-36,0</td>
</tr>
<tr>
<td>Non-steroidal anti-inflammatory agents</td>
<td>7</td>
<td>16,3</td>
<td>5,0-28,0</td>
</tr>
</tbody>
</table>

CI: Confidence interval.

The sociodemographic data described in this study were similar to those identified in other studies of postoperative patients with similar socio-demographic characteristics, particularly with respect to the average age that consisted of 47,46 years. In an exploratory research that addressed the comparison between nursing diagnoses in adults and elderly hospitalized during the postoperative period, the predominant age group in adults was between 40 and 49 years.12

Another prospective study that evaluates the constipation after hysterectomy, the average age of the participants was 46,6 years, consonant with the found in subject of this research.13

Apart from the association with the rent, schooling influence treatment adherence, study that evaluated these socioeconomic aspects, argues that individuals with greater knowledge about the disease has a higher treatment adherence. Even comments that low income is related to low schooling, allying itself to limited knowledge about the disease, which can contribute significantly in the accession.14

Besides, the low educational level identified in the participants can, according to a similar survey, compromising the postoperative recovery due to the difficulty of understanding the guidelines transmitted by health professionals. That way, should be considered and evaluated during the planning of nursing interventions, the degree of education of subject.12

The ND identified in this study are consistent with those found in postoperative patients of similar studies. Worth pointing out that although 10 patients present two of dysfunctional gastrointestinal Motility, and Constipation, the same will be discussed separately. Will be taken into consideration the total number of patients who presented each of the diagnoses.

Second was observed, the dysfunctional gastrointestinal Motility was the most prevalent in 34 subjects of the sample researched and, as is pointed out by other studies, this diagnosis is complex and multifactorial. This finding is due to the fact that the regulation of motility occurs through a complex interplay between stimulus and feedback and get involved, so a large number of hormones and neuroendocrine peptides. In this way, is confirmed by other studies that abdominal surgeries, electrolyte imbalances, and pre-existing Coexisting patients' age can contribute to the onset of intestinal dysfunction and thus appear as variables that could interfere with the inference of this nursing diagnosis.15

In the study well prepared, abdominal surgeries were identified in 65,1% of patients. A clinical research that used an experimental project to compare different methods to
stimulate the return of gastrointestinal function after abdominal surgery, found that patients who undergo this type of surgery have reduced gastrointestinal peristalsis due to surgical manipulation of the bowel, in addition to the administration of opioids after.\textsuperscript{16}

Accordingly, to recover the bowel after the surgery is considered problematic, because the stomach and jejunum resumes normal physiological mobility 12 to 24 hours after surgery, while on the colon, it may take between 48 and 72 hours. Moreover, as findings of a systematic review, the fear of pain and dirt in bed seen in some patients in the postoperative period may contribute decisively to the change in bowel activity.\textsuperscript{17}

Concerning the ND Constipation manifested in 19 participants, research indicates high prevalence in hospitals and relate this with difficulty, especially with impaired quality of life of patients. It is a common condition in the postoperative period due to the delay in the recovery of motility patterns and intestinal contractility and results in the accumulation of intestinal flatus and faeces which in turn, are not directed to the right. For these reasons, may interfere with elimination of important metabolites, and retain pathogenic microorganisms and thus increase the risk of complications in the postoperative period and prolong hospitalization further.\textsuperscript{18-19}

Such a condition can be understood as less than three bowel movements per week or incomplete bowel movements, during which there is difficulty or effort in at least one quarter of the time. In a study that evaluates the constipation after the surgical procedure, this diagnosis was described as a frequent problem. The findings suggest that there are changes after intestinal surgery and are related mainly to depressed or changes in rectum.\textsuperscript{13}

It is noted a high presence of post-operative constipation, of cause still unclear. In these cases, it is considered the influence of nerve injuries during the surgical procedure and with significant consequences on quality of life and wellbeing of patients.\textsuperscript{20}

Research that has assessed the first few days after surgery related this illness the need of use of painkillers, incorporation of modifications in the diet, the detention and the lack of familiarity with the hospital environment and assistance procedures.\textsuperscript{18}

One of the defining characteristics identified in the study, hypoactive bowel sounds, was the more established, present in 55,8\% of participants. It is known that the bowel sounds are sounds for the Peristaltic movements responsible for movement of food bolus through the gastrointestinal tract. In this way, these noises is considered an under active clinical evidence crucial to the proof of paralytic ileus and constipation in bedridden patients.\textsuperscript{21}

Defining characteristic as hyperactive bowel Sound was present in 23,3\% of the sample of the study, is defined by the frequency of more than 35 per minute.\textsuperscript{22} A critical review of the auscultation bowel sounds, reveals that the extreme increase of bowel sounds can be potentially caused by intestinal obstruction, gastroenteritis, diarrhea, inflammatory use of laxatives and gastrointestinal bleeding. It’s called attention to the bowel obstruction, which may be the cause of hyperactive or hypoactive bowel sounds, since it depends on the commitment of intestinal motility, if will prevent the sounds being produced or increase peristalsis as an attempt to overcome the obstruction.\textsuperscript{23} The defining characteristic hard stools and formed were present in 14\% of the subjects of the research. Is a manifestation of
the Constipation that arises under the influence of physiological factors, pharmacological, psychological, mechanical and functional.\textsuperscript{7}

As expected, the surgery performed as related factor (RF) in all study participants, and about it, study says that in addition to the insufficient intake of water and fiber, fewer meals, chronic diseases and use of medicines, the traumas arising from surgical procedures can lead to the appearance of the Constipation.\textsuperscript{12} FR sedentary lifestyle, also presented a significant frequency (60.5%). It is important to investigate the lifestyle and physical activity profile of the patients, since sedentariness is a significant factor for the presence of constipation, study demonstrates that patients with little activity or physical inactivity, presents a greater chance of developing problems related to the gastrointestinal tract, and has an important relationship with constipation, since the contractility of the colon is greater when the person is on the move.\textsuperscript{24}

The findings of several studies\textsuperscript{15,17,25-6} corroborate with the results of the present study according to the related factor. Point out the influence of factors intrinsic to the hospitalization and surgical procedures in the emergence of irregularities, exemplified by the fast oral gastrointestinal in preparation for procedures, the presence of restriction on water intake, immobilization in bed, stress, pharmacological interventions based on medicines constipantes, modulators of the inflammatory response, adverse responses to the use of opioids (vomiting and nausea) and dehydration. 16.3% of participants of the current study used non-steroidal anti-inflammatory Agents steroids.

The RF Anxiety was perceived in 23.3% of patients. In short, the post-op promotes psychological and physical disorders, such as fear and anxiety about complications, and thus cause changes in intestinal motility and nausea. In order to reduce fear and anxiety, patients need information about the preparation, the actual procedure and the post-operative recovery. According to a systematic review, the patient is considered essential to avoid nausea and vomiting for a satisfactory surgical recovery. Thus, the nursing care must be effective in order to keep the patient well informed and participant of decisions regarding your health. Nurses can be crucial to the extent that use of availability, understanding and education in health as a goal of making the postoperative recovery less scary.\textsuperscript{17}

CONCLUSION

The postoperative period, therefore, constitutes a period that brings physical and mental instability to the patient, so the nursing care is fundamental to their recovery and rehabilitation, mainly, when systematized, providing integrated and individual care.
The findings of this study show that patients in postoperative situation are mostly likely to present problems identified with regard to disposal and return, which alters significantly the recovery and quality of life of the patient.

We highlight the important role of nursing, to demonstrate caution, information about the preparation, the procedure and the post-operative period, in addition to always keep the patient informed in order to provide their participation in decisions regarding their health.

Thus, with the identification of diagnosis, nursing care plans can be traced in an attempt to resolve such, which will bring benefits to patients, assisting them with quality and holistically, since it is a key moment of adaptations and important modifications in lifestyle.

However, one cannot fail to mention the limitations of this study, in which occurred the difficulty of finding articles in national databases that link and show the significance of the presence of these to patients in postoperative period. In this manner, it is suggested to conduct studies that evaluate the development potential of the domain, Exchange and disposal and analysis of the incidence and prevalence of these to patients not only after surgical procedures, but also in General.

Due to the significant presence of those in at-risk patients postoperatively, as noted, we recommend also a greater deepening regarding the identification of nursing interventions based on taxonomies Resolutive required during the nursing process, to improve the State of health and quality of life of the patient, as well as reduce the time of hospitalization, in order to provide appropriate assistance.

REFERENCES

Nursing diagnoses of...


Contact of the corresponding author:
Jéssica Naiara de Medeiros Araújo
Rua Dom Joaquim de Almeida, 2076 apt° 202 / Lagoa Nova
CEP: 59056-140 - Natal - RN
E-mail: jessicanoiara_rn@hotmail.com.