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# DIAGNÓSTICO DE ENFERMAGEM NA RECUPERAÇÃO CIRÚRGICA RETARDADA EM IDOSOS: ESTUDO DE CASOS MÚLTIPLOS

NURSING DIAGNOSIS ON DELAYED SURGICAL RECOVERY IN ELDERLY PEOPLE: MULTIPLE CASE STUDY

# DIAGNÓSTICO DE ENFERMERÍA EN LA RECUPERACIÓN QUIRÚRGICA RETARDADA EN LOS ANCIANOS: UN ESTUDIO DE CASOS MÚLTIPLES

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#### **RESUMO**

**Objetivo:** Descrever as características definidoras e fatores relacionados ao diagnóstico de enfermagem na recuperação cirúrgica retardada em idosos pós-cirúrgicos de gastrectomia e colectomia. **Método:** Estudo descritivo de casos múltiplos, realizado em dois hospitais públicos do Rio de Janeiro, Brasil, de agosto/2014 a abril/2015. Os sujeitos do estudo foram 10 idosos, acompanhados por 60 dias, por meio de cinco entrevistas sobre variáveis do diagnóstico. A análise descritiva apresentou os cálculos de média, desvio padrão e percentual; e para análise e síntese dos dados diagnósticos adotou-se o modelo de Risner. **Resultados:** os pacientes foram, majoritariamente, do sexo masculino (70%); média de idade 70,1 ± 6,8; dias pós-operatório 63,8 ± 42,8. Os fatores relacionados aos casos foram: *procedimento cirúrgico extenso* (100%); *dor* (80%); e *infecção pós-operatória no local da incisão* (50%). Esses se ajustaram às características definidoras: *adiamento ao retorno às atividades de trabalho/emprego* (100%); *evidência de interrupção na cicatrização da área cirúrgica* (70%); *dificuldade para movimentar-se* (50%); *ajuda no autocuidado* (50%), ratificado o retardo na recuperação cirúrgica. **Conclusão:** Recomenda-se investigação precoce em idosos com risco de desenvolver o diagnóstico para o estabelecimento de ações assertivas de enfermagem.

Descritores: Idoso; Enfermagem perioperatória; Diagnóstico de enfermagem

## **ABSTRACT**

**Objective:** To describe the defining characteristics and factors related to nursing diagnosis on delayed surgical recovery in elderly people, post-surgical of gastrectomy and colectomy. **Method:** A descriptive study of multiple cases, carried out in two public hospitals in Rio de Janeiro, Brazil, from August/2014 to April/2015. The study subjects were 10 elderly people, followed up for 60 days, through five interviews on diagnostic variables. The descriptive analysis presented the mean, standard deviation and percentage calculations; and for the analysis and synthesis of the diagnostic data, the Risner's model was adopted. **Results:** Patients were predominantly males (70%), means age 70.1 ± 6.8, postoperative 63.8 ± 42.8 days. The factors related to the cases were: *extensive surgical procedure* (100%), *pain* (80%), *postoperative infection at the incision site* (50%). These ones conformed to the defining characteristic: *postponed return at work/job activities* (100%), *evidence of interruption in the surgical area healing* (70%), *difficult to move* (50%), *help in self-care* (50%) ratified the retardment in surgical recovery. **Conclusion:** we recommend early research in elderly people with possibility/risk of developing diagnostic for establishing assertive nursing actions.

Descriptors: Elderly people; Perioperative nursing; Nursing diagnosis

# **RESUMEN**

**Objetivo:** Describir los factores relacionados y características que definen el diagnóstico de enfermería recuperación quirúrgica retardada en ancianos a lo largo post-quirúrgico de la gastrectomía y la colectomía. **Método:** Estudio descriptivo de múltiples casos, llevado a cabo en dos hospitales públicos del Rio de Janeiro, Brasil, de agosto/2014 hasta abril/2015. Los sujetos participantes del estudio fueron 10 ancianos, acompañados por 60 días, en cinco entrevistas sobre variables del diagnóstico. El análisis descriptivo mostró los cálculos de la media, desviación estándar y el porcentaje; y el análisis y síntesis de los datos de diagnóstico, adoptaron el modelo Risner. **Resultados:** Los pacientes eran varones (70%), edad 70,1 ± 6,8, postoperatorio 63.8 ± 42.8 días. Los factores relacionados: *procedimiento quirúrgico amplio* (100%); *dolor* (80%); *infección postoperatoria en el sitio de la incisión* (50%). Esos se ajustaron a las características definitorias: *aplazamiento al regreso al trabajo/empleo* (100%); *evidencia de interrupción de la curación de la zona quirúrgica* (70%); *dificultad de moverse* (50%); *ayuda en el autocuidado* (50%) confirman el retraso en la recuperación quirúrgica. **Conclusión:** se recomienda investigaciones precoces en ancianos con posibilidad/riesgo de desarrollar de diagnóstico para el establecimiento de acciones asertivas de enfermería.

Descriptores: Anciano; Enfermería perioperatoria; Diagnóstico de enfermería

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### **INTRODUCTION**

In Brazil, a person who is 60 years-old or older is considered an elderly person<sup>(1)</sup>. Currently, it is estimated a growth of 2% per year of the world's elderly population and, accumulation of aging, health deterioration<sup>(1-2)</sup>. In Brazil, from December 2014 to December 2015, 24% of this population was hospitalized, and in that period, more than seven surgical pathways were registered among the elderly, with 10% of surgeries of the digestive tract, attached organs and wall abdominal<sup>(1)</sup>.

It is known that the elderly population requires differentiated care, if this is not available, this can lead to prolonged bedtime or even readmissions<sup>(3)</sup>. These re-hospitalizations may occur due to complications presented in the postoperative period of the elderly people, for example: operative wound dehiscence, atelectasis and pneumonia, deep venous thrombosis, pulmonary embolism, renal function decline and hypothermia<sup>(2-4)</sup>. Cardiopulmonary complications are about 60% of mortality after emergency surgery<sup>(3-5)</sup>. These increase the costs of health, both for longer hospitalization and for delaying return to daily activities (4-5). Death is a consequence of union, as it is the cause of the failure of other organs<sup>(1)</sup>.

The patient with postoperative complications remains hospitalized for longer than expected. This may indicate that the same presents the nursing diagnosis on delayed surgical recovery (RCR), which can be defined by NANDA-International (NANDA-I) as an extension of the number of postoperative days required to initiate and to perform activities that maintain the life, health and well-being. This diagnosis has nine defining characteristics and six related factors<sup>(6)</sup>.

In an observational study with 72 patients followed up after the fifth postoperative day, performed at a large university hospital in the state of Rio de Janeiro, it was proposed to identify the occurrence of the nursing diagnosis on delayed surgical recovery between adults and the elderly people<sup>(3)</sup>. There was a relative increase in the rate of diagnosis in the elderly, which was 77.1%, compared to adults (75.7%), but with no significant difference  $(0.421)^{(3)}$ . The most frequent defining characteristics in elderly patients were: difficulty in moving (0.045), perception that more time is needed for recovery and for help to complete self-care (p <0.0001)<sup>(3)</sup>.

In another similar study, the incidence of nursing diagnosis on delayed surgical recovery among adults and the elderly was 36.67%, with a prevalence of postoperative complications related to surgeries of the digestive tract in 30.6% of cases<sup>(4)</sup>. In this context, it is questioned: How are the factors related and defining characteristics of nursing diagnosis on delayed surgical recovery related in elderly patients submitted to gastrectomy and colectomy surgeries?

Understanding how the nursing diagnosis occurs in the elderly in large surgeries, with a history of greater risk for complications and the occurrence of the diagnosis, contributes to their identification by the nurses in clinical practice, thus facilitating critical thinking and diagnostic reasoning. The search for their early identification contributes to the reduction of cases of delayed surgical recovery, through preventive nursing actions. Furthermore, studies that detail the cases of delayed surgical recovery, as proposed in this study, have not yet been identified in the literature.

Therefore, we outlined as objective: To describe the defining characteristics and factors related to nursing diagnosis on delayed surgical recovery in elderly people post-surgical of gastrectomy and colectomy.

### **METHOD**

It is a descriptive study of multiple cases<sup>(7)</sup> where eight defining characteristics and six factors related to the diagnosis of nursing on delayed surgical recovery were described in the postoperative period of 10 (ten) participants who presented this qualification, during hospital stay, of a total of 83 subjects submitted to gastrectomy or colectomy, from August 2014 to April 2015, in two teaching hospitals of the federal public network in the state of Rio de Janeiro/Brazil. It is noteworthy that both scenarios presented similar characteristics regarding the nursing process used. The remaining participants resulted in ten refusals to participate in the study, two readmissions, four complications before the surgical procedure, four patients who died before or after surgery, and ten subjects were hospitalized for diagnostic investigation. The other 43 subjects were discharged on schedule, characterizing the absence of the diagnosis of delayed surgical recovery.

Data were collected in person, while the patients were hospitalized in their respective

hospitals. After discharge, the data were collected at the outpatient clinic, together with the return for review and follow-up of the surgical recovery. The collection comprised the following phases:

Capture of the subjects, with identification of the eligible sample: the active search, performed twice a week in each scenario, at which time the patients in the pre-operative for colectomy and gastrectomy surgeries criteria, who met the inclusion criteria, were identified in the medical record book. The medical records were used to consult the patient's contact data, as well as the date of hospitalization and date of surgery.

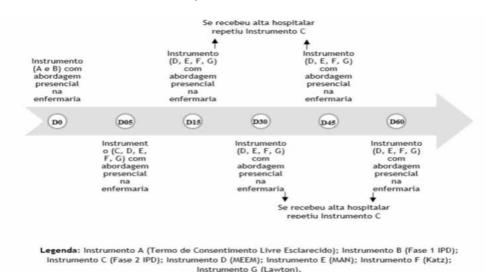
Call for research: the aspects involved in the follow-up of this study were clarified for patients and their families at the preoperative time (D0). For those who agreed to participate in the study, the Terms of Free and Informed Consent (Instrument A) were delivered.

Application of the data collection instruments: at the time D0, the Data Production Instrument / IPD (Instrument B) was applied, which made it possible to characterize the participants regarding sociodemographic and clinical variables such as: age, sex, surgical procedure performed, date of hospitalization, date of the surgical procedure, date of hospital discharge and presence of comorbidities (Diabetes, Dyslipidemia, Neoplasia, Systemic Hypertension and Anemia).

The instruments listed below were applied at moments D05, D15, D30, D45, D60: 1) Instrument C - extraction of information on study analysis variables, such as presence or absence of defining characteristics and factors related to nursing diagnosis delayed surgical recovery; 2) Instrument D - Cognitive evaluation scale by the Mini Mental State Examination - MMSE<sup>(8)</sup>, which had its psychometric evaluation in Brazil in 2006, where it was highlighted by the authors that the schooling should be considered for the adoption of the appropriate cutoff point<sup>(8)</sup>; 3) Instrument E Nutritional assessment through the Mini Nutritional Status Assessment - MAN<sup>(9)</sup>, validated in 1998 in Brazil<sup>(9)</sup>; 4) Instrument F - Assessment of activities of daily living - KATZ(10), adapted transculturally in Brazil in 2008, proving equivalence with the original version<sup>(10)</sup>; 5) Instrument G - Assessment scale of instrumental activities of daily living of LAWTON(11), whose reliability was analyzed in Brazil in 2008, and presented satisfactory psychometric indexes<sup>(11)</sup>.

The data of the scales have relevance, since they can help in the evaluation of the defining characteristics and factors related to the diagnosis in question. The flowchart of data collection is shown in Figure 1.

Figure 1 - Flowchart of data collection. Niterói, 2015.



Source: Research date.

Inclusion criteria: participants who are older than 60 years old, submitted to gastrectomy or colectomy, with delayed surgical recovery during the postoperative period. The choice of these surgeries is based on their degree of complexity, extensive and

painful recovery period, especially in the elderly people<sup>(12)</sup>. As exclusion criteria: subjects who did not complete the five interviews at regular intervals of days (D): D05, D15, D30, D45 and D60.

For the analysis of the information, a database was constructed with the variables under study. The related factors and defining characteristics of nursing diagnoses on delayed surgical recovery, as well as the scales of MAN, KATZ and LAWTON were evaluated over the course of 60 days, i.e., longitudinally. The variables gender, age, type of surgery, postoperative davs. hospitalization comorbidities and MEEN scale were evaluated transversally. The descriptive analysis presented the mean, standard deviation and percentage calculations.

For the identification of the nursing diagnoses, the clinical reasoning process (analysis, judgment and data synthesis) was used according to Risner<sup>(13)</sup>. Analysis is understood as the

separation of the material into parts and the critical examination of them, which defines their essential components and their relations, being divided into two parts: categorization of the data and identification of divergent data or gaps.

Synthesis is the combination of parts or elements into a single entity, divided into: Clustering of evidence into standards; Comparison of standards with theories, models. norms and concepts; Identification possibilities; and Proposition of etiological causes. Establishing the diagnoses themselves is the last stage of this process, designed to name and validate the findings<sup>(13)</sup>. Figure 2 shows the variables collected and analyzed that aided in the diagnostic decision<sup>(5)</sup>.

Figure 2- Clinical evidence related to defining characteristics and related factors. Niterói, 2015.

Defining Characteristics	Clinical Evidence				
CD1: Postpone return to	Days of hospitalization, longer postoperative recovery time than				
work/employment activities	recommended for surgery.				
CD2: Difficulty in moving around	Need help to sit, to get out of bed, to walk and to go to the bathroom.				
CD3: Need help to complete self-care	Lawton Index.				
CD4: Fatigue	Prolonged periods of bed rest and excessive fatigue when walking.				
CD5: Perception that more time is needed for recovery	A report of the sensation or feeling of the patient to have their functional capacity diminished and/or present physiological changes that make difficult the accomplishment of the daily activities known as activities of daily life (ADLs).				
CD6: Evidence of interruption in healing of the surgical area	Dehiscence of operative wound, phlogistic signs (erythema, flushing, heat and edema), presence of exudate and/or drainage 48/72 hours postoperatively.				
CD7: Loss of appetite with nausea	Decreased acceptance of diet, less than 50%, report of gastric discomfort or esophageal reflux; use of antiemetic.				
CD8: Loss of appetite without nausea	Dissatisfaction with hospital feeding, acceptance of diet less than 50% and decrease in the sensation of hunger or desire to eat.				
Related Factors	Clinical Evidence				
FR1: Pain	Visual Analog Scale (EVA).				
FR2: Postoperative feeling	Postoperative expectations such as feelings of anxiety, fear, worry, insecurity, guilt, loss, depression, decreased self-esteem, among others that, if they are presented by the surgical patient, they may contribute to delayed recovery.				
FR3: Postoperative infection at incision site	Infection in a surgical site reported in the medical record, purulent exudate o drainage, presence of erythema, deep tissue separation, bacterial isolation, antibiotic use, fever and hospitalization for more than 14 days.				
FR4: Obesity	Body mass index (BMI = kg / m2)> 30 kg / m2				
FR5: Extensive surgical procedure	Large surgery: abdominal, thoracic, vascular, thoracic spine with instrumentation, hip arthroplasty and oncological surgeries.				
FR6: Prolonged surgical procedure	Increased surgical procedure time, i.e., higher than the average described in the literature.				

Source: Santana et al..3

The study was approved in 2013 by the Research Ethics Committee of the Faculty of Medicine of the Antônio Pedro University Hospital (protocol number 221.674) and the Federal Hospital of State Employees (protocol

number 000499), thus following the Recommendations of Resolution 466/12 of the National Health Council (CNS)<sup>(14)</sup>.

#### **RESULTS AND DISCUSSION**

Table 1 presents the clinical characteristics of the elderly patients with nursing diagnosis on delayed surgical recovery. The categorical

variables were described by absolute frequency and percentage and the continuous variables by mean and standard deviation.

Table 1 - Presentation of clinical variables of elderly patients with nursing diagnosis on delayed surgical recovery (n = 10). Niterói-RJ, 2015.

Variable	(n=10)	p-value	
Male gender	7,0 (70%)		
Age	70,1 ± 6,8 0,40		
Preoperative time of hospitalization (days)	4,0 (2,0-11,7)*	0,012	
Time of postoperative hospitalization (days)	63,8 ± 42,8	0,198	
Type of surgery			
Gastrectomy	6,0 (60%)		
Colectomy	3,0 (30%)		
Laparotomy	1,0 (10%)		
Comorbities			
HAS	8,0 (80%)		
Anemia	5,0 (50%)		
Diabetes	3,0 (30%)		
Dyslipidemia	3,0 (30%)		
Cancer	2,0 (20%)		
Respiratory problems during	2.0 (20%)		
Recovery  Need for ICU admission	2,0 (20%)		
	3,0 (30%)		
Scales (record of the 5th day PO)			
MEEN – Cognitive status	20,0 (15,0 - 25,0)*	0,035	
Lawton	13,3 ± 4,1	0,979	
MAN – Nutritional status	15,8 ± 1,5	0,101	
Katz - Degree of dependency for AVD's			
G - Dependent on all	()		
Activities	8,0 (80%)		
E - Independent for all activities less one			
activities less tile	2,0 (20,0%)		

<sup>\*</sup> Variables without normal distribution that were presented by median and interquartile range

Source: Research data.

The patients were predominantly males (70%), with a mean age of  $70.1 \pm 6.8$ . The most prevalent associated diseases were: Systemic Arterial Hypertension (80%); Dyslipidemia (30%); and Diabetes Mellitus (30%). They presented a median time of preoperative hospitalization of 4.0 (2.0–11.7) days, which was significantly different in the group (p = 0.012). There was also a mean of  $63.8 \pm 42.8$  postoperative days, that is, a prolonged hospitalization.

A preliminary analysis of the evaluation scales of the patients who participated in the study was performed on the 5<sup>th</sup> postoperative day. MEEN presented a median score of 20.0, with intervals

between 15.0 and 25.0. It was considered, according to this score, that the patients had, for the most part, a moderate cognitive loss. The level of schooling was considered to score in the test result  $^{(8)}$ , since the participants' level of education was up to elementary school. It should be noted that there was a significant difference in the MMSE score in the group (p = 0.035).

The LAWTON scale had a mean score of 13.3  $\pm$  4.1, that is, the majority of these were elderly individuals with limitations to perform instrumental activities of daily living. The most preserved were administering finances, answering the telephone and making use of medicines.

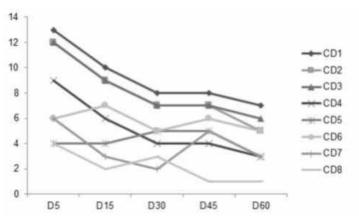
Evaluation of the KATZ scale revealed that 80% of patients had dependence for all activities. On the KATZ scale, the G index shows that an individual is highly dependent on all activities. In this study, this index remained elevated from postoperative D5 in 100% of the elderly people to D60 in the half of the study universe (50%). Index A, which represents independence in all activities, appears only in the D30 (20%), suggesting a late return to the activities that guarantee its autonomy.

A homogeneous distribution of the risk of malnutrition was observed throughout the study follow-up (50% of the cases). The MAN scale averaged 15.8  $\pm$  1.5. However, the number of

patients who presented malnutrition was considerable, especially in the first 30 days of hospitalization (50%). The normal pattern of nutrition was only identified from the 45th postoperative day (40%).

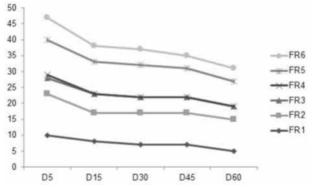
Figures 3 and 4 represent, respectively, the prevalence of defining characteristics and factors related to the diagnosis of delayed surgical recovery over the course of 60 days. The vertical axis shows the number of times that each characteristic and factor appear during the interview days (horizontal axis), represented by the internal trace of the graph.

Figure 3 - Prevalence of defining characteristics in the elderly patient with delayed surgical recovery (n = 10) over 60 days, Niterói, 2015.



**Subtitle**: CD1 – Postpone their return to work/employment activities, CD 2 - Difficulty in moving around; CD 3 - Need help to complete self-care; CD4 - Fatigue; CD5 - Perception that more time is needed for recovery; CD6-Evidence of interruption in the scar of the surgical area; CD7- Report loss of appetite with nausea; and CD8 - Reports loss of appetite without nausea. Source: Research Data.

Figure 4 - Description of the related factors in the elderly with delayed surgical recovery (n = 10) during 60 days, Niterói, 2015.



**Subtitle:** FR1- Pain, FR- 2 Postoperative feeling, FR3 - Postoperative infection at the incision site, FR4-Obesity, FR5-Extensive surgical procedure and FR6- Prolonged surgical procedure.

Table 2 was elaborated as a way to perform a global, descriptive and combined evaluation of the defining characteristics and related factors in

the elderly patients with delayed surgical recovery.



Table 2 - Prevalence of the combination of the Defining Characteristics and Related Factors of the Delayed Surgical Recovery Diagnosis, (n = 10), Niterói, 2015.

Related factors/ Defining Characteristics	Postoperative infection at the incision site	Extensive surgical procedure	Prolonged surgical procedure	Negative Post- operative Expectation	Pain
Postpone the return to activities (n=10)	5	10	6		8
Difficulty to move (n=10)	5				8
Need help to complete the self-care (n=10) Fatigue (n=08)	5			7	8
Perception that more time is needed for recovery (n=07)	5				
Evidence of interruption in healing the surgical area (n=07)	5	7	6		
Loss of appetite without nausea (n=05)	5				5
Loss of appetite with nausea (n= 4)			4		

Subtitle: CD = Defining characteristic; FR = Related factor

Source: Research data.

The variables 'Post-pone the return to work/employment', 'Difficulty to move', and 'Need help to complete self-care' were the most frequent in the proposed temporal cut. The first to arise in the postoperative period is 'difficulty to move', but self-care can be performed even with motor difficulties. However, the permanence of the motor difficulty beyond the expected one postpones the return to the activities. And this is a central feature in the concept of diagnosis, which only ceases with the recovery of mobility, perceived at the end of the 60-day follow-up.

The "Report of loss of appetite with nausea" and "Report of loss of appetite without nausea" appear less frequently. It is also observed a linear evolution of the frequency of related factors: some increase or decrease over

time. The related factors "extensive surgical procedure" and "prolonged surgical procedure" appear as the most present in the segment studied. The related factor "post-operative infection" at the incision site was more prevalent in D5. There was also a constant prevalence from D15 to D45, which decreased according to recovery, as well as the related factor "pain" was present at the beginning and decreased until the D60.

Ten patients presented at the same time the related factor "extensive surgical procedure" and the defining characteristic "postpones the return to activities" (n = 10). It is observed that the last one was prevalent with almost all related factors (pain, postoperative infection at the incision site, extensive surgical procedure and

prolonged surgical procedure) in the patients. The factor related postoperative infection at the incision site was prevalent along with 6 defining characteristics.

This described study the defining characteristics and factors related to nursing diagnosis delayed surgical recovery in elderly patients in postoperative gastrectomy and colectomy over the course of 60 days. Notably. while the frequency of the defining characteristics was oscillating over the course of the follow-up, the related factors presented a decreasing presentation from the D5 to the D45.

Regarding the defining characteristics, it was observed that those characteristics related to self-care and daily life activities of the elderly: "postpones the return to work/employment", "difficulty to move" and "needs help to complete self-care" were the most prevalent in the postoperative period of gastrectomy and colectomy of the elderly patient. That is, they impact on the need for nursing care and family support, reiterating the dependence and loss of autonomy in the elderly patient<sup>(2)</sup>.

It is also worth noting that the defining characteristic "postpones the return to work/employment activities" was present in the 10 cases studied. This data demonstrated that the subjects of the study still carried out employment activities as a source of income, so the presence of the diagnosis is an important cause of individual and social limitations.

In agreement with the results, a study showed that the elderly patients are more likely to develop the defining characteristic "difficulty to move", corroborating with the results of the present study, which identified this defining characteristic in all the elderly people<sup>(3.5)</sup>.

Regarding the physical aspects, "fatigue" was present in eight patients (n = 8) in the D5 of postoperative and its high prevalence may be related to the presence of a medical diagnosis of oncological diseases<sup>(15)</sup>, and may contribute for aggravation of the sensation of discomfort, difficulty to move and lack of appetite.

The "Evidence of interruption in healing of the surgical area" is considered to be a key feature of the diagnosis of delayed surgical recovery. As observed in the data analysis, it was more prevalent in postoperative D15 (n = 7), so its presence is characterized by delayed surgical recovery. Also, their presence may be related to nutritional alteration, presence of foreign bodies, advanced age and location of the wound<sup>(9)</sup>.

The "loss of appetite without nausea" was evidenced by dissatisfaction with hospital feeding, decreased hunger sensation and diet acceptance of less than 3 meals. Its prevalence oscillated in the follow-up of the study, but was more evident in postoperative D5 and D45 period and related to the type of surgery performed.

Regarding this result, according to the nutritional evaluation used in the study (MAN)<sup>(9)</sup>, it was observed that elderly patients have presented nutritional changes, with risk of malnutrition (n=5) and malnutrition (n=5) before surgery. This data can be considered as a strong antecedent for the emergence of nursing diagnosis on delayed surgical recovery.

There was a slight improvement in the nutritional status of the elderly patients only in the D45 of postoperative, but four patients reached a level of eutrophy, 4 elderly patients were at risk of malnutrition and two patients were still in the malnutrition range. This result is worrying, since malnutrition may contribute to alterations in the healing process<sup>(9)</sup>. The "Loss of appetite with nausea" had an expected prevalence, with a high prevalence only in D5of postoperative. At that moment, nutritional changes were present due to anesthetic effects, a fact that contributes to the delay in returning to normal functions<sup>(16)</sup>. However, nurses who work in the postoperative period should be alert to post-anesthetic nutritional complications, which may present impairment in nutritional status<sup>(17)</sup>.

The defining characteristic "perception that more recovery time is needed" presented low prevalence on the fifth postoperative day (n = 4), but increased in the sequential evaluations (D15, D30 and D45). The process of prolonging hospitalization presents as a difficulty to restore physical and mental health, which generates situational crises, both personal and family, that accompany this elderly person throughout this period, as well as socioeconomic, by the direct and indirect hospital costs to the patients' relatives and the elderly people<sup>(3-5)</sup>.

The factors "extensive surgical procedure", "negative post-operative feelings" and "pain" were the most evident during the 60 days of follow-up and decreased over time.

When the "extensive surgical procedure" is evaluated, it is observed that the large surgical size can be related to the postponement of return to work/employment activities by hospitalization or re-hospitalization time. Among the patients who presented the RCR diagnosis, 20%

maintained this related factor constant, considering their appearance from the beginning of the postoperative period.

The "pain" factor may be related to the absence or delay of recovery. However, after the surgical procedure, this complaint is expected due to functional alterations and complexity of the digestive surgeries<sup>(18)</sup>.

On the "negative postoperative feeling" factor, as the postoperative days extend, feelings of fear and worry are common, since many patients believe in hospital discharge and are fearful of a disease progression<sup>(5)</sup>.

It is also noted that although the "postoperative infection at the surgery site" was not the most prevalent factor, it was present in 60% of the elderly patients in the D15 of postoperative. Policies to prevent hospital infection are important measures to guide the work of the CCIH nurse. However, these actions cannot be disarticulated from perioperative care. The integration of the CCIH with the care nurse is very important to predict patients at risk of complications and, consequently, of delayed surgical recovery.

Another highlight of this study was the prolonged time of surgical recovery with hospitalizations exceeding 100 days. This is due to personal, institutional, and economic losses, and declares an insufficiency of the current care policy centered on the hospital and biomedical model<sup>(3,5)</sup>.

It should be noted about the profile of the sample, a majority male. Some studies report that delay in seeking health care may be an explanation; the other is the greater dependence demand for self-care involved in gender issues<sup>(19)</sup>.

An alert about the heterogeneity in the sample was the preoperative time, and there were patients with a 16-day period in this phase. There are policies to reduce perioperative hospitalization time called fast-tracking, instituted to reduce complications of hospital infection, hospital costs and greater patient satisfaction with a shorter period of social life<sup>(20)</sup>. Thus, distance education policies (telephone follow-up, SMS, videoconference), follow-up visits and pre- and postoperative outpatient clinics have been investigated<sup>(20)</sup>.

Regarding the variation in MEEN results, it is important to highlight that the lower the score, the greater the cognitive loss and the greater the dependence for self-care<sup>(8)</sup>. Therefore, there is a need for specialized nursing care, such as:

orientation to reality; caregiver support and aid; teaching: post-operative care; promotion of the exercise; nutritional support; and skin care<sup>(21,22)</sup>.

Once the related factors and defining characteristics of RCR nursing diagnosis were described, it was possible to observe a mapping that contributes to the implementation of preventive care with the patient in the preoperative and postoperative period, with the objective of promoting full recovery and avoid complications. The study's limitation is the small number of patients investigated; however, the indepth analyzes of the case studies were made possible by the homogeneity of the sample.

#### **CONCLUSION**

The detailed description of the defining characteristics and related factors of nursing diagnosis on delayed surgical recovery in elderly patients in post-surgical of gastrectomy and colectomy over 60 days indicated that pain, complexity of the surgical procedure and postoperative infection at the surgical site are etiological factors for postponing return to activities, difficulty in mobility and interruption in wound healing.

The results presented contribute to the characterization of the elderly people with a chance/risk of developing this diagnosis, contributing to the nurses' clinical performance. The study also benefits the teaching of perioperative nursing by supporting, as an educational objective of the students, to determine whether or not the patient recovers in the estimated time. Also, the presence of the diagnosis can be an indicator of perioperative management analysis.

Therefore, it is recommended continuous investigation of this diagnosis for the planning of assertive actions to prevent and to promote the surgical recovery of the elderly people.

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