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ORIGINAL ARTICLE

DIAGNÓSTICOS DE ENFERMAGEM EM PÓS-OPERATÓRIO IMEDIATO DE CIRURGIA BARIÁTRÍCA EM TERAPIA INTENSIVA

DIAGNOSTICS OF NURSING IN IMMEDIATE POSTOPERATIVE OF BARIATRIC SURGERY IN INTENSIVE CARE

DIAGNÓSTICOS DE ENFERMERÍA EN EL POSTOPERATORIO INMEDIATO DE CIRUGÍA BARIÁTRÍCA EN CUIDADOS INTENSIVOS

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RESUMO

Objetivo*:** caracterizar o perfil clínico dos pacientes em pós-operatório de cirurgia bariátrica na terapia intensiva e descrever os diagnósticos de enfermagem. ***Método*:** estudo descritivo, transversal e prospectivo, com 13 pacientes em pós-operatório de cirurgia bariátrica em hospital público e de ensino. Por meio dos Históricos de Enfermagem e os Diagnósticos de Enfermagem foram formulados de acordo com a taxonomia II da NANDA, no período de junho a agosto de 2010. Foi realizada análise quantitativa dos dados. O projeto de pesquisa foi aprovado pelo Comitê de Ètica em Pesquisa, protocolo n. 3492.—Resultados*:** 76,9%, sexo feminino, a variação de idade foi de 21 a 53 anos e a do índice de massa corpórea de 35 a 77 kg/m^2; identificados 211 diagnósticos de enfermagem, 15 categorias diagnósticas reais e sete de risco; 14 categorias obtiveram 100% de frequência. ***Conclusão:*** os diagnósticos de enfermagem permitiram a escolha de intervenções mais eficazes e direcionadas à obtenção dos resultados de enfermagem. ***Descritores*:** Obesidade Mórbida; Cirurgia Bariátrica; Diagnóstico De Enfermagem; Unidades De Terapia Intensiva; Enfermagem.

ABSTRACT

Objective: characterizing the clinical profile of patients in post-operatory of bariatric surgery in intensive care and describing the nursing diagnoses. ***Method:*** a descriptive, cross-sectional and prospective study with 13 patients in post-operatory of bariatric surgery in public and teaching hospitals. Through the history of Nursing and Nursing Diagnoses were formulated according to the NANDA Taxonomy II from June to August 2010. Quantitative data analysis was performed. The research project was approved by the Research Ethics Committee, Protocol n. 3492. ***Results:*** 76,9%, female, age range of 21-53 years old and the body mass index 35-77 kg/m^2; identified 211 nursing diagnoses, 15 real diagnostic categories and seven of risk; 14 categories obtained 100% frequency. ***Conclusion:*** nursing diagnoses allowed the choice for more effective interventions and aimed at obtaining nursing results. **Descriptors:** Morbid Obesity; Bariatric Surgery; Nursing Diagnosis; Intensive Care Units; Nursing.

RESUMEN

Objetivo: caracterizar el perfil clínico de los pacientes en el postoperatorio de la cirugía bariátrica en el cuidado intensivo y describir los diagnósticos de enfermería. ***Método:*** es un estudio descriptivo, transversal y prospectivo con 13 pacientes después de la cirugía bariátrica en los hospitales públicos y de enseñanza. A través de los Históricos de Enfermería y los Diagnósticos de Enfermería fueron hechos de acuerdo con la taxonomía II NANDA de junio a agosto de 2010. Se realizó un análisis cuantitativo de los datos. El proyecto de investigación fue aprobado por el Comité de Ética en la Investigación, Protocolo n. 3492. ***Resultados:*** el 76,9%, mujeres, con rango de edad de 21 a 53 años y el índice de masa corporal 35-77 kg/m^2; identificados 211 diagnósticos de enfermería, 15 categorías diagnósticas reales y siete de riesgo; 14 categorías obtuvieron 100% de frecuencia. ***Conclusión:*** los diagnósticos de enfermería permitieron la elección de las intervenciones más eficaces y orientadas a la obtención de los resultados de enfermería. ***Descriptores:*** La Obesidad Mórbida; La Cirugía Bariátrica; Diagnóstico De Enfermería; Unidades De Cuidados Intensivos; Enfermería.

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INTRODUCTION

Obesity is a non-communicable chronic disease of multifactorial etiology, characterized by excessive accumulation of body fat. The prevalence of individuals overweight and obese has grown immensely over the last 30 years and is currently a public health problem. The World Health Organization (WHO) considers obesity when the Body Mass Index (BMI) is greater than 30 kg/m^2.[1] This condition is a major risk for the emergence of diseases such as type II diabetes, cardiovascular disease, hypertension, stroke and certain cancers.[2]

Treatment of obesity and overweight in patients seeking alternative therapies currently includes bariatric surgery, effective intervention when there is no positive response and failure of recurrence of clinical interventions;[1-3] Among the criteria, the main indication for surgery is the BMI of 40 kg/m^2 or greater than 35 kg/m^2 associated with comorbidities.[1]

Surgical treatment promotes lower total absorption of the ingested food or multicast content and/or reduces the amount of food eaten. This gastric mechanical restriction causes the patient feeling earlier satiety.[2]

Bariatric surgery is well tolerated, but complications can occur inside and/or in the immediate postoperative period. Examples of such respiratory complications: thromboembolic events, pressure ulcer formation, dehydration, vomiting and diarrhea. Therefore, monitoring postoperatively in the intensive care unit (ICU) is indicated.[2-3]

The intensive and systematic nursing care in bariatric surgery after surgery is essential to minimizing the risk and occurrence of adverse events. The nurses use as a methodological tool the Nursing Process (NP) for the organization and implementation of care. [4]

One of the stages of the Nursing Process is the Nursing Diagnosis (DE), defined as the clinical judgment of the responses of the individual to life processes or to current health problems. This phase of the scheme of assistance allows nurses to meet human responses changed in an individual or risks to change, which contributes to the planning of individualized interventions.[5]

Thus, the relevance of the process of Nursing and the establishment of Nursing Diagnoses as an essential step to assist in a systematic way, with clinical evaluation, interpretation of individual form of answers and appropriate interventions is that it poses the question of labor: What are the most frequent Nursing Diagnoses in patients after bariatric surgery in the ICU?

OBJECTIVES

- Identifying the frequency of DE of patients in post-operative bariatric surgery in ICU.
- Describing the DE of patients in post-operative bariatric surgery in ICU, based on the Taxonomy II of NANDA I (NANDA, 2010).

METHOD

This is a cross-sectional, descriptive, prospective study developed in the ICU of the Clinical Hospital of the Faculty of Medicine of Botucatu, Paulista State University Julio de Mesquita Filho - UNESP.

The sample consisted of 13 patients who underwent bariatric surgery and were transferred to the ICU. As inclusion criteria participated in the study all patients with bariatric surgery in the period from June to August 2010 and who signed the consent form. Patients who did not have clinical conditions were asked to family the signature.

Data collection occurred from June to August 2010 in ICU teaching hospital in São Paulo. The instrument data used by the researcher was the Nursing History (HE) of the Intensive Care Unit. The HE consists of anamnesis, physical examination and laboratory tests. The researcher applied the instrument after evaluating the patients admitted to the ICU from the operating room in the immediate postoperative period, and enclosing it to the chart. The collected data were the basis for the formulation of nursing diagnoses, according to taxonomy NANDA-I (North American Nursing Diagnosis Association).[6]

The appointment of diagnostic categories and its related factors (RF) and/or risk (FRI) and defining characteristics (DC) has been validated by the researcher and author for each patient, through cross-mapping between formulated DE and taxonomy. The project was submitted to the Ethics Committee and received the assent CAAE No. 3492-2010.

RESULTS

Of the 13 patients undergoing bariatric surgery ten were female (76,9%), and aged between 21-53 years old, average of 37,7 years old. BMI of the patients in the preoperative period ranged from 35 to 77 kg/m^2, average 49.6 kg / m^{2,} and 11 morbidly obese and had BMI greater than 40 kg/m^2. As for comorbidities 11 (84,6%) had systemic

hypertension (SH); 4 type 2 diabetes mellitus (30,85%); 4 Hypothyroidism (30,85%); 2 respiratory disease (15,4%); Dyslipidemia 1 (7,7%); Sleep apnea 1 (7,7%); 1 Acute Myocardial Infarction (7,7%) and 1 Myasthenia Gravis (7,7%).

After the surgery, from the post-anesthetic recovery room, patients were transferred to the ICU. The following were aware, sleepy, communicating verbally slowed way, hemodynamically stable, using a Venturi mask with 50% to 15 liters of oxygen / minute, eupneic and saturation measurement values normal non-invasive.

All patients presented with abdominal surgical vertical scar on mesogastric, and two post-surgical abdominal drainage systems, with an open drain system and a closed system. Of the patients studied, 4 (30,8%) needed to be submitted to indwelling catheter. No patient had evacuation within 24 hours after surgery.

Drugs used primarily included antibiotics, proton pump inhibitors, antiemetic and analgesic, serum electrolytes to be changed in the medical criteria, as needed by the patient and infused by infusion pump for peripheral venous access.

There were identified 22 diagnostic categories in 7 domains according to Taxonomy II of NANDA, as shown in table 1.[6]

Table 1. Diagnostic categories grouped into domains and their frequencies in the immediate postoperative period of Bariatric Surgery. Botucatu, 2010

Domain	Diagnostic Category	Postoperative N (13)	
		n	%
Nutrition	Risk of unstable blood glucose	4	30,8
	Subtotal	4	30,8
Elimination and Exchange	Risk of Gastrointestinal Motility Dysfunctional	13	100
	Impaired Spontaneous Ventilation	13	100
	Risk of Constipation	13	100
	Stress urinary incontinence	1	7,7
	Subtotal	40	
Activity and rest	Impaired transfer capability	13	100
	Impaired bed mobility	13	100
	Deficit in the self-care to dress up	13	100
	Deficit in the self-care for bath	13	100
	Deficit in the self-care for intimate hygiene	13	100
	Delayed Surgical Recovery	1	7,7
	Subtotal	56	
Roles and relationships	Interrupted Family Processes	13	100
	Subtotal	13	100
Coping/tolerance to stress	Anxiety	9	69,2
	Subtotal	9	69,2
Security and protection	Risk of injury by perioperatory placing	13	100
	Risk for Impaired skin integrity	13	100
	Risk of infection	13	100
	Risk for Peripheral Neurovascular Dysfunction	13	100
	Impaired skin integrity	1	7,7
	Impaired Dentition	1	7,7
	Subtotal	54	
Comfort	Comfort Impaired	13	100
	Acute pain	7	53,8
	Nausea	5	38,5
	Subtotal	25	
	Total	211	

DISCUSSION

Most patients were female, which can demonstrate that women seek more for treatment, and a similar demographic characteristic in other studies.[6-7]

The total number of identified DE was of 211, distributed among 7 areas of Nutrition, Elimination and Exchange, Activity and Rest, Roles and Relationships, Coping/stress tolerance, Safety and Security and Comfort. The highest frequency of ED was represented by the Security and Protection domains and Activity and Recreation and the smallest in the fields of Nutrition and Coping and stress tolerance.

Of the 13 patients, 4 had comorbidity of diabetes mellitus and the only DE identified in Nutrition domain was the risk for blood glucose unstable. The identified risk factors were to instability of blood glucose levels in

these patients and weight gain, lack of diabetes control and food intake, are present as a pre-metabolic condition.[8]

We will discuss below the 14 that were identified in all patients in the study.

In the Elimination of Domain and Exchange FROM the risk Motility Gastrointestinal Dysfunctional, Spontaneous Ventilation Impaired Risk and Constipation.

"Risk Gastrointestinal Motility Dysfunctional" is defined as "risk of increased peristaltic activity, decreased, ineffective or absent in the gastrointestinal system." Collaborate as risk factors for the peristaltic activity decreased abdominal surgery; immobility in bed; pharmacological agents such as proton pump inhibitors and antibiotics and change in eating habits. The diabetes mellitus was present in 5 patients and gastroesophageal reflux disease.[8]

No patient had evacuation within 24 hours after surgery, expected result due to factors such as fasting, loss of privacy, mobility in bed which predispose to constipation.

This clinical condition is related to the diagnosis of "Cold risk" whose risk factors: obesity; changes in food intake and changes in their usual eating patterns, evacuation and fluid restriction, reported in nursing history. To these factors add up to opioids, sedatives, and inflammatory mediators, in addition to the electrolyte disturbances and anxiety.[9]

Some interventions may be proposed, such as using the Bristol Scale that standardizes the appearance for the evaluation of the stool and facilitates the application of protocols by all team members. Another intervention is the team's attention on the initiation and early progression of enteral diet whenever possible and in order to address the need for fiber. The prescription of laxatives and enemas is restricted to those patients who do not respond to the administration of enteral medications. The adoption of non-drug comfort measures may reduce the use of medications and the incidence of constipation.[9-10]

The diagnosis "Spontaneous Ventilation Impaired" has the definition "reduced energy reserves, resulting in an inability of the individual to maintain proper breathing to sustain life".[8]

In 100% of patients, ventilatory support in the postoperative period was necessary. Patients undergoing abdominal surgery, especially gastric, have reduced lung function due to the impairment of the function of the respiratory muscles and diaphragmatic motion. This is the limited expansion of the rib cage. The central fat deposition also impairs respiratory function and other factors may contribute to lung alterations such as age, duration of surgery, anesthesia and the patient recumbent.[2]

There are the complications related to the respiratory system as major postoperative obese patients in the ICU. Interventions to improve respiratory function of the patient are providing adequate ventilation support the needs of the patient, perform periodically focused physical examination to respiratory changes, verify and record the oxygen saturation, keep the head elevated to 30 degrees so that the abdomen not press the diaphragm and impede their movement.[11]

Diagnosis "Transfer Capacity Impaired" has as related factors: environmental constraints, obesity, poor muscle strength and pain in specific cases. The defining characteristics of the diagnosis were: inability to transfer from the chair to bed, inability to transfer from the bed to a standing position, inability to transfer up between surfaces of different levels.[8]

"Mobility bed Impaired" has the definition "constraint to move independently from one position to another in the bed." The related factors were: environmental constraints, obesity, poor muscle strength and pain in some patients. The defining characteristics were impaired inability to "dodge" or reposition them in bed, impaired ability to move from supine to sitting position, impaired ability to turn from one side to the other.[8]

The diagnosis "Injury Risk of Perioperative Positioning" was identified from risk factors such as immobilization, excess fatty tissue and muscle weakness, sensory disturbances/perceptual arising from anesthesia.[8]

"Integrity Risk impaired skin" differs from the previous diagnosis consist of extrinsic mechanical factors and the pressure surface, wet skin due to physical restraint, and intrinsic factors such as the patient's nutritional state of balance caused by obesity.[8] Pressure ulcer is the main manifestation, and associated with other factors such as anesthesia, sedatives, analgesics, altered level of consciousness, ventilatory support during surgery, restriction of movement for prolonged periods, mobility in bed and obesity, are increasing risk.[12-14]

Patients undergoing intensive care are at high risk for developing pressure ulcers due to environmental limitations and psychobiological, hemodynamic instability, prolonged immobility and use of sedative and

analgesic drugs. It is recommended to consider at risk for pressure ulcers all persons confined to bed.[15]

The incorporation in clinical nursing practice using the Braden scale should be encouraged, as well as preventive interventions for the development of pressure ulcers.[15]

The Nursing Diagnosis "Comfort Impaired" means "perceived lack of feeling of comfort, relief and transcendence in the physical, psychological, environmental and social." The defining characteristics of this diagnosis is the lack of privacy, harmful environmental stimuli, lack of control of the situation, inability to relax, disturbed sleep pattern but famine reports and anxiety.[8]

Mobility related DE, comfort, skin integrity and risk positioning injury in these patients may be related to the increased workload. This can be estimated by applying the Nursing Activities Score, score identifies the workload of the ICU nursing staff and can help the staff dimensioning. Items related to mobilization and comfort are stratified according to the frequency and the number of professionals to provide care, which require more professional in the case of obese patients.[16-17]

The "Risk for Infection" is common in these patients due to chronic disease with inadequate primary defenses; invasive surgical procedure that causes continuity of the skin with the incision; the insertion of drainage systems and peripheral venous access. Is associated with increased exposure to environmental pathogens in the hospital environment, already colonized by resistant germs and different from those of non-hospital environment 8 The incidence of surgical site infection in obese patients tend to have significant morbidity.[18]

Four patients (30,8%) needed to be submitted to indwelling catheter due to spontaneous diuresis disability. Opioids used in the treatment of these patients increase the tone and the amplitude of the urinary sphincter and decrease the ureter contractions, making it difficult to spontaneous urination and results in urinary retention.[19]

The nursing interventions to prevent infection are, washing the hands before handling the patient, make use of gloves, perform the healing of surgical incision and inserts of aseptically drains, discard the drainage only at the end of each shift, change peripheral venous access periodically observe and record the presence of inflammatory signs in puncture sites, drains and surgical scar, keep the environment clean.[20]

The diagnosis "Peripheral Neurovascular Dysfunction Risk" was found in 100% of patients, due to the risk for developing deep vein thrombosis factor for thrombus formation, which can totally or partially occlude the deep venous system.[21] Other factors, such as major surgery, immobility in bed and/or impaired mobility collaborate with the appointment of this diagnosis.[22]

The most effective interventions for the prevention of this complication in the postoperative period are the use of a pneumatic intermittent compression, associated with anti-thrombolytic subcutaneous drug prophylaxis.[16]

"Self-care deficit to wear" is related to muscle weakness, environmental barriers and the pain, evidenced by the inability to get the clothes to dress and undress.[8]

The "Self-care deficit for swimming" also relates to environmental barriers and muscle weakness, evidenced by inability to obtain water source, take the items for the bath, wash and dry the body.[8]

The diagnosis of "Self-care deficit for intimate hygiene" is related to environmental barriers, to weakness, impaired transfer capacity, impaired mobility state. The defining characteristics are: inability to reach, sit down and get up from the toilet or hygiene chair and inability to make a proper personal hygiene.[8]

Interventions for patients with self-care deficit are to provide the best possible privacy to the patient, support, if necessary perform for him, hygiene and allow it to be able to do alone, stimulating autonomy.

"Family Process interrupted" is defined as "change in relationships and/or functioning of the family." Related factors are changing the health of a family member, hospitalized patients, and situational transition. There are evidenced changes in patterns of communication and intimacy and emotional support and willingness to affective answer.[8] The study unit procedure is presence of a companion with the patient, when is hemodynamically stable and extubated, which can contribute to a humanized environment.

By identifying the DE in this post-operative condition, is reflected on the difficulties experienced by nurses who assist these patients and apply the Systematization of Nursing Care. The difficulties related to the physical space and structure, as well as aspects of care for obese patients have been identified in other studies.[23-24]

The postoperative care of patients

undergoing bariatric surgery is complex and proper identification of care needs cooperate in the selection of interventions that achieve promotion results to health as described on patients with spinal cord injury.[25] The construction protocols attention to this group of patients through the identification of nursing diagnoses in integrative review, presents a proposal for the assistance and education during the care process. [26]

CONCLUSION

The present study showed care needs of 13 patients in the immediate postoperative period of bariatric surgery in the ICU. We identified 22 diagnostic categories, 211 DE distributed in 7 Areas of NANDA Taxonomy II-I. From the 22, 14 were identified in all patients: Transfer Ability Impaired, Mobility Impaired in Bed, Injury Risk of Perioperative Positioning, Skin Integrity Risk Impaired, Comfort Impaired, Motility Gastrointestinal Risk Dysfunctional, Infection Risk, Peripheral Neurovascular Dysfunction, and Self-care deficit to wear, Self-Care Deficit for Bath, Self-Care Deficit for Intimate Hygiene, Family Processes interrupted, Spontaneous Ventilation Impaired and Constipation risk.

DE while the EP structure allowed the choice of more effective interventions and directed the taking of nursing outcomes supported the coordination of the care process for patients in the immediate postoperative period of bariatric surgery in the intensive care unit.

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