



Main nursing diagnoses in hospitalized elderly people who underwent urological surgery

Principais diagnósticos de enfermagem em idosos hospitalizados submetidos às cirurgias urológicas

Principales diagnósticos de enfermería en ancianos hospitalizados sometidos a cirugías urológicas

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Objective: to identify the main nursing diagnoses in the elderly during postoperative period of urologic surgeries. **Methods:** Cross-sectional and quantitative study conducted in a urological unit. Data collection was conducted through physical examinations and consultation to medical records. One hundred senior citizens who were hospitalized at the institution participated in the study. **Results:** The most frequent urological surgical procedures were: transurethral resection of the prostate (27 %) and open prostatectomy (16 %). Among the nursing diagnoses identified, impaired skin integrity (100 %), risk of infection (100 %), Risk for deficient fluid volume (84 %) acute pain (68 %) and deficient knowledge (61 %) had a higher number of occurrences. **Conclusion:** the findings allowed, through nursing diagnoses, nursing interventions in the postoperative period of urological surgeries, providing the implementation of effective and immediate actions to solve problems.

Descriptors: Aged; Urologic Surgical Procedures; Urology Department, Hospital; Nursing Diagnosis; Geriatric Nursing.

Objetivo: identificar os principais diagnósticos de enfermagem em idosos no pós-operatório de cirurgias urológicas. **Método:** estudo transversal, quantitativo em uma unidade de urologia. A coleta de dados ocorreu pelo exame físico e consulta ao prontuário. Participaram 100 idosos internados na instituição. **Resultados:** procedimentos cirúrgicos urológicos de maior frequência: Ressecção transuretral da próstata (27%) e a Prostatectomia aberta (16%). Dentre os diagnósticos de enfermagem identificados, Integridade da pele prejudicada (100%), Risco de infecção (100%), Risco de volume de líquidos deficiente (84%), Dor aguda (68%) e Conhecimento deficiente (61%) apresentaram maior número de ocorrências. **Conclusão:** os achados permitiram, mediante os diagnósticos de enfermagem, intervenções de enfermagem no pós-operatório de cirurgia urológicas, possibilitando a implementação de ações eficazes e imediatas para a resolução dos problemas.

Descritores: Idoso; Procedimentos Cirúrgicos Urológicos; Unidade Hospitalar de Urologia; Diagnóstico de Enfermagem; Enfermagem Geriátrica.

Objetivo: identificar los principales diagnósticos de enfermería en ancianos en el postoperatorio de cirugías urológicas. **Método:** estudio transversal, cuantitativo en una unidad de urología. Datos recolectados mediante examen físico y consulta a los registros médicos. Los participantes fueron 100 ancianos hospitalizados en la institución. **Resultados:** procedimientos quirúrgicos urológicos de mayor frecuencia: Resección transuretral de la próstata (27%) y Prostatectomía abierta (16%). Entre los diagnósticos de enfermería identificados, Integridad de la piel perjudicada (100%), Riesgo de infección (100%), Riesgo para volumen deficiente de líquidos (84%), Dolor agudo (68%) y Escaso conocimiento (61%) tuvieron mayor número de ocurrencias. **Conclusión:** los resultados permitieron, mediante los diagnósticos de enfermería, intervenciones de enfermería en el postoperatorio de cirugías urológicas, proponiéndose implementación de acciones eficaces e inmediatas para resolución de los problemas.

Descritores: Anciano; Procedimientos Quirúrgicos Urológicos; Servicio de Urología en Hospital; Diagnóstico de Enfermería; Enfermería Geriátrica.

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Introduction

One observes an increase in the elderly population in the world and in Brazil. Due to the aging process there are decline and changes in the human body functions and systems, leading to the occurrence of non-communicable chronic diseases, a suitable factor in the increase of demand for care in health services and of clinical and surgical procedures in this age group⁽¹⁾.

In the aging process men and women may have changes in their urinary systems, such as acute and chronic renal failure, urinary retention, bladder infections and other urinary tract infections. Such urinary changes have a direct connection with the changes in the reproductive system⁽²⁾.

For the development of urological nursing care it is necessary expertise, including the reading and interpretation of diagnostic tests, development of nursing care and rehabilitation of patients with pathological processes that interfere with the proper functioning of the urinary system⁽³⁾.

Thus, nursing interventions in the postoperative period for the elderly must be performed with quality and safety. Close monitoring must occur to reduce the possibility of complications, since they have smaller physiological reserves and decreased physiological responses to stress⁽³⁾.

Then, in order to help with care directed to patients, nurses use in their activity the Nursing Process, which involves a series of dynamic and inter-related actions, adopted by a particular method or way of doing (Systematization of Nursing Care) based on the technical-scientific knowledge of the area, in a system of values and beliefs that drive their attitude towards the care of the essential nursing practice⁽⁴⁾.

In this context, Wanda de Aguiar Horta stands up, considered the national pioneer of the Systematization of Nursing Care proposing the Nursing Process when she inserted in the professional field the nursing theories - an important action to support nursing care. Her theory was defined as the

Theory of Basic Human Needs, based on the Theory of Human Motivation by Abraham Maslow and on the levels of psychic life used by John Mohana, which categorizes the needs in three levels: psychobiological, psychosocial and psychospiritual, being the two first ones common standards to all living beings in the several aspects of their organic complexity and the last level is considered a unique feature of man⁽⁵⁾.

The steps of the nursing process are part of the systematization of nursing care, which is an exclusive activity of nurses, regulated by the Law of the Professional Nursing Practice No 7498/86⁽⁶⁾. It has legal support from the Federal Nursing Council, initially approved by Resolution No. 272/2002, and currently by Resolution No. 358/2009, which talks about the systematization of nursing care and the implementation of the Nursing Process in public or private environments, where professional nursing care takes place, and it takes other measures⁽⁷⁻⁸⁾.

The Systematization of Nursing Care in the postoperative period aims to support means for a comprehensive nursing care that meets patients' needs during this period. The main focus is to be focused on patients and on the interventions to meet their needs, as well as respect them as individuals, protecting their rights and dignity, reducing their anxiety and their families' and providing individualized care⁽⁹⁾.

One of the most used nursing diagnosis taxonomy is currently the nursing diagnosis classification system⁽¹⁰⁾ known as North American Nursing Diagnosis Association - International (NANDA-I). The North American Nursing Diagnosis Association - International arose through a group of nurses from the North American Nursing Association through the need to identify, organize and classify the nursing diagnoses. In the updated version it uses Taxonomy II, which consists of 217 approved nursing diagnoses⁽¹¹⁾.

The identification of nursing diagnoses and the conduction of specific interventions, as part of the Nursing Process and of the Systematization of Nursing Care can assist nurses in elderly care in different scenarios of their professional practice, promoting,

in particular, improvement in their quality of life. It is noteworthy that the study of nursing diagnoses is essential because it is an instrument to help in the implementation of planning, conduction and evaluation of nursing care, but it is still a challenge, because it requires resolving planning and training of nurses to attend the elderly population⁽¹²⁾.

Given the above and believing that the identification of nursing diagnoses facilitates and improves nursing care in the postoperative period, reduces the length of stay, prevents possible complications after surgery assisting in the recovery of the patient, this study was conceived with the questioning of the benefits that the identification of nursing diagnoses in urological procedures in postoperative period can provide to the elderly.

Considering that the change in the population pyramid occurs in the city of Imperatriz, and due to the scarcity of research about the implementation of the Systematization of Nursing Care, as well as the identification of nursing diagnoses in urological surgical procedures in the elderly, this research will contribute to suggest geriatric care in surgical condition to a more advanced stage of life of men and women.

This study aimed to identify the main nursing diagnoses in the elderly in postoperative urologic surgeries.

Method

This is a cross-sectional, descriptive study with a quantitative approach, carried out between September and December 2013 at a urology unit of a public hospital in the city of Imperatriz-MA, Brazil. This institution is a reference in urgent and emergency care with expertise in trauma, orthopedics, internal medicine, surgical clinic, neurology, urology and pediatrics, among others, meeting all the demand of the southern state of Maranhão region. Over 15 thousand people are attended per month, about 60% of the patients come from other cities of Maranhão,

Pará and Tocantins, some in order to perform basic procedures.

The sample consisted of elderly patients (≥ 60 years) in mediate postoperative urological surgery. The formula was used: $n = \frac{N \cdot n_0}{N + n_0}$, where: n represents the population size and n_0 is the first approximation of the sample size, and it is obtained by the formula: $n_0 = \frac{1}{E_0^2}$, having E_0 as the tolerable sampling error⁽¹³⁾.

One considered as parameters, the 95% significance level, the sampling error of 10% and a population size of 626 patients after surgery of urological procedures in 2012, after the application of the formula one found out a total of 86. Considering the loss of questionnaires and dropouts, one added a 15% value to the sample, resulting in a total of 100 elderly people, ensuring this way, the sample power.

Inclusion criteria were: being a senior citizen (mimimum 60 years old), both sexes, having performed urologic surgery at the hospital. The elderly with postoperative period of more than five days were excluded (considering that after the fifth day after surgery the patient is in better health and recovery from surgery, and probably the nursing diagnosis would be different), those who underwent urological surgical procedures in another hospital and aged people who did not have cognitive level to answer the questionnaire. It was used the sampling procedure for convenience to the composition of the sample group.

Data collection was performed by physical examination and consultation of medical records. For the physical test, it was used an adapted instrument⁽¹⁴⁾, a structured interview form, based on the conceptual model of Wanda de Aguiar Horta, composed by history and physical examination based on health needs and basic human needs.

The first part of the instrument consisted of personal identification, information about the disease and treatment, medical history, habits (housing and living conditions) and psychosocial aspects. The second part consisted of physical examination that

allowed the identification of related factors or risk factors and defining characteristics for identification of nursing diagnoses.

The physical examination was performed by the researcher and composed of general review and ectoscopy and examination of different systems and devices through the propaedeutic techniques of nursing, following the sequence: assessment of general health, facies, attitude and preferred decubitus in bed, attitude in standing position or posture, involuntary movements, biotype or morphological type, height and other anthropometric measurements, weight, physical development, body temperature, aspects of the skin and mucous membranes, assessment of the state of nutrition, hydration, vital signs and level of consciousness, speech and language, ventilation and gait.

To assist in the physical examination the following instruments and apparatus were used: digital scale, millimeter rod to measure height, measuring tape, tongue depressor, flashlight, stethoscope, sphygmomanometer aneroid with cuffs, clinical thermometer, magnifying glass, needle and cotton to test sensitivity and gloves.

From the patient's record it was possible to collect medical diagnosis, length of stay, perioperative period, record of daily evolution, complications, record reviews, prescription of medications, diet, specific care, report of the actions observed and performed by the team, laboratory and imaging exams.

The nursing diagnoses were analyzed using the Taxonomy II from NANDA-I (2012-2014). After the survey of the nursing diagnoses, there was the group of the most frequent ones according to Wanda Horta's theory, identifying the affected basic human needs including the psychobiological, psychosocial and psychospiritual needs. The nursing diagnostic statements were submitted to three nurses for the process of content validation. These nurses were included in the validation considering their experience in surgical clinical practice and their knowledge about nursing diagnosis. Out of these, one was a nurse who

actually worked at the place of the study and the rest were teachers of a nursing program who taught practical classes in the hospital.

Then, one built up a database in the application Microsoft Excel and, with the aid of the statistical program Statistical Package for the Social Sciences version 16.0, the sociodemographic data and the nursing diagnoses identified were processed and analyzed using descriptive statistics (single and percentage frequency).

The study followed the legal procedures of research involving human subjects. It obtained approval from the Research Ethics Committee, under protocol number 409,320.

Results

The population consisted of 100 elderly people, with a higher proportion of males (72%) and the ages ranged from 60 to 82 years old. Regarding marital status, 71% were married and 83% reported being Catholic (Table 1).

Table 1 - Characteristics of hospitalized elderly people in urology unit

Variables	%
Sex	
Female	28.0
Male	72.0
Age group (years)	
60-69	72.0
70-79	21.0
80-89	7.0
Marital status	
Married	71.0
Single	6.0
Widowed/Divorced	23.0
Religion	
Catholic	83.0
Protestant	17.0

It was observed that the surgical urological procedures were most commonly transurethral resection of the prostate (27%) and open prostatectomy (16%). Details of the types of urological surgeries are described in Table 2.

Table 2 - Distribution of the elderly people according to the type of urologic surgery performed

Surgery	%
Transurethral resection of the prostate	27.0
Open prostatectomy	16,0
Ureterolithotripsy	12.0
Double J catheter insertion	9.0
Cystostomy	7.0
Postectomy	6.0
Urethrotomy	5.0
Pyelolithotomy	4.0
Ureterolysis	4.0
Pyeloplasty	3.0
Ureteroplasty	3.0
Nephrolithotomy	2.0
Nephrostomy	2.0

From the identification of the affected Basic Human Needs one identified 13 nursing diagnoses. The diagnoses presented are of the Royal and Risk type and are related to the functional, emotional, social and environmental aspects. The nursing diagnoses that showed the highest number of occurrences were: Impaired skin integrity (100%), Risk of infection (100%), Risk for deficient fluid volume (84%), Acute pain (68%) and Deficient knowledge (61%).

The following shows the distribution of nursing diagnoses, main related or risk factors and defining characteristics identified in accordance with the affected Basic Human Needs:

Basic human needs affected: psychobiological

Hydration-nursing diagnoses: risk for fluid volume deficit.

Risk factors: deficiency of knowledge; Failure of regulatory mechanisms; Medicine. Absolute frequency: 84. Relative frequency: 84%;

Elimination-nursing diagnoses: Impaired urinary elimination. Related factors: sensorimotor damage; Anatomic obstruction. Defining characteristics: Dysuria; Frequency. Absolute frequency: 24. Relative frequency: 24%;

Elimination-nursing diagnoses: risk for constipation. Risk factors: insufficient physical activity; Weakness of the abdominal muscles; Irregular evacuation habits; Disabled eating habits; Insufficient intake of fiber. Absolute frequency: 19. Relative frequency: 19%;

Exercises and physical activities-nursing diagnoses: Impaired physical mobility. Related factors: decreased muscle control; Pain; Decreased muscle strength; Intolerance to activity. Defining characteristics: Postural instability; Changes in gait; Decreased response time. Absolute frequency: 21. Relative frequency: 21%;

Sleep and rest-nursing diagnoses: Disturbed sleep pattern. Related factors: Lack of privacy/control of sleep; Interruptions (monitoring); Noise. Defining characteristics: Dissatisfaction with sleep; Change in the normal sleep pattern; Verbal report of not feeling well rested; Reports of difficulty sleeping. Absolute frequency: 28. Relative frequency: 28%;

Cutaneous-mucous Integrity-nursing diagnoses: Impaired skin integrity. Related factors: Mechanical factors (abrasive forces); Medications; Immune deficiency; Impaired metabolic state. Defining characteristics: Destruction of skin layers; Disruption of the skin surface. Absolute frequency: 100. Relative frequency: 100%;

Physical Integrity-nursing diagnoses: Fatigue. Related factors: Noise; Disease state; Sleep deprivation. Defining characteristics: Increased physical complaints; Tiredness report; Reporting inability to maintain the usual level of physical activity. Absolute frequency: 29. Relative frequency: 29%;

Immune regulation-nursing diagnoses: Risk

for infection. Risk factors: Environmental exposure to increased pathogens; Invasive procedures; Tissue destruction and increased environmental exposure; Inadequate primary defenses. Absolute frequency: 100. Relative frequency: 100%;

Painful perception-nursing diagnoses: Acute pain. Related factors: harmful agents (biological, chemical, physical, psychological). Defining characteristics: expressive behavior (irritability); Disturbance in sleep pattern; Evidence of observed pain; Position to avoid pain; Verbal pain report. Absolute frequency: 68. Relative frequency: 68%;

Basic human needs affected: Psychosocial

Security-nursing diagnoses: Anxiety. Related factors: Family Association; Stress. Defining characteristics: Fear; Fatigue; Concern; Insomnia. Absolute frequency: 41. Relative frequency: 41%;

Communication-nursing diagnoses: Deficient knowledge. Related factors: Lack of familiarity with the information resources; Lack of interest in learning; Cognitive limitations. Defining characteristics: inappropriate instructions following; Verbalization of the problem. Absolute frequency: 61. Relative frequency: 61%;

Recreation-nursing diagnoses: Diversional Activity Deficit. Related factors: Lack of recreational activities on the environment. Defining characteristics: Reports feeling bored (wish that there was something to do, read); The usual hobbies cannot be done at the hospital. Absolute frequency: 18. Relative frequency: 18%;

Basic human needs affected: psychospiritual

Religious or theological-nursing diagnoses: risk for impaired religiosity. Risk Factors: Barriers to practice religion; Suffering; Pain; Hospitalization. Absolute frequency: 6. Relative frequency: 6%.

Discussion

Regarding the characteristics of the elderly by sex, age, marital status and religion of this study, similar data were found in a study, in which 57.5% of the study population were male, 42.5% were female and 60% were married⁽¹⁵⁾.

The results of this study corroborate the findings of the literature, showing a predominance of older people in the age group 60-69 years (56.8%)⁽¹⁶⁾ in the postoperative urologic surgeries.

Among men, a large number presented problems related to the prostate and needed surgery⁽¹⁷⁾. Transurethral resection of the prostate and open abdominal surgery are the most effective ways to treat patients with benign prostate hypertrophy. Such interventions are responsible for 90% of clinical improvement⁽¹⁸⁾.

In this study one identified 13 different nursing diagnoses found in elderly people in the postoperative period of urological surgeries, being 10 the real type and 3 the risk type. The identification of nursing diagnoses is the basis for sustaining the planning and implementation of nursing actions, based on a survey of accurate data with specific focus on the aging process⁽¹⁷⁾.

Impaired skin integrity (100%) is defined as "altered epidermis and/or dermis"^(11:494). A comparative study of nursing diagnoses in hospitalized adults and elderly people during postoperative period identified similar data to those found in this study, where all the subjects had the same diagnosis (100%).

Impaired skin integrity may represent greater complexity and severity in the elderly, since the functions of the immune system are programmed genetically to decrease over time, making the elderly more vulnerable. A study about nursing diagnoses in adults and elderly people hospitalized during postoperative period identified that the impaired skin integrity diagnosis occurred both in 100% of the

adults and in 100% of the elderly⁽¹⁹⁾.

The diagnosis Risk for infection was also prevalent in 100% of the study population, and it is defined by Taxonomy II of NANDA-I as "At increased risk for being invaded by pathogenic organisms"^(11:485). A similar study identified that the same frequency of hospitalized elderly patients presented risk of infection, since hospitalization and invasive procedures expose the elderly to increased risk for infections⁽²⁰⁾. In another study, the authors identified risk for infection in 100% of the patients who underwent prostatectomy⁽¹⁷⁾ and 100% of adult and elderly patients hospitalized in the postoperative period⁽¹⁹⁾.

One defines the diagnosis Risk for fluid volume deficit (84%) as the risk for reduction of intravascular, interstitial or intracellular liquid, that is, it refers to a risk of dehydration⁽¹¹⁾. This diagnosis was present in 94% of the elderly who participated in a study⁽²¹⁾. In another study, the frequency of this diagnosis was 53.6%⁽²²⁾.

In the first hours after surgery, fluid replacement is required until the patient is stable, since hydration helps prevent complications such as clots that can cause urinary catheter obstruction and produce distension of the prostate capsule, resulting in hemorrhage⁽³⁾.

The diagnosis Acute Pain was identified in 68% of the elderly, being described by NANDA-I as "unpleasant sensory and emotional experience arising from actual or potential tissue damage or described in terms of such damage; sudden or slow onset of any intensity from mild to severe with an anticipated or predictable end and a duration of less than 6 months"^(11:548). In a study related to nursing diagnoses in elderly patients undergoing prostatectomy, such diagnosis was present in 36% of the interviewed patients⁽²¹⁾.

The elderly need more attention from the nursing staff. The existence of pain complaint needs to be investigated and evaluated by its intensity, frequency and duration, because the observed

characteristics of pain can interfere with the quality of life of older people, causing unnecessary suffering.

Lack of knowledge was a diagnosis present in 61% of the elderly, this is defined as the absence or deficiency of cognitive information related to a specific topic^(11,22). The nursing staff need to worry about ensuring the elderly's understanding together with their families whenever necessary in this regard. In addition, they need to carefully evaluate the best way to carry out the teaching of self-care for the elderly and their families, using, for this, an individualized approach.

The use of the Systematization of Nursing Care/ Nursing Process in the context of hospitalized elderly patients who underwent urological surgery allows nurses to have complete and detailed knowledge about the situation of the person who is in such a condition, and thus it helps in the planning of a more suitable care.

Final Considerations

The method used in this study made it possible to reach the proposed goal, because one identified the main nursing diagnoses in hospitalized elderly patients who underwent urological surgery in a urological unit of a hospital in Maranhão. Among these nursing diagnoses identified, one highlighted: Impaired skin integrity (100%), Risk for infection (100%), risk for deficient fluid volume (84%), acute pain (68%) and deficient knowledge (61 %) showed a higher number of occurrences.

One hopes that this study will contribute to increase the knowledge of nurses about the health of the elderly in urological surgical conditions, leading them to propose reasoned and specific interventions, providing the implementation of effective and immediate actions to resolve the observed problems.

Among the study's limitations, it should be mentioned that it portrays the reality of only one hospital in the State of Maranhão. Despite this limitation, the lack of studies on the theme presented

makes the study relevant, since the identification and survey of nursing diagnoses improve the postoperative period and the quality of life of the elderly in the hospital. Further studies should be performed in this scenario to bring about improvement of care to the elderly in urological surgical condition.

Collaborations

Lima WG, Nunes SFL, Bezerra MLR participated in the creation and elaboration of the project, data collection and analysis, critical writing and analysis of the article. Alvarez AM and Valcarenghi RV contributed to the writing, critical review of the scientific article and final analysis to be approved.

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