Rev Rene. 2024;25:e93567.
DOI: 10.15253/2175-6783.20242593567
www.periodicos.ufc.br/rene

Original Article

Mapping nursing diagnoses in geriatric syndromes prescribed in an intensive care unit

Mapeamento dos diagnósticos de enfermagem nas síndromes geriátricas prescritos em uma unidade de terapia intensiva

How to cite this article:
Silva VS, Braga LS, Moura RCA, Lima MAF, Fonseca MES, Nogueira LS, et al. Mapping nursing diagnoses in geriatric syndromes prescribed in an intensive care unit. Rev Rene. 2024;25:e93567. DOI: https://doi.org/10.15253/2175-6783.20242593567

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Conflict of interest: the authors have declared that there is no conflict of interest.

ABSTRACT
Objective: to identify nursing diagnoses related to geriatric syndromes in elderly patients hospitalized for COVID-19 in the intensive care unit. **Methods:** this is a observational study, based on the medical records of 132 elderly patients aged 60 and over, diagnosed with COVID-19 and admitted to the intensive care unit. The diagnoses listed by the nurses were grouped using the NANDA-I nomenclature and into geriatric syndromes with a presentation of the domains, defining characteristics, and risk factors. **Results:** among the elderly there was a predominance of males, 76 (57.6%), mean age 72.9, and standard deviation 8.18. Among the geriatric syndromes, frailty had 11 related diagnoses and, postural instability and iatrogenesis had 7. The most frequent diagnoses were risk of infection 131 (99.2%), risk of impaired skin integrity 125 (94.7%), impaired physical mobility 123 (93.2%), and self-care deficit for bathing and hygiene 122 (92.4%) **Conclusion:** it is essential to carry out a rigorous clinical assessment at the bedside and to assess the basic needs of the elderly, taking into account their frailties, to provide effective nursing care. **Contributions to practice:** the identification of the diagnoses grouped in the geriatric syndrome enables professionals to provide nursing care targeted at specific age groups.
Descriptors: Nursing Diagnoses; COVID-19; Aged; Geriatric Nursing; Intensive Care Units.

RESUMO
Objetivo: identificar os diagnósticos de enfermagem relacionados às síndromes geriátricas em idosos internados por COVID-19 na unidade de terapia intensiva. **Métodos:** estudo observacional, baseado em prontuários de 132 pacientes idosos de 60 anos e mais, diagnosticados com COVID-19 internados na unidade de terapia intensiva. Realizou-se o agrupamento dos diagnósticos elencados pelo enfermeiro, a partir da nomenclatura NANDA-I, agrupados nas síndromes geriátricas com apresentação dos domínios, características definidoras e fatores de risco. **Resultados:** entre os idosos houve predominância do sexo masculino 76 (57,6%), média de idade 72,9 e desvio padrão 8,18. Entre as síndromes geriátricas, a de fragilidade teve 11 diagnósticos relacionados e a instabilidade postural e iatrogenia tiveram 7. Os diagnósticos de maior frequência foram o risco de infecção 131 (99,2%), risco de integridade da pele prejudicada 125 (94,7%), mobilidade física prejudicada 123 (93,2%) e *déficit* de autocuidado para banho e higiene 122 (92,4%) **Conclusão:** é imprescindível a avaliação clínica rigorosa à beira leito e o levantamento das necessidades básicas em consideração às fragilidades dos idosos para proposição do cuidado de enfermagem efetivo. **Contribuições para a prática:** a identificação dos diagnósticos agrupados na síndrome geriátrica possibilita aos profissionais prestar uma assistência de enfermagem direcionada à especificidade etária.
Descritores: Diagnósticos de Enfermagem; COVID-19; Idoso; Enfermagem Geriátrica; Unidade de Terapia Intensiva.

Received: June 16th 2024; Accepted: July 25th 2024.

Introduction

The viral infection caused by Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), known as corona virus disease (COVID-19), is still contributing to the increase in mortality with its multisystemic action and delicate prognosis, requiring hospitalization in an intensive care unit (ICU)[1]. In previous years, the disease has led to an increase in hospitalization rates, due to its high transmissibility and the difficulty in reducing transmission.

In addition, age has become a predisposing factor in the severity of COVID-19, given that senescence is compromised by fragility, pre-existing comorbidities, aging of the immune system, and decreased organic and functional reserve, making patients more frequent in intensive care units[2].

To be considered healthy, the elderly person must be able to be independent even if they are affected by some illness. To assess this capacity, certain characteristics need to be in harmony, such as autonomy, cognition, mobility, and communication, which, once lost, favor the emergence of geriatric syndromes, classified as postural instability and falls, urinary incontinence, cognitive insufficiency, immobility and pressure injury, impaired communication, iatrogeny, family insufficiency, and frailty[3]. Thus, the worsening and high mortality rate from SARS-CoV-2 are favored by these syndromes, making the clinical condition more complex[4].

As a result, the frailty of the geriatric population has become a predisposing factor for the worsening of COVID-19, increasing mortality in intensive care units. It is therefore essential that care for the elderly is focused on preventing latent problems, based on expected weaknesses; as well as distinguishing between the physiological aspects of aging and the pathological condition caused by COVID-19, so that care is focused on successful outcomes, considering the complexity of this age group and the course of the disease[5].

Thus, the nursing process in intensive care is an integral and theoretically based care instrument, supported by the clinical and therapeutic judgment of nursing professionals, and is a means of organizing care in which clinical data is grouped into diagnoses representing the basic human needs involved[6]. In this way, the intensive care nurse personalizes the patient according to the nursing diagnoses of the NANDA International (NANDA-I) taxonomy[7], which is the most used in Brazilian nursing care.

However, in view of the vulnerability and mortality of the elderly in the COVID-19 pandemic, with hospitalization and the need for intensive care due to the course of the disease and the specificities of geriatrics due to their fragility, disabilities and comorbidities, taking into account the essentiality of planned care with interventions aimed at this age group, to ensure effective care management with a comprehensive clinical assessment at the bedside, based on basic human needs, and also considering the knowledge and relationship between nursing diagnoses and geriatric syndromes, the aim was to identify nursing diagnoses related to geriatric syndromes in elderly patients hospitalized for COVID-19 in the intensive care unit.

Methods

This is a observational study with a quantitative approach, based on the printed medical records of elderly patients diagnosed with COVID-19 and admitted to the intensive care unit. A non-probabilistic sequence sample of 132 elderly people aged 60 or over of both genders, admitted between April 2020 and April 2021, was used.

As an inclusion criterion, medical records of elderly people aged 60 or over of both genders admitted to the intensive care unit with a diagnosis of COVID-19 were selected, and as an exclusion criterion, forms that made up the medical record with illegible information and deteriorated records.

The study was carried out in a public, health insurance and private hospital in Rio Branco - Acre, in the 20-bed intensive care unit, exclusively for patients who tested positive for SARS-CoV-2 and with proven

severity for admission to the intensive care unit, with clinical characteristics of dyspnea, fatigue, chest pain, desaturation, sore throat, hyperthermia and tachycardia.

The descriptive variables were: gender, age, skin color (self-declared), marital status, schooling, occupation, comorbidities present, NANDA-I classification, based on basic human responses (psychobiological needs), and the eight geriatric syndromes (frailty, impaired communication, cognitive impairment, bowel incontinence, iatrogenic, family insufficiency, immobility and postural instability).

The data was collected from March to December 2022 by the research team of undergraduate nursing students, nurses from the hospital unit involved in the study, and a research professor, from the printed medical records gradually released by the hospital's medical archive and statistics service. To extract the data, a content extractor designed with the variables already present in the medical records was used.

The diagnoses were collected using the nursing process, which was already part of the medical records used in the intensive care unit. Thus, the nursing diagnoses of 132 patients over 60 years of age were listed and grouped into Basic Human Needs[8]. For each of the eight geriatric syndromes, the diagnoses found in the medical records were grouped, based on the definition and characterization of each syndrome, and the defining characteristics and risk factors of each diagnosis in its domain in the NANDA-I classification.

The data was tabulated in an Excel spreadsheet, the categorical variables were described in absolute (n) and relative (%) frequencies; the continuous variables were presented using measures of central tendency, mean and standard deviation, and a textual classification figure was also drawn up.

The standards for research involving human beings were respected, by Resolution 466/2012 of the National Health Council. The research project was approved by the Research Ethics Committee of the Federal University of Acre, with Certificate of Submission for Ethical Appraisal No. 54859321.0.0000.5010 and opinion No. 5,235,641/2022 with collection beginning after the project was approved by the said Committee.

Results

The total research sample consisted of 132 medical records, of which 105 (79.6%) patients progressed to death, with a diagnosis of COVID-19, admitted to an intensive care unit in the municipality of Rio Branco in the state of Acre. The majority were male, 76 (57.6%), with a mean age of 72.9 (standard deviation (SD)=8.2), 101 (80.2%) were brown, 62 (50.8%) had a partner and 60 (48.2%) had no partner. As for education, 30 (43.5%) had higher education, followed by 19 (27.5%) with elementary education. Regarding occupation, 60 (51.7%) were retired, the average length of stay was 17.7 days (SD=13.7), and 108 (94.7%) of the patients had comorbidities.

The nursing diagnoses recorded within the nursing process by the unit's professional nurse were: risk of infection, ineffective breathing pattern, impaired physical mobility, self-care deficit for bathing and hygiene, imbalanced nutrition, infection-related hypothermia, risk for falls, risk for impaired skin integrity, ineffective airway clearance, decreased cardiac tissue perfusion, risk for aspiration, Impaired urinary elimination, impaired gas exchange, ineffective renal perfusion, diarrhea, anxiety, disturbed sleep pattern, ineffective tissue perfusion, pain, infection-related hyperthermia and constipation.

The Nursing Diagnoses found in the intensive care unit were grouped into the Basic Human Needs (Figure 1). Body regulation involves the following functions: thermal, hormonal, neurological, hydrosaline, electrolytic, immunological, cell growth, and vascular. This need had more diagnoses related to hypothermia related to infection, hyperthermia related to infection, decreased cardiac tissue perfusion, ineffective tissue perfusion and risk of infection.

In addition, another psychobiological need was oxygenation, which is related to some diagnoses such as ineffective breathing pattern, ineffective airway clearance, risk for aspiration and impaired gas exchange.

Psychobiological needs	Nursing Diagnoses
Oxygenation	Ineffective breathing pattern*; Ineffective airway clearance; Risk for aspiration; Impaired gas exchange
Hydration	Diarrhea; constipation
Elimination	Impaired urinary elimination† Diarrhea; constipation
Sleep and rest	Disturbed sleep pattern‡; Anxiety
Body care	Self-care deficit for bathing and hygiene§
Skin and mucous membrane integrity	Risk of impaired skin integrity
Physical integrity	Risk for falls‖; Impaired physical mobility
Regulation (thermal, hormonal, neurological, hydrosaline, electrolyte, immunological, cell growth, vascular)	Infection-related hypothermia¶; Infection-related hyperthermia**; Decreased cardiac tissue perfusion††; Ineffective tissue perfusion‡‡; Risk of infection
Locomotion	Impaired physical mobility; Risk for falls
Perception: olfactory, visual, auditory, tactile, gustatory and painful	Pain

Diagnoses updated in the NANDA-I 2021-2023 version: *Ineffective breathing pattern; †Impaired urinary elimination; ‡Disturbed sleep pattern; §Self-care deficit in bathing; ‖Risk for falls in adults; ¶Hypothermia; **Hyperthermia; ††Risk of decreased cardiac tissue perfusion; ‡‡Ineffective peripheral tissue perfusion

Figure 1 – Nursing diagnoses grouped based on psychobiological needs in elderly patients diagnosed with COVID-19 admitted to an intensive care unit. Rio Branco, AC, Brazil, 2020/2021

The tables show the relationships between nursing diagnoses, their respective domains, defining characteristics or risk factors and geriatric syndromes. Because frailty is a state of greater vulnerability and a decrease in intrinsic capacity, it was associated with a greater number of diagnoses, the most frequent in the sample of 132 patients: risk of infection present in 131 (99.2%) elderly, followed by risk of impaired skin integrity 125 (94.7%), impaired physical mobility 123 (93.2%), self-care deficit for bathing and hygiene 122 (92.4%) risk for fall 113 (85.6%) and decreased cardiac tissue perfusion present only in the frailty syndrome with 23 (17.4%) diagnoses (Table 1).

Table 1 – Nursing diagnoses found in the geriatric frailty syndrome and their distribution in a sample of 132 elderly people admitted to an intensive care unit. Rio Branco, AC, Brazil, 2020/2021

Nursing diagnoses	Domain	Defining characteristics or risk factors	n (%)
Risk of infection	11 - Safety/ Security	Invasive devices; difficulties in managing wound care; inadequate access to the individual; protective equipment; inadequate hygiene.	131 (99.2)
Pain	12- Comfort	Expressive behavior; facial expression of pain; despair; positioning to relieve pain; guarding behavior.	38 (28.8)
Self-care deficit for bathing and hygiene*	4- Activity/ Rest	Difficulty accessing the toilet; difficulty accessing water; difficult drying body; difficulty washing body.	122 (92.4)
Imbalanced nutrition	2- Nutrition	Body weight below the ideal weight range for age and gender; delayed wound healing; diarrhea; weight loss with adequate food intake.	60 (45.5)
Impaired physical mobility	4 - Activity/ Rest	Altered gait; decreased fine motor skills; decreased gross motor skills; decreased range of motion; uncoordinated movement.	123 (93.2)
Risk of impaired skin integrity	11- Safety/ Security	Altered skin color; altered turgor; bleeding; peeling; damaged skin surface.	125 (94.7)
Decreased cardiac tissue perfusion†	4 - Activity/ Rest	Unavailable at Nanda-I 2021-2023 and Nanda-I 2018-2020	23 (17.4)
Impaired urinary elimination‡	3 – Elimination and exchange	Frequent urination; urinary incontinence; urinary retention; urinary urgency.	76 (57.6)
Constipation	3 – Elimination and exchange	Hard stools; stools with lumps; need for manual maneuvers to facilitate defecation; feeling of anorectal obstruction.	19 (14.4)
Disturbed sleep pattern§	4 - Activity/ Rest	Difficulties in daily functioning; difficulty initiating sleep; difficulty maintaining sleep state; expressed dissatisfaction with sleeping.	58 (43.9)
Risk for falls‖	11- Safety/ Security	Decreased lower extremity strength; hypoglycemia; impaired postural balance; incontinence; obesity; sleep disorders.	113 (85.6)

Diagnoses updated in the NANDA-I 2021-2023 version: *Self-care deficit in bathing; †Risk of decreased cardiac tissue perfusion; ‡Impaired urinary elimination; §Disturbed sleep pattern; ‖Risk for falls in adults

Impaired communication is a geriatric syndrome that is related to some nursing diagnoses such as anxiety, present in domain 9 – coping/stress tolerance with 34 (25.8%), pain – domain 12 – comfort 38 (28.8%), self-care deficit for bathing and hygiene – domain 4 – activity and rest 122 (92.4%), imbalanced nutrition – domain 2 – nutrition 60 (45.5%) and risk for fall – domain 11 – safety/security 113 (85.6%) (Table 2).

Cognitive impairment was associated with anxiety in domain 9 – coping/stress tolerance and disturbed sleep pattern in domain 4 – activity/rest with 58 (43.9%). Bowel incontinence was associated with the diagnosis of impaired urinary elimination in domain 3 – elimination and exchange with 76 (57.6%).

Table 2 – Nursing diagnoses in the geriatric syndrome of communicative and cognitive incapacity and bowel incontinence and their distribution in a sample of 132 elderly people admitted to an Intensive Care Unit. Rio Branco, AC, Brazil, 2020/2021

Geriatric syndromes	Nursing diagnoses	Domain	Defining characteristics or risk factors	n (%)
Impaired communication	Anxiety	9- Coping/ Stress tolerance	Crying; expressing distress; irritable mood; psychomotor agitation.	34 (25.8)
	Pain	12- Comfort	Expressive behavior; facial expression of pain; despair; positioning to relieve pain; guarding behavior.	38 (28.8)
	Self-care deficit for bathing and hygiene*	4- Activity/Rest	Difficulty accessing the toilet; difficulty accessing water; difficult drying body; difficulty washing body.	122 (92.4)
	Imbalanced nutrition	2- Nutrition	Body weight below the ideal weight range for age and gender; delayed wound healing; diarrhea; weight loss with adequate food intake.	60 (45.5)
	Risk for falls†	11- Safety/ Security	Decreased lower extremity strength; hypoglycemia; impaired postural balance; incontinence; obesity; sleep disorders	113 (85.6)
Cognitive impairment	Anxiety	9 - Coping/ Stress tolerance	Crying; expressing distress; irritable mood; psychomotor agitation.	34 (25.8)
	Disturbed sleep pattern‡	4 - Activity/Rest	Difficulties in daily functioning; difficulty initiating sleep; difficulty maintaining sleep state; expressed dissatisfaction with sleeping.	58 (43.9)
Bowel incontinence	Impaired urinary elimination*	3 – Elimination and exchange	Frequent urination; urinary incontinence; urinary retention; urinary urgency.	76 (57.6)

Diagnoses updated in the NANDA-I 2021-2023 version: *Self-care deficit in bathing; †Risk for falls in adults; ‡ Disturbed sleep pattern; §Impaired urinary elimination-

It can be seen that iatrogenesis correlates with the diagnoses of diarrhea in domain 3 – elimination and exchange with 21 (15.9%), imbalanced nutrition in domain 2 – nutrition 60 (45.5%), hyperthermia related to infection 23 (17.4%), hypothermia related to infection 60 (45.5%), risk for impaired skin integrity 125 (94.7%), risk of infection 131 (99.2%) and risk for fall 113 (85.6%) present in domain 11 – safety/security (Table 3).

Table 3 – Nursing diagnoses in the geriatric syndrome of iatrogeny, family insufficiency, immobility and their distribution in the sample of 132 elderly hospitalized in an Intensive Care Unit. Rio Branco, AC, Brazil, 2020/2021

Geriatric syndromes	Nursing diagnoses	Domain	Defining characteristics or risk factors	n (%)
Iatrogeny	Diarrhea	3 – Elimination and exchange	Abdominal colic; abdominal pain; intestinal urgency; dehydration.	21 (15.9)
	Imbalanced nutrition	2 - Nutrition	Body weight below the ideal weight range for age and gender; delayed wound healing; diarrhea; weight loss with adequate food intake.	60 (45.5)
	Infection-related hyperthermia*	11- Safety/ Security	Hot skin to the touch; flushed skin; tachycardia; tachypnea; convulsion.	23 (17.4)
	Infection-related hypothermia†	11- Safety/ Security	Bradycardia; cyanotic nails; shivering; skin cold to the touch.	60 (45.5)
	Risk of impaired skin integrity	11- Safety/ Security	Altered skin color; altered turgor; bleeding; peeling; damaged skin surface.	125 (94.7)
	Risk of infection	11- Safety/ Security	Invasive devices; difficulties in managing wound care; inadequate access to the individual; protective equipment; inadequate hygiene.	131 (99.2)
	Risk for falls‡	11- Safety/ Security	Decreased lower extremity strength; hypoglycemia; impaired postural balance; incontinence; obesity; sleep disorders	113 (85.6)
Family insufficiency	Anxiety	9 - Coping/ Stress tolerance	Crying; expressing distress; irritable mood; psychomotor agitation.	34 (25.8)
Immobility	Impaired physical mobility	4 - Activity/Rest	Altered gait; decreased fine motor skills; decreased gross motor skills; decreased range of motion; uncoordinated movement.	123 (93.2)
	Self-care deficit for bathing and hygiene§	4 - Activity/Rest	Difficulty accessing the toilet; difficulty accessing water; difficult drying body; difficulty washing body.	122 (92.4)
	Ineffective airway clearance	11 - Safety/ Security	No cough; adventitious breath sounds; altered respiratory rhythm; altered chest percussion; diminished breath sounds.	77 (58.3)
	Risk for aspiration	11 - Safety/ Security	Decreased gastrointestinal motility; difficulty swallowing; dislodged enteral nutrition tube; increased gastric residue; ineffective airway clearance.	107 (81.1)
	Risk of impaired skin integrity	11 - Safety/ Security	Altered skin color; altered turgor; bleeding; peeling; damaged skin surface.	125 (94.7)

Diagnoses updated in the NANDA-I 2021-2023 version: *Hyperthermia; †Hypothermia; ‡Risk for falls in adults; §Self-care deficit in bathing

Family insufficiency is linked to the diagnosis of anxiety in domain 9 – coping/tolerance, 34 (25.8%). Immobility is linked to the diagnoses of impaired physical mobility 123 (93.2%), self-care deficit for bathing and hygiene in domain 4 – activity/rest 122 (92.4%), ineffective airway clearance 77 (58.3%), risk for aspiration 107 (81.1%) and risk of impaired skin integrity in domain 11 –safety/security 125 (94.7%) (Table 4).

Table 4 – Nursing diagnoses in the geriatric syndrome of postural instability and their distribution in a sample of 132 elderly people admitted to an Intensive Care Unit. Rio Branco, AC, Brazil, 2020/2021

Nursing diagnoses	Domain	Defining characteristics or risk factors	n (%)
Risk for falls*	11- Safety/ Security	Decreased lower extremity strength; hypoglycemia; impaired postural balance; incontinence; obesity; sleep disorders	113 (85.6)
Impaired physical mobility	4 - Activity/Rest	Altered gait; decreased fine motor skills; decreased gross motor skills; decreased range of motion; uncoordinated movement.	123 (93.2)
Disturbed sleep pattern†	4 - Activity/Rest	Difficulties in daily functioning; difficulty initiating sleep; difficulty maintaining sleep state; expressed dissatisfaction with sleeping.	58 (43.9)
Ineffective breathing pattern‡	4 - Activity/Rest	Paradoxical abdominal breathing pattern; altered chest excursion; altered tidal volume; bradypnea; cyanosis.	116 (87.9)
Self-care deficit for bathing and hygiene§	4 - Activity/Rest	Difficulty accessing the toilet; difficulty accessing water; difficult drying body; difficulty washing body.	122 (92.4)
Pain	12 - Comfort	Expressive behavior; facial expression of pain; desperation; positioning to relieve pain; guarding behavior.	38 (28.8)
Impaired gas exchange	3 – Elimination and exchange	Abnormal arterial pH; abnormal skin color; altered respiratory depth; altered respiratory rhythm; hypoxemia; hypoxia.	103 (78.0)

Diagnoses updated in the NANDA-I 2021-2023 version: *Risk for fall in adults; †Disturbed sleep pattern; ‡Ineffective breathing pattern; §Self-care deficit in bathing

According to Table 4, postural instability is related to the diagnoses of risk the fall in domain 11 – safety 113 (85.6%), impaired physical mobility 123 (93.2%), disturbed sleep pattern 58 (43.9%), ineffective breathing pattern 116 (87.9%), self-care deficit for bathing and hygiene in domain 4 – activity/rest 122 (92.4%), pain in domain 12 – comfort 32 (28.8%) and impaired gas exchange in domain 3 – elimination and exchange 103 (78.0%).

Discussion

With regard to comorbidities, a study found that the majority of patients admitted had previous chronic diseases when associated with COVID-19, increasing the severity of the infection and being an important risk factor. In this study, this perspective is evidenced by the high prevalence of comorbidities such as systolic arterial hypertension, followed by diabetes mellitus, heart disease, chronic obstructive pulmonary disease and obesity[9].

Regarding psychobiological needs, it can be seen that those of oxygenation, nutrition, elimination, sleep and rest, body care, skin and mucous membrane integrity, physical integrity, thermal, hormonal, neurological, hydrosaline, electrolytic and immunological regulation, cellular and vascular growth, locomotion and perception: olfactory, visual, auditory, tactile, gustatory and painful are related to some of the diagnoses present in this study. It's worth pointing out that nurses must take into account the problems and basic needs when drawing up and implementing a care plan, as being aware of these needs is of total importance for quality care that meets the needs of each individual[10].

In the intensive care unit, due to the severity of the patients, assertive clinical judgment by the nursing professional, based on a careful and descriptive assessment of organic changes and basic human needs for planning interventions aimed not only at the problems listed but at the risks and incidents to which the elderly are subject, such as: catheter-associated bloodstream infection, ventilator-associated pneumonia, length of stay of patients in the intensive care unit and length of use of the central venous catheter[11], makes the importance of the nursing process and its

applicability with nursing diagnoses, to help the professional to a greater scientific empowerment and mastery regarding the real clinical conditions of the patient favoring an effective recovery[12].

Thus, geriatric syndromes provide essential support for research with elderly people, and it is therefore essential to relate them to the diagnoses found in an intensive care unit. Fragility syndrome is present in the vast majority of elderly people, as changes in the physiological system also reduce intrinsic capacity reserves (vitality, cognition, locomotion, sensory, and mood), leading to greater susceptibility to stress and making this population more vulnerable to adverse events[13].

As a result, it was possible to associate frailty with a greater number of diagnoses, such as: risk of infection; pain; self-care deficit for bathing and hygiene; imbalanced nutrition; impaired physical mobility; risk of impaired skin integrity; decreased cardiac tissue perfusion; impaired urinary elimination; constipation; disturbed sleep pattern and risk for fall. Impaired communication was associated with the diagnoses of anxiety; pain; self-care deficit for bathing and hygiene; imbalanced nutrition and risk for fall[7].

Cognitive impairment encompasses the diagnoses of anxiety and disturbed sleep pattern. This syndrome generates a severe public health problem and influences the individual's social and occupational issues[14]. Concerning iatrogenesis, this syndrome presented some diagnoses that are within the same domain in NANDA-I, such as hyperthermia related to infection, hypothermia related to infection, risk of infection, risk of impaired skin integrity, and risk for fall, which are nomenclatures observed in the medical records and are found in domain 11 – safety/protection. Thus, it can be seen that iatrogenesis is linked to care and protection by the professional, and that this syndrome arises from professional errors that affect the patient's health[15]. Other related diagnoses were unbalanced nutrition and diarrhea or constipation.

In this study, family insufficiency was related to the diagnosis of anxiety. However, it is known that during COVID-19 hospitalization, visits to intensive care units were not allowed. It is known that the family becomes an important ally during the hospitalization process, helping to reduce stress and anxiety[16].

As for immobility syndrome, the following were allocated: impaired physical mobility, the self-care deficit for bathing and hygiene, ineffective airway clearance, the risk for aspiration, and impaired skin integrity. The domains present were 4 – activity/rest and 11 – safety/protection. This syndrome is common in elderly people, especially those who are hospitalized, as the longer the hospital stay, the more harmful the effects of immobility and restriction to bed are[17].

Postural instability was more closely linked to nursing diagnoses such as risk for fall in domain 11 - safety and protection, impaired physical mobility, disturbed sleep pattern, ineffective breathing pattern, self-care deficit for bathing and hygiene in domain 4 - activity/rest, pain in 12 – comfort and impaired gas exchange in 3 – elimination and exchange. The most observed domain was 4 – activity/rest. During the aging process, some systems become ineffective in performing basic activities, because the physiological and natural changes of aging (senescence) are present[18]. However, frequent geriatric syndromes in the elderly population and in hospitalized patients require greater attention and better management of the quality of care in the face of disabilities[19].

According to the diagnosis of self-care deficit for bathing and hygiene, its definition is the inability to perform the activity of cleaning independently. It is known that bed baths for bedridden patients offer a number of benefits, helping with well-being, reducing odors, improving hygiene and stimulating the body's blood circulation. However, the procedure can also be harmful and clients may also experience an increase in respiratory rate, a decrease in body temperature, accidental removal or displacement of invasive devices and changes in body physiology, so the nursing team needs to take a closer look at the clinical assessment[20].

In addition, to assist, it is necessary to assess

the patient's hemodynamic situation, since instability can contribute to a worsening of the condition, given that a great deal of energy is expended during bathing, which can contribute to decompensation in hemodynamic parameters and subsequently lead to death[21].

Impaired physical mobility reflects on a person's social life, often exacerbating some feelings that end up influencing increased pain, anxiety and fatigue. It is worth noting that physical mobility helps prevent sarcopenia, reduces the risk for falls and improves quality of life[22-23]. These conditions can be harmful to the elderly who are hospitalized, as they are forced to remain confined to their beds due to the use of numerous devices and equipment and the complications that can arise, such as pressure injuries and ventilator-associated pneumonia.

Regarding the risk of impaired skin integrity, it is worth noting that ageing is a natural process that influences the loss of muscles and the precariousness of the tegumental system[24], as well as nutrition, medication and hydroelectrolytic disorders, which can cause stiffness and a reduction in the sebaceous and sweat glands, thus leading to dryness and lesions[10]. On the other hand, ineffective airway clearance, in which there is a "reduced ability to clear secretions or obstructions from the respiratory tract to keep the airways unobstructed"[7:432], is present in most patients with COVID-19, in which they present clinical changes, such as hypoxia, dyspnea, cyanosis and changes in breathing pattern[25].

The diagnosis of ineffective breathing pattern, on the other hand, was present in the vast majority of patients in the intensive care unit, using invasive mechanical ventilation[26] due to the respiratory failure present in the severe form of COVID-19, causing a lack of control in oxygen supply and consumption. It is known that diagnoses related to breathing are of total importance, as they significantly affect tissue oxygenation and become a problem that requires quick and effective nursing interventions to ensure an improvement in the patient's condition[27].

As for the diagnosis of hypothermia, this can be interpreted as a decrease in core body temperature below normal, which is present in cases of infection, given the changes that occur in thermoregulatory functions, leading to discomfort and other complications for patients, such as the development of coagulation disorders and cardiac arrhythmias[28]. As for sphincter incontinence, it was related to the diagnosis of impaired urinary elimination in patients hospitalized in an intensive care unit, as evidenced by the use of a bladder catheter, making it necessary to carry out and monitor the water balance[29].

Regarding the risk for aspiration, this refers to the susceptibility of liquid or solid secretions passing through the tracheobronchial region, causing serious damage to the patient's health. Patients with invasive devices in the intensive care unit, such as probes and orotracheal tubes, as well as difficulty in spontaneous breathing and swallowing and gastroparesis, use various types of medication and have a reduced cough reflex, are more susceptible to bronchoaspiration and aspiration pneumonia[30].

Study limitations

The study was only carried out in one intensive care unit in the municipality of Rio Branco, which was designed to receive patients who tested positive for SARS-CoV-2. As this was secondary data, there were gaps in the information and illegible records, as the information was extracted from the care routine for a condition in the service record and not for research purposes.

In addition, the results generated had the prescription of nursing diagnoses by several nurses who were in the routine of care in the intensive care unit in the first year of COVID-19, not being collected by the research team. Thus, prospective monitoring with daily, careful observation of elderly patients, with a list of diagnoses and carried out in various intensive care units would be a possible study to be developed in the future to compensate for these limitations.

Contributions to practice

This study showed the applicability of nursing diagnoses in the first year of the COVID-19 pandemic, enabling professionals to identify patients' main problems and needs, for individualized care contributing to better stability and recovery of the elderly patient. It also demonstrated the need for a daily correlation of diagnoses with each syndrome to complete the clinical assessment and propose interventions. It is hoped that this study will help to implement and scale up more specialized care focused on the vulnerabilities of each elderly person, given the demands of care and disabilities generated by geriatric syndromes.

Conclusion

Given the list of diagnoses for each geriatric syndrome, the importance of rigorous clinical assessment at the bedside and the imperative need to survey basic needs in consideration of the frailties and incapacities of the elderly can be observed to propose effective and therapeutic nursing care centered on the specificities of each comorbidity and the age group of elderly people aged 60 and over. It is worth considering that diagnoses in intensive care units provide nurses with greater scientific knowledge and help them to prescribe immediate and individualized interventions aimed at the health problems of hospitalization and possible risks. However, knowing the elderly person's functional limitations not only makes it possible to establish a careful care plan but also to assess how effective it can be in providing the best therapeutic response.

Authors' contribution

Conception and design or analysis and interpretation of data; Writing of the manuscript or relevant critical review of the intellectual content; Final approval of the version to be published; Responsibility for all aspects of the text in ensuring the accuracy and integrity of any part of the manuscript: Silva VS, Braga LS, Rocha GS. Writing of the manuscript or relevant critical review of the intellectual content; Final approval of the version to be published; Responsibility for all aspects of the text in ensuring the accuracy and integrity of any part of the manuscript: Moura RCA, Lima MAF, Fonseca MES, Nogueira LS.

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