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Nursing care for a patient with peripheral neuropathy in primary health care

Cuidados de enfermería para pacientes con neuropatía periférica en el nivel de atención primaria de salud

Cuidado de enfermagem a usuário com neuropatia periférica em nível primário de saúde

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Abstract

This study aimed to describe the application of the assessment, diagnosis, and planning stages of the Nursing Process for an elderly patient with Type 2 Diabetes Mellitus, peripheral neuropathy, and a complicated diabetic foot. The study was grounded in the North American Nursing Diagnosis Association International, Nursing Interventions Classification, and Nursing Outcomes Classification taxonomies, as well as Dorothea Orem's Self-Care Deficit Theory. It is a qualitative single-case study conducted at an outpatient health service in Rio de Janeiro, with data collected from medical records. Based on the identified diagnoses, expected outcomes and interventions were established to improve mobility, promote tissue healing, prevent new lesions, and achieve metabolic control. Applying the Nursing Process enabled the identification of the patient's needs and the planning of individualized care to promote self-care and improve the quality of care provided. The study underscores the importance of the nurse's role in caring for elderly patients with Diabetes Mellitus and neuropathic complications, particularly regarding the prevention of diabetic foot issues and amputations.

Descriptors: Diabetic Neuropathies; Amputees; Nursing; Nursing Process; Primary Environmental Care.

Resumén

El objetivo fue describir la aplicación de las etapas de valoración, diagnóstico y planificación del Proceso de Enfermería en un paciente anciano con diabetes mellitus tipo 2, neuropatía periférica y pie diabético complicado, basándose en las taxonomías de la Asociación Norteamericana de Diagnósticos de Enfermería Internacional, la Clasificación de Intervenciones de Enfermería y la Clasificación de Resultados de Enfermería, así como en la Teoría del Déficit de Autocuidado de Dorothea Orem. Se trata de un estudio cualitativo de caso único realizado en un servicio de salud ambulatorio de la ciudad de Río de Janeiro, con datos recopilados de la historia clínica del paciente. Con base en estos diagnósticos, se establecieron resultados e intervenciones esperadas dirigidas a mejorar la movilidad, promover la cicatrización de los tejidos, prevenir nuevas lesiones y controlar el metabolismo. La aplicación del Proceso de Enfermería permitió identificar las necesidades del paciente y planificar una atención individualizada para promover el autocuidado y mejorar la calidad de la atención. El estudio refuerza la importancia del rol de enfermería en el cuidado de personas mayores con diabetes mellitus y complicaciones neuropáticas, especialmente en el contexto de la prevención del pie diabético y las amputaciones.

Descriptores: Neuropatías Diabéticas; Amputados; Enfermería; Proceso de Enfermería; Enfermería de Atención Primaria.

Resumo

Objetivou-se descrever a aplicação das etapas de avaliação, diagnóstico e planejamento do Processo de Enfermagem em um usuário idoso com Diabetes Mellitus tipo 2, neuropatia periférica e pé diabético complicado, fundamentada nas taxonomias da *North American Nursing Diagnosis Association International*, *Nursing Interventions Classification* e *Nursing Outcomes Classification* e na Teoria do Déficit de Autocuidado de Dorothea Orem. Trata-se de um estudo de abordagem qualitativa, do tipo relato de caso único, desenvolvido em um serviço ambulatorial de saúde no município do Rio de Janeiro, com dados coletados a partir do prontuário. A partir desses diagnósticos, foram estabelecidos resultados esperados e intervenções voltadas à melhoria da mobilidade, à promoção da cicatrização tecidual, à prevenção de novas lesões e ao controle metabólico. A aplicação do Processo de Enfermagem possibilitou a identificação das necessidades do usuário e o planejamento de cuidados individualizados para a promoção do autocuidado e a melhoria da qualidade da assistência. O estudo reforça a importância da atuação do enfermeiro na atenção à pessoa idosa com Diabetes Mellitus e complicações neuropáticas, especialmente no contexto da prevenção do pé diabético e de amputações.

Descritores: Neuropatias Diabéticas; Amputados; Enfermagem; Processo de Enfermagem; Enfermagem de Atenção Primária.

Introduction

Diabetes Mellitus (DM) is a chronic disease characterized by persistent hyperglycemia resulting from alterations in insulin secretion and/or action. It is a multifactorial condition involving genetic, behavioral, and environmental factors, with a rising global prevalence; approximately 537 million adults worldwide have been diagnosed, with Brazil ranking sixth globally in terms of prevalence[1,2].

Type 2 diabetes mellitus (T2DM) is the most prevalent form, accounting for most cases and being primarily associated with insulin resistance or relative insulin deficiency. It follows a slow and often silent course, which hinders early diagnosis and fosters the development of chronic complications[2,3].

Among the most debilitating complications is peripheral diabetic neuropathy, a comorbidity affecting the lower limbs. Its etiology may be sensory, resulting in a loss of tactile sensation; motor, causing foot deformities and gait abnormalities; or autonomic, leading to skin dryness. The condition can be exacerbated by vasculopathy, which reduces blood perfusion and impairs wound healing. Diabetic foot refers to the occurrence of infection, ulceration, or tissue damage associated with neurological abnormalities and peripheral vascular disease in individuals with type 2 diabetes[4-7].

Caring for patients with diabetic feet requires a systematic and continuous approach. In this regard, the Nursing Process stands out as an essential methodological tool for organizing care, enabling the identification of needs, the planning of interventions, and the evaluation of outcomes. Regulated by COFEN Resolution No. 736/2024, this methodology governs the application of the Nursing Process within the socio-environmental context of care, guiding a safe, individualized, and evidence-based practice[8,9].

The nursing process consists of interrelated stages comprising assessment, diagnosis, planning, implementation, and nursing evaluation. Its application enables the nurse to gain a holistic view of the patient, considering biological, psychological, and social aspects, which is fundamental in the management of chronic diseases such as diabetes mellitus (DM), as these require continuous monitoring and actions aimed at promoting self-care[9].

The integration of the nursing process stages is operationalized through standardized language systems, wherein assessment informs diagnoses based on nursing taxonomy—specifically NANDA International (NANDA-I), the organization responsible for the standardized classification of nursing diagnoses. Care planning guides interventions via the Nursing Interventions Classification (NIC), which encompasses the actions and care measures performed by the nursing team. Clinical goals and expected outcomes are measured using the Nursing Outcomes Classification (NOC); this system fosters greater organization, communication, and quality in care delivery. This study aims to apply the assessment, diagnosis, and planning stages of the Nursing Process (NP), integrated through the NANDA-I, NOC, and NIC taxonomies, to the care of an elderly patient with peripheral diabetic neuropathy[10-12].

Methodology

This is a qualitative study that seeks to explore the complexity and richness of the social, cultural, scientific, and individual context, grounded in theoretical and methodological principles that guide data collection and analysis. The single-case study method is a procedure commonly used in clinical care to foster understanding and intervention planning, distinguished by its capacity to integrate various techniques and fields of knowledge. In this instance, theoretical knowledge was applied to the detailed analysis of the clinical condition of an elderly patient diagnosed with type 2 diabetes mellitus (T2DM) and neuropathic complications. The qualitative approach was selected because it enables an in-depth understanding of health conditions, individual needs, and subjective aspects related to care[11,12].

The study was conducted at a public outpatient health institute in the city of Rio de Janeiro that serves as a reference center for diabetes mellitus. Data collection took place from February to June 2023, while data processing and analysis were carried out between February and June 2026.

Data collection involved gathering clinical information, including past medical history, history of the present illness, physical examination, and laboratory test results. Furthermore, social and behavioral aspects of the case were considered, as they are essential for a comprehensive understanding of the clinical picture.

The case analysis presented the primary nursing diagnoses, as well as the planning and implementation of nursing care, based on current literature and Dorothea Orem's Self-Care Deficit Theory[13,14], grounding the stages of the nursing process: 1) Assessment (Nursing History), through the collection of clinical data from an elderly patient with type 2 diabetes and a deep plantar ulcer; 2) Nursing Diagnosis, using the NANDA-I taxonomy; and 3) Nursing Planning, establishing goals and actions based on classifications[12] and the NIC[11]. Due to the cross-sectional nature of the case analysis and the absence of longitudinal clinical follow-up by the researchers, the implementation and nursing evaluation stages were not included in the scope of this article, characterizing the methodological design as a targeted, preventive care plan.

The study was conducted in strict adherence to the ethical principles governing research involving human subjects, as established by National Health Council Resolutions No. 466/2012 and No. 674/2021. Anonymity, privacy, and the complete confidentiality of user information were rigorously guaranteed, ensuring the protection of the participant's identity at all stages of the research. The project received formal approval via the substantiated opinion of the Research Ethics Committee of the Luiz Capriglione State Institute of Diabetes and Endocrinology (IEDE/SES), under protocol number 5.814.509, and the elderly participant's involvement was formalized following the reading, clarification, and signing of the Informed Consent Form[15].

Results

Identification: Male patient, 79 years old, retired, born and residing in an urban area; diagnosed with Type 2 Diabetes Mellitus (T2DM) approximately 25 years ago, initially treated with oral antidiabetics and on insulin therapy for the last 10 years. Past Medical History (PMH): history of systemic arterial hypertension (30 years), dyslipidemia, peripheral diabetic neuropathy (diagnosed 8 years ago), and a prior hospitalization 3 years ago for a right foot infection resulting in transmetatarsal amputation; recurrent episodes of hyperglycemia; reports previous poor dietary adherence and irregular follow-up; denies known drug allergies. Family History (FH): father died at age 72 due to cardiovascular complications and DM; mother died at age 80 due to stroke; siblings diagnosed with T2DM. Social History (SH): widower, retired (former rural worker), lives with a daughter, incomplete primary education, sedentary lifestyle, alcohol consumer, and former smoker (40 pack-years; quit 10 years ago). Has maintained a diet high in simple carbohydrates for most of his life and experiences self-care difficulties following the amputation. History of Present Illness (HPI): patient reports that, about 6 months ago, a lesion developed on the plantar region of the left foot—initially painless and associated with pre-existing callus formation. It progressed to a deep plantar ulcer with seropurulent discharge and a foul odor. Denies significant local pain due to peripheral neuropathy. Reports a sensation of "tingling" and numbness in the left lower limb for years. Physical examination reveals a prior transtibial amputation of the right lower limb; the left foot presents a deep plantar ulcer in the metatarsal region with hyperkeratotic edges, and a wound bed showing granulation tissue and necrotic areas consistent with a neuropathic plantar ulcer (mal perforans); diminished peripheral pulses; 10 g monofilament test (esthesiometer) absent at multiple points (loss of protective sensation). Recent laboratory results show: Glycated hemoglobin: 9.2% and fasting blood glucose: 198 mg/dL.

Discussion

Diabetes mellitus and the complications associated with inadequate glycemic control, particularly diabetic foot, are major causes of hospitalization, infection, and amputation among the elderly. The clinical case presented highlights the complexity of care for a patient with long-standing type 2 diabetes, peripheral neuropathy, peripheral artery disease, and a history of amputation, factors that significantly increase the risk of new lesions and functional loss[5,16,17].

Dorothea Orem defined self-care as the activities an individual performs to maintain their well-being and care for themselves by regulating vital aspects of their life[13].

The diagnoses were listed based on the health problems experienced and the need for nursing care to meet self-care requirements. Dorothea E. Orem's self-care nursing theory proposes three types of requirements, activities the individual must perform to care for themselves: universal self-care requirements, developmental self-care requirements, and health-deviation self-care requirements (Chart 1)[13,14].

Chart 1. Relationship between self-care requirements, self-care deficits, and nursing diagnoses in the case of a patient with peripheral neuropathy. Rio de Janeiro, RJ, Brazil, 2026

Self-care requirements	Self-care deficit	Nursing diagnoses
Universal self-care	Walking, physical activity, treatment adherence.	Ineffective health self-management; impaired physical mobility.
Developmental	Physiological decline associated with aging.	Ineffective health self-management.
Health deviation	Diabetes; diabetic neuropathy; plantar ulcer.	Impaired physical mobility; impaired tissue integrity and ineffective health self-management.

Source: Adapted from NANDA[10].

Regarding the universal self-care requirement, consideration is given to internal or external factors that affect individuals' ability to manage their self-care and relate to the performance of activities of daily living, such as proper nutrition, hydration, personal hygiene, and physical activity. As a diabetic, the patient studied needs to control their diet, walk, exercise, and use medication correctly to maintain their health; however, this presents limitations due to a lack of information, the adoption of unhealthy lifestyle habits, and impaired balance and gait resulting from amputations and injuries[1,18,20]. Self-care needs manifest across life stages, such as old age, which, due to the physiology of aging, entails higher risks of falls, as well as mobility and metabolic changes[4,13,21]. The third requirement, health-deviation self-care, arises when the person presents with an illness, injury, or alteration in health status[13,21].

The initial diagnosis was impaired physical mobility related to left-sided hemiparesthesia, neuromuscular impairment (neuropathy), structural impairment on the right side (prior amputation), and diminished tissue perfusion (peripheral artery disease), characterized by an impaired ability to walk due to the amputation. The limitation in walking ability arises from lower-limb amputation, which causes significant alterations in gait biomechanics, directly impacting how the body moves and maintains balance[15].

Mobility constitutes a universal self-care requirement as well as a health deviation, given a person's inability to move within a space, a condition of physical function fundamental to the performance of activities of daily living (Chart 1)[11]. Once diabetic peripheral neuropathy causes a loss of protective sensation, it increases the risk of gait instability due to trauma and new injuries sustained while walking. Pain, discomfort, and the need to reduce pressure on the injured area also contribute to restricted mobility and a partial dependence on others for safe

ambulation[7,22]. It is worth noting that mobility impairments go beyond difficulties in performing activities of daily living, leading to dependency and disability[16].

Another established diagnosis was impaired tissue integrity related to inadequate glycemic control and peripheral diabetic neuropathy, characterized by the presence of a deep plantar ulcer on the lower left limb. The patient presents with a lesion featuring hyperkeratotic edges, necrotic areas, seropurulent discharge, and compromised tissue perfusion, evidencing damage to the skin and underlying tissues. The absence of protective sensation, confirmed by tactile sensitivity testing using an esthesiometer, facilitated repetitive trauma and delayed detection of the lesion, contributing to the worsening of the condition. Inadequate glycemic control, as demonstrated by the tests performed, affects the management of both the underlying disease and comorbidities, while also increasing the risk of infection and amputation[18,19,23]. A history of past and current injuries, in the context of diabetes mellitus as a comorbidity, necessitates self-care regarding identified health issues that require intervention to limit damage and maintain the user's autonomy[13].

Ineffective health self-management refers to an older adult's inability to manage their own care and the consequent need to learn how to handle their health condition or receive assistance in doing so. A lack of glycemic control and failure to maintain a healthy diet to manage the underlying disease, along with comorbidities such as diabetic foot and dyslipidemia, were key findings in establishing the diagnosis[14,21]. During nursing consultations in primary care, guidance on self-care and foot care, such as moisturizing and the use of appropriate footwear, should be provided. At this level of care, it is possible to establish continuous support within the community, including clinical management of diabetes mellitus, assessment of diabetic foot, and actions aimed at health promotion and the prevention of diseases and health conditions[18,19]. Deviations in health and development are marked, respectively, by the user's need to master diabetes management and by the physiological decline associated with aging, which brings health demands and a predisposition to diseases such as diabetes if the older adult has not adopted healthy practices (Chart 1)[24]. There is also the universal requirement for self-care, as diabetes management is linked to activities of daily living, such as nutrition, physical activity, and risk prevention[13].

The patient exhibits inadequate glycemic control, a history of recurrent hyperglycemia episodes, a sedentary lifestyle, and poor dietary habits, demonstrating difficulty adhering to treatment and properly managing the disease. Biases influence the decision-making of diabetic patients regarding self-care; these tend to be shaped by personal experiences and individual perceptions of the disease and their own bodies[17]. Nursing care planning for this patient is based on clinical reasoning and the application of the Nursing Process, utilizing standardized taxonomies to guide therapeutic decisions in a prioritized and multidimensional manner. The planning addresses the following: inadequate glycemic control, a history of recurrent hyperglycemia episodes, a sedentary lifestyle, and poor dietary habits, indicating difficulties with treatment adherence and proper disease management, which increase the risk of diabetes-related complications[2,20]. Furthermore, mobility restrictions and the presence of lesions were taken into account in the care planning for the elderly individual. The aim is to reverse or mitigate self-care limitations, with an emphasis on health education, as a lack of knowledge regarding their condition hinders the assessment of their health status, the seeking of institutional care support, and the understanding of when to request such support or advice[17,19].

Additional nursing care measures were identified based on the user's health-deviation self-care requirements and considering complications arising from type 2 diabetes, such as peripheral neuropathy, vascular impairment, plantar lesions, and functional limitations[23]. The proposed interventions aim to reduce immediate functional limitations, halt the progression of the infectious process, and restore metabolic stability to preserve the left lower limb, preventing further injuries and improving the patient's quality of life.

The balance outcome (Chart 2) was selected during the planning phase due to the self-care deficit and functional impairments resulting from a transmetatarsal amputation of the right lower limb and a deep plantar ulcer on the left lower limb, conditions that compromise safe ambulation, balance, and motor coordination. The indicators "maintain balance while walking or standing on one foot" and "uses proper body mechanics" allow for the assessment of the user's functional mobility progress and the effectiveness of interventions aimed at fall prevention, improved locomotion, and the promotion of partial independence during gait. The targets established for these indicators aim to gradually increase functional capacity and reduce risks associated with motor instability[5,25,26].

To address the balance outcome, the proposed intervention was exercise therapy: ambulation, and the specific activities (Chart 2) were selected based on the functional limitations the user exhibited due to lower-limb amputation and plantar ulcers. The activity "Assisting with the use of footwear that facilitates walking and prevents injury" is relevant for users with diabetic neuropathy who have lost protective sensation, a condition that increases the risk of trauma, the formation of new ulcers, and the worsening of existing lesions. The use of appropriate footwear is another nursing care resource, as it contributes to better plantar pressure distribution, tissue protection, and greater safety during gait[5,25,26]. Safe transfer and ambulation techniques should be implemented to address the user's impaired balance, motor coordination, and physical stability. These guidelines are important for reducing the risk of falls, preventing further injury, and promoting greater functional independence during daily activities[3].

Assistive devices, such as canes or walkers, where appropriate, help reduce the load on the injured limb, promote greater stability during gait, and facilitate safe mobility, considering the functional limitations and increased risk of instability resulting from peripheral neuropathy[3].

Chart 2. NIC-NOC linkages for the diagnosis of impaired physical mobility. Rio de Janeiro, RJ, Brazil, 2026

Nursing diagnoses		
Impaired physical mobility		
Results	**Interventions**	**Activities**
Maintains balance while walking or standing on one foot	Exercise therapy – ambulation	• Provide assistance through footwear and insoles that facilitate walking and prevent injuries. • Advise on the availability of assistive devices, if appropriate.
Uses proper body mechanics	Promotion of body mechanics	• Assess the user's understanding of body mechanics and exercise. • Apply principles of body mechanics when safely handling the user and using assistive devices for movement. • Demonstrate how to shift weight from one foot to the other while standing.

Source: Adapted from NIC and NOC[11,12].

Body mechanics should be promoted; by definition, this involves facilitating the use of posture and movement during activities to prevent fatigue, strain, or musculoskeletal injury[12]. It is possible to address biomechanics in individuals with an amputated limb who, due to fear of ground contact, place less body weight on the affected foot than on the unaffected one, even when proprioception is impaired. Guidance on the balanced use of the lower limbs during ambulation prevents overloading the non-amputated foot, as the amputated limb can still generate hamstring strength relative to the other limb, thereby enabling load distribution[27].

Chart 3. NIC-NOC linkages for the diagnosis of impaired tissue integrity. Rio de Janeiro, RJ, Brazil, 2026

Nursing diagnoses		
Impaired tissue integrity		
Results	**Interventions**	**Activities**
Tissue integrity - skin, membranes, and mucous membranes	Tissue perfusion Skin lesions	• Observe the characteristics of the wound, including drainage, color, size, and odor. • Encourage the user to play a more active role in the treatment. • Instruct the user on monitoring for signs and symptoms of tissue infection (such as local heat, redness, changes in odor, and increased purulent discharge) to facilitate early identification of systemic complications, given that the user's peripheral neuropathy masks pain symptoms. • Perform the dressing change.

Source: Adapted from NIC and NOC[11,12].

The outcome of tissue integrity: skin and mucous membranes (Chart 3) is relevant due to the presence of a plantar ulcer associated with peripheral diabetic neuropathy and peripheral vascular disease. Indicators regarding tissue perfusion and skin lesions were used to assess the patient's understanding of basic foot care and the prevention of infections and injuries[23]. It is essential to encourage the user to play a more active role in their treatment, including self-assessment of the feet, consistent moisturizing, and the use of appropriate footwear to prevent injuries or plantar strain. They need to recognize changes in their body, whether positive or negative—and know how to manage them appropriately, either directly or through healthcare services, while also understanding the importance of regularly having wound dressings changed at a Basic Health Unit within the primary care system[16,19,26]. By fostering engagement and shared responsibility in daily health practices, nursing empowers the user to progressively regain agency and control over their own metabolic and behavioral therapeutic regimen, thereby reducing the risk of relapse and hospital readmission[12]. Educational interventions structured for monitoring signs and symptoms of injury or infection mitigate the impact of peripheral neuropathy, which masks painful signals, and are integrated into the support-education system[23].

Chart 4. NIC-NOC linkages for the diagnosis of ineffective self-management of blood glucose levels. Rio de Janeiro, RJ, Brazil, 2026

Nursing diagnoses		
Ineffective blood glucose self-management		
Results	**Interventions**	**Activities**
Blood glucose	Hyperglycemia control	• Monitor blood glucose levels during consultations. • Guide diabetes management during illness and periods of high stress; assist in adjusting the regimen to prevent and treat hyperglycemia. • Facilitate adherence to diet and exercise plans and provide educational interventions regarding training and glucose awareness.
Knowledge - diabetes control	Preventive foot care measure	• Advise at-risk users to adopt lifestyle changes to reduce the risk of developing hyperglycemia.

	Prescribed meal plan	• Guide healthy eating patterns. • Guide physical activity.

Source: Adapted from NIC and NOC[11,12].

The glycemic control outcome and its indicator, blood glucose (Chart 4), were selected to monitor treatment response and adherence to therapeutic guidelines. The choice of this outcome is linked to the need to reduce chronic complications of diabetes mellitus, facilitate wound healing, and promote greater clinical stability[19].

Given the patient's inadequate glycemic control and recurrent episodes of hyperglycemia, the hyperglycemia control intervention (Chart 3) recommends the activity of "monitoring blood glucose levels" to assess the response to pharmacological and non-pharmacological treatments, prevent metabolic decompensation, and improve the healing process[11].

Similarly, monitoring the signs and symptoms of hyperglycemia enables the user to better manage their condition and the increased risk of metabolic complications resulting from uncontrolled diabetes, through the early identification of manifestations such as polyuria, polydipsia, fatigue, blurred vision, and weakness, thereby allowing for prompt interventions[11].

To facilitate adherence to the diet, the process includes counseling on healthy eating habits and the creation of an individualized, palatable diet that fits the user's economic means. Thus, by adopting a dietary plan tailored to the individual, considering their preferences and income, it is possible to effectively implement this pillar of glycemic control for diabetes management; this approach should be encouraged alongside physical activity, while accommodating the user's physical limitations[5,23].

The planning of the nursing interventions described in this study was based on Dorothea Orem's Self-Care Deficit Theory[13], aiming to intervene when an individual's therapeutic demand exceeds their capacity for self-care. In this elderly patient's case, the severity of established complications, such as the loss of protective sensation and severe functional limitation, clearly constitutes a self-care deficit. Consequently, the interventions are structured around both partially and wholly compensatory care. Part of the care is provided by the nursing team, which directly assumes responsibility for complex tasks, such as detailed wound assessment, control of risk factors for further amputations, and rigorous management of impaired tissue perfusion, representing essential steps where the patient lacks the autonomy to act independently.

For Dorothea Orem, the team's actions aimed at the direct treatment of the plantar lesion, specifically, dressing the wound using aseptic technique, constitute what is known as the wholly compensatory nursing system[12-14]. It should be implemented only when the nursing professional's technical expertise is required. Even so, the user plays an active role and engages in self-care by regularly visiting primary health care units for wound dressing or for assessment if symptoms predicting the worsening of the lesion are identified, a process that relies on a support-education system to enable the user to acquire the necessary knowledge[13].

The ongoing management of diabetic foot and diabetes mellitus within primary care enables systemic monitoring of the patient within the community and facilitates more effective health prevention and promotion activities, including educational support, thereby serving as a foundation for rehabilitation goals. As outlined in the interventions addressing the diagnosis of ineffective health self-management (Chart 4), the nursing focus shifts toward skill development and the empowerment of the patient-family unit. Educational efforts target the safe and correct management of insulin therapy, aiming to reverse inadequate metabolic control, as well as rigorous daily inspection of the remaining contralateral foot and adherence to therapeutic rest for the affected limb[2,23,24].

Caring for individuals with diabetic neuropathy remains a major challenge for nursing. Understanding self-care deficits is crucial for developing targeted, effective care that supports health outcomes and self-care performance. Given the multifactorial nature of diabetes mellitus (DM) and the importance of patient self-care, nursing plays a pivotal role in overcoming obstacles within these processes in Primary Health Care. Nursing care is essential for stabilizing the condition and limiting damage that could otherwise be prevented through early intervention. Nursing care should focus not only on diabetes itself but also on the needs of the elderly patient; to this end, Primary Health Care must be strengthened at both structural and professional levels[28]. The application of Orem's concepts supports continuous and integrated care, capable of empowering the user to act as an active agent in preventing further health issues and promoting long-term health[14].

Final Considerations

This case report provided insight into the complexity of nursing care for an elderly patient with long-standing Diabetes Mellitus complicated by severe chronic conditions, such as peripheral neuropathy, peripheral artery disease, and a complicated diabetic foot. It demonstrated that inadequate glycemic control, combined with poor treatment adherence, a sedentary lifestyle, and deficits in self-care, directly contributed to the development of a deep, infected plantar ulcer and a high risk of further amputation. Applying the nursing process facilitated critical thinking regarding individualized care planning, the early identification of complications, and the implementation of interventions aimed at wound healing, glycemic control, and the prevention of additional amputations. Furthermore, it underscored the importance of the nurse's role in providing continuous monitoring, health education, and self-care promotion for patients with diabetic foot conditions. The use of Dorothea Orem's Self-Care Deficit Theory made it possible to understand self-care requirements and guide the nursing

process. As this is a case study and user information was provided only at the time of data collection, the study has limitations that prevented the full execution of all stages of the nursing process.

References

1. Magliano D, Boyko EJ. IDF diabetes atlas. 10th ed. Brussels: International Diabetes Federation; 2021.
2. Muzy J, Campos MR, Emmerick I, Silva RSD, Schramm JMDA. Prevalência de diabetes mellitus e suas complicações e caracterização das lacunas na atenção à saúde a partir da triangulação de pesquisas. Cad Saude Publica. 2021;37(5):e00076120. https://doi.org/10.1590/0102-311x00076120
3. De Negreiros RV, Amâncio DCS, Alcântara CA, Bruce RDN, Nunes YMC, Silva JS, et al. Proposta de implantação do processo de enfermagem à pessoa com diabetes mellitus com risco de amputação. LEV. 2025;16(55):e11476. https://doi.org/10.56238/levv16n55-141
4. Oliveira SSS, Santos FP. Complicações do diabetes mellitus em idosos diabéticos: neuropatia e vasculopatia. Rev Ibero-Am Humanid Cienc Educ. 2024;10(5):2236-54. https://doi.org/10.51891/rease.v10i5.13905
5. Brasil. Ministério da Saúde. Protocolo Clínico e Diretrizes Terapêuticas Acromegalia [Internet]. Brasília (DF): Ministério da Saúde; 2025 [citado em 10 mai 2026]. Disponível em: https://www.gov.br/conitec/pt-br/midias/consultas/relatorios/2025/relatorio-preliminar-pcdt-acromegalia-cp-14
6. Rocha MCV, Costa HVCC, Cova MCC, Rocha LMV, Lira CVCF, Souza NCVF, et al. Diabetes mellitus em idosos: prevalência e incidência no Brasil. Braz J Implantol Health Sci. 2024;6(8):2418-31. https://doi.org/10.36557/2674-8169.2024v6n8p2418-2431
7. Braun JC, Rocha TRD. StepAmpute: abordagem de análise de marcha de amputados baseado na captura de movimentos ópticos sem marcadores. In: Anais da Escola Regional de Aprendizado de Máquina e Inteligência Artificial da Região Sul (ERAMIA-RS) [Internet]. Porto Alegre: SBC; 2025 [citado em 7 jun 2026]. p. 332-5. https://doi.org/10.5753/eramiars.2025.16693. Disponível em: https://sol.sbc.org.br/index.php/eramiars/article/view/39449
8. Barros ALBLD, Lucena ADF, Almeida MDA, Brandão MAG, Santana RF, Cunha ICKO, et al. O avanço do conhecimento e a nova resolução do Cofen sobre o Processo de Enfermagem. Rev Gaúcha Enferm. 2024;45:e20240083. https://doi.org/10.1590/1983-1447.2024.20240083.pt
9. Brasil. Conselho Federal de Enfermagem (COFEN). Resolução COFEN nº 736, de 17 de janeiro de 2024 [Internet]. Brasília (DF): COFEN; 2024 [citado em 7 jun 2026]. Disponível em: https://www.cofen.gov.br/resolucao-cofen-no-736-de-17-de-janeiro-de-2024/
10. Herdman TH, Kamitsuru S, Lopes CT, organizadores. Diagnósticos de enfermagem da NANDA-I: definições e classificação 2024-2026. 13ª ed. Porto Alegre: Artmed; 2024.
11. Wagner CM, Butcher HK, Clarke MF. NIC: classificação das intervenções de enfermagem. 8ª ed. Rio de Janeiro: Guanabara Koogan; 2025.
12. Moorhead S, Swanson E, Johnson M. NOC: classificação dos resultados de enfermagem. 7ª ed. Lucena ADF, Almeida MDA, organizadores. Rio de Janeiro: Guanabara Koogan; 2024.
13. Tanaka M. Orem's nursing self-care deficit theory: a theoretical analysis focusing on its philosophical and sociological foundation. Nurs Forum. 2022;57(3):480-5. https://doi.org/10.1111/nuf.12696
14. Bezerra MLR, Faria RDPR, Costa De Jesus CA, Dos Reis PED, Pinho DLM, Kamada I. Aplicabilidade da teoria do déficit do autocuidado de ordem no Brasil: uma revisão integrativa. J Manag Prim Health Care. 2019;9:e538. https://doi.org/10.14295/jmphc.v9i0.538
15. Nicacio EM. O processo de avaliação ética de pesquisas em Ciências Humanas e Sociais: considerações sobre uma peculiaridade brasileira. Prax Educ. 2023;18:e21663. https://doi.org/10.5212/praxeduc.v.18.21663.031
16. Brandão JL. Cognição, mobilidade e qualidade de vida de idosos com amputação de membro inferior devido à úlcera de pé diabético: uma série de casos [dissertação]. Belo Horizonte: Universidade Federal de Minas Gerais; 2022.
17. Yan F, Peng G, Sun R, Zhang Y, Qiao P, Liu M, et al. Identifying decision-making biases in self-care behaviours among patients with type 2 diabetes mellitus: a qualitative study from a behavioural economics perspective. Int J Nurs Stud. 2025;171:105182. https://doi.org/10.1016/j.ijnurstu.2025.105182
18. Caldeira JMA, Silva DVA, Barbosa LR, Evangelista CB, Brito MFSF, Caldeira AP, et al. Cuidados de enfermagem ao pé diabético na atenção primária: revisão de escopo. Acta Paul Enferm. 2024;37:eAPE01684. https://doi.org/10.37689/acta-ape/2024AR001684
19. Casarin DE, Donadel G, Dalmagro M, Oliveira PC, Ceranto DCFB, Zardeto G. Diabetes mellitus: causas, tratamento e prevenção. Braz J Dev. 2022;8(2):10062-75. https://doi.org/10.34117/bjdv8n2-107
20. Brasil. Ministério da Saúde. Envelhecimento e saúde da pessoa idosa. Brasília: Ministério da Saúde; 2006. (Cadernos de Atenção Básica; 19).
21. Gao H, Han Y, Deng D, Liu L. The intervention effect of comprehensive precision nursing in elderly patients with type 2 diabetes. Australas J Ageing. 2025;44(2):e70047. https://doi.org/10.1111/ajag.70047
22. Ventura De Oliveira R, Eduardo Dos Santos Oliveira L, Pestana Potsch B, Vinicius Vitoriano De Jesus B, Gomes Brandao D, Luiz Oliveira Dos Santos P, et al. Técnicas cirúrgicas: amputações parciais dos pés. In: Freitas GBL, editor. Teoria e prática trauma e emergência. 16ª ed. Rio de Janeiro: Editora Pasteur; 2024. p. 137-49. https://doi.org/10.59290/978-65-6029-132-4.16. Disponível em: https://editorapasteur.com.br/publicacoes/capitulo/?doi=10.59290/978-65-6029-132-4.16
23. Armstrong DG, Tan TW, Boulton AJM, Bus SA. Diabetic foot ulcers: a review. JAMA. 2023;330(1):62-75. https://doi.org/10.1001/jama.2023.10578
24. Chentli F, Azzoug S, Mahgoun S. Diabetes mellitus in elderly. Indian J Endocrinol Metab. 2015;19(6):744-52. https://doi.org/10.4103/2230-8210.167553
25. Rodrigues DF, Machado PAP, Martins T, Carvalho ALRF, Pinto CMCB. Avaliação da dependência do autocuidado em pessoas com amputações dos membros inferiores: um estudo exploratório. Rev Lat Am Enfermagem. 2024;32:e4333. https://doi.org/10.1590/1518-8345.7424.4333

26. Ferreira GRS, Viana LRDC, Frazão MCLO, Freitas SDA, Beserra HJMD, Costa KNDFM. Cuidados de enfermagem na reabilitação de pessoas com amputação de membros: revisão integrativa. Nursing (São Paulo). 2025;29(323):10738-51. https://doi.org/10.36489/nursing.2025v29i323p10738-10751
27. Filho F. Senso de posição articular, força e distribuição de carga entre os membros inferiores em amputação transtibial: estudo transversal [dissertação]. São Paulo: Universidade de São Paulo; 2019.
28. Figueiredo PM, Santos SV, Almeida DMC, Lemos ACM. Atendimento à pessoa idosa pelo Sistema Único de Saúde: reflexões gerontológicas. Glob Acad Nurs. 2025;6(Supl. 1):e460. https://doi.org/10.5935/2675-5602.20200460