

EXPERIENCE REPORT

Nursing Program Rehabilitation for postpuerperal patient with stroke: a case report

HIGHLIGHTS

- 1. Early rehabilitation is essential after a stroke.
- 2. Rehabilitation Nursing Program promotes functional recovery.
- 3. Rehabilitation nurse favors functional reeducation/readaptation.

Rosa Maria Nunes Leão¹ ©
Mónica Guilhermina Gonçalves Teixeira¹ ©
Mariana Mendes² ©
Olga Maria Pimenta Lopes Ribeiro³ ©

ABSTRACT

Objective: Identify health gains in post-puerperal patient care after ischemic stroke during a Rehabilitation Nursing Program. **Method:** Case report conducted in February 2022 in a hospital in the region of Porto, Portugal, with a puerperal patient victim of ischemic stroke undergoing a Rehabilitation Nursing Program during 12 days of hospitalization. Rehabilitation nursing care was sustained in the theoretical reference of Afaf Meleis. **Results:** The implementation of the rehabilitation nursing program produced gains in the functional recovery of the puerperal patient, specifically in the ability to perform daily life activities, increase muscle strength, improve balance, and walk, thereby enabling greater autonomy. **Conclusion:** The results reinforce the importance of Rehabilitation Nursing in rehabilitation and functional recovery. For clinical practice, it is emphasized that implementing personalized programs, which incorporate early and evidence-based interventions, is crucial for optimizing rehabilitation.

KEYWORDS: Stroke; Postpartum Period; Rehabilitation Nursing; Stroke Rehabilitation; Health Gains.

HOW TO REFERENCE THIS ARTICLE

Leão RMN, Teixeira MGG, Mendes M, Ribeiro OMPL. Nursing Program Rehabilitation for post-puerperal patient with stroke: a case report. Cogitare Enferm [Internet]. 2025 [cited "insert year, month and day"];30:e95359en. Available from: https://doi.org/10.1590/ce.v30i0.95359en

³ Escola Superior de Enfermagem do Porto, Porto, Portugal.

INTRODUCTION

Pregnancy involves changes in hemostasis and hemodynamic status that contribute to the increased risk of stroke during pregnancy and puberty. Cardioembolism, prothrombosis, preeclampsia, and eclampsia are indicated as triggering factors¹⁻², with the thrombotic risk persisting up to 12 weeks after delivery³. The incidence rate of postpartum stroke has been rising since 1990³, with the highest incidence in the first two weeks. This increased risk is associated with hypertensive disorders and heart disease⁴, often associated with increased incidence rates of obesity and late maternal age³.

Stroke is a medical emergency that requires multidisciplinary treatment⁵, where prompt diagnosis and early treatment contribute to the reduction of long-term morbidity². There is a need to develop and implement strategies in the field of prevention, treatment and early rehabilitation⁶⁻⁷ since due to this pathological process puberty may be associated with decreased muscle strength, discoordination, changes in speech/language, vision impairment, apraxia, ataxia, dysarthria, dysphagia, changes in cognitive function and consciousness⁸. In turn, these changes can compete for compromise in walking, in postural control/balance, influencing mobility and the ability to perform daily life activities⁹.

The activity of the Rehabilitation Nursing Team in Brazil, regulated by the Federal Council of Nursing (COFEN) through COFEN Resolution No. 728, of November 9, 2023¹⁰, authorizes the team to act directly in providing assistance in Rehabilitation Nursing. In addition, this regulation covers activities related to health education, teaching and research, as well as in care management.

In countries where professional practice in the field of rehabilitation nursing has been regulated for more years, Specialist Nurses in Rehabilitation Nursing (SNRN) gather a set of specific competencies, which are based on knowledge that enables the care of people with acute/chronic diseases or with their sequences¹¹. In their scope of action, they aim to promote and improve functionality, independence, and maximum satisfaction, as well as preserve the self-esteem and quality of life of each person⁸, focusing on care for rehabilitation and their support network in the process of living, sickness, and dying¹⁰.

SNRNs possess differentiated knowledge and assume responsibilities, including the person in their evaluation, as well as in the planning, implementation, and monitoring of the rehabilitation plan¹¹. Early, specialized, and daily intervention, in addition to preventing complications/incapacities, allows recovery of lost functions and/or strengthening of functionalities similar to the original ones⁷.

The puerperal patient who suffers from ischemic stroke in the postpartum period simultaneously experiences two transitions - one developmental transition and another health/disease transition⁷ with significant repercussions on their well-being. It is known that recovery from deficits is more likely the sooner the rehabilitation process begins, making the SNRN intervention in the acute phase even more relevant. In this sense, this study aims to identify health gains in puberty care after ischemic stroke during a Rehabilitation Nursing Program.

METHOD I

Case report based on the guidelines of the Case Report (CARE)¹², concerning a puerperal patient who on the 11th day after euthocic sub-epidural birth, had an ischemic stroke, being subjected to a 12 day Rehabilitation Nursing Program in an stroke unit (SU). The hospitalization of the puerperal patient took place in the year 2022 in a public hospital institution in the Northern Region of Portugal, which has 400 hospital beds.

Rehabilitation nursing care was supported in the theoretical framework of Afaf Meleis⁷ and utilizing the language of the International Classification for Nursing Practice (ICNP). The Afaf Meleis⁷ reference comprehends the transition as a change in the state of health, in the relationships of roles, and the expectations or abilities of the person. In the transition process, which is the case in the study, the challenge for the nurse is to understand the transition processes experienced by the puerperal patient and develop effective therapies that help her to recover stability and well-being, as well as to become empowered and empowered to face the continuity of her life in a healthy manner¹³.

For the assessment of deficits and as support for clinical SNRN decision-making, various instruments were used: the National Institutes of Health Stroke Scale (NIHSS) to evaluate the severity and magnitude of neurological deficit; the Gugging Swallowing Screen Scale (GUSS) to evaluate swallowing; the Muscle Strength Scale of the Medical Research Council (MRC) to evaluate muscle strength; the Tinetti Index to evaluate balance and the Barthel Scale Modified for evaluation of daily life activities supplemented by the Self-Care Dependency Evaluation Form (FADA).

In addition to the informed consent of the puerperal patient, this case study obtained the favorable opinion of the Ethics Committee of the hospital institution where the hospitalization took place, in Portugal, with process number 52/2021, and was conducted according to the required ethical and legal standards. In addition, it was authorized by the Board of Directors of the hospital institution at a meeting held in February 2022.

Case presentation:

The present case relates to a 31-year-old puerperal patient, who lives with her husband and newborn child in her own home, and is a store operator with an indefinite contract. Denied medication/allergy use and did not know of a family history of cerebrovascular disease. As antecedents were described dyslipidemia and arterial hypertension during pregnancy.

At home, on the 11th day after delivery, symptomatology of paresthesia in the lower limbs (LL) and, subsequently, in the left upper limb (LUL) begins, lack of strength and feeling of imbalance, culminating in plagia in the left lower limb (LLL) during transportation to the hospital. Transferred to Day 3 for Stroke Unit with diagnosis of ischemic stroke in the right anterior cerebral artery and recent thrombus with occlusion of the upper cervical segment of the right inner carotid artery. There is no indication for intravenous thrombolysis due to recent delivery, nor for thrombectomy, as there is no evidence of a large vessel occlusion.

Upon admission to SU, the puerperal patient scored 15 values on the Glasgow Coma Scale, with no changes in visual and spatial perception, oculomotricity, extinction, or agnosia. It presented symmetrical facial mimicry, conserved tactile and algid sensitivity,

and no aphasia, dysarthria, or dysphagia, with symmetrical lifting of the palate and protrusion of the tongue in the midline, along with conserved mobility.

According to the evaluation of the NIHSS scale, scores 4/42 are representative of a minor stroke but with significant functional limitations. These limitations were evident when applied to the MRC scale where muscle strength in LUL (proximal, medial and distal) showed movements against gravity, but did not overcome resistance (degree 3); in the proximal and medial LLL sketched contraction, but without movement (degree 1); and in the distal LLL without visible movements (degree 0). The balance was compromised, according to the Tinetti Index, with a score of 2/28, showing only sitting balance. All these deficits compromised the functional capacity for executing daily life activities, resulting in a score of 40/100 on the Barthel Scale Modified.

RESULTS

The care process during the rehabilitation nursing program was primarily focused on reeducation and functional re-adaptation, prevention of complications, and promotion of independence and autonomy in the postpartum period. In this sense, after the organized and systematic collection of data relevant to decision-making, the SNRN identified the areas in which intervention was necessary and planned the care accordingly.

Within the puerperal patient recovery/capacitation process, in relation to body movement, balance and self-care, along with the diagnoses of the health condition, the diagnoses in the context of "awareness", "knowledge" and "capacity" were prioritized, planning and implementing interventions to contribute to the improvement of the specific indicators of the transition process experienced by the puerperal patient.

Following this, in Chart 1, in relation to the nursing focus "body movement", with an emphasis on the field of muscular strength, the diagnostic process, the planning of the interventions, and the evaluation of the results obtained are presented.

Chart 1. Nursing focus: body movement. Porto, Portugal, 2022

(continue)

Nursing focus: body movement

Diagnostic process

Relevant data for diagnoses

- Decrease in muscle strength in proximal, medial, and distal LUL Grade 3; proximal, medial, and distal LLL - Grade 1/1/0, respectively. Absence of awareness of the relationship between muscular and joint exercises and limb mobility/increased muscle strength; lack of knowledge and ability to perform the exercises.
- Demonstrates cognitive ability, willpower, and a desire to become independent in caring for the newborn child.

Instruments to support decision-making

• Medical Research Council Muscle Strength Scale

Diagnostics

- Body movement compromised in the left upper limb
- Body movement compromised in the lower left limb
- Potential to improve awareness of the relationship between muscular and joint exercises and mobility
- Potential to improve knowledge about muscle and joint exercises
- Potential to improve the ability to perform muscular and joint exercises

Intervention planning

- Perform technique of muscular and joint exercises
- Analyze with the person the relationship between muscular and joint exercises and the mobility of the upper and lower limb left
- Teaching the person about muscle and joint exercises
- Instruct the person about muscle and joint exercises
- Training muscle and joint exercises
- Encourage the person to perform muscle and joint exercises

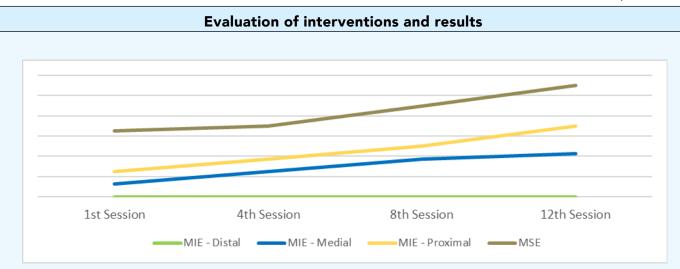
Note: The interventions were gradually adjusted to meet the needs and evolving requirements of the puerperal patient, as outlined in Chart 4.

Evaluation of interventions and results

The muscle strength in the segments of the left hemibody evolved favorably, except for the distal LLL that remained motionless (degree 0). The left upper limb at admission presented with a muscle strength grade of 3 (proximal, medial, and distal). After performing muscle and joint exercises, particularly active-resistance exercises, the grade evolved globally to 4 by the time of discharge. The lower left limb, namely the proximal, medial, and distal segments, evolved discreetly during rehabilitation sessions. At the level of proximal LLL there was a significant improvement in muscle strength (from grade 1 to grade 3), and rehabilitation with passive mobilizations was started, progressing to active-assisted exercises and, finally, active and active-resisted exercises. At the level of medial LLL, the evolution was even more favorable (grade 1 to degree 4), starting rehabilitation with passive mobilizations and gradually progressing to active-assisted, active, and finally active-resisted exercises, using elastic and weighted bands.

Chart 1. Nursing focus: body movement. Porto, Portugal, 2022

(conclusion)



The puerperal patient's awareness and knowledge of the relationship between muscular and joint exercises and mobility significantly contributed to her involvement in the rehabilitation process, demonstrating her ability to perform the exercises she was taught.

Nursing results:

- Improved body movement in the left upper limb
- Improved body movement in the lower left limb
- Awareness of the relationship between muscular and joint exercises and effective mobility
- Knowledge about effective muscle and joint exercises
- Ability to perform muscular and joint exercises effectively

Source: The authors (2022).

Chart 2 presents the diagnostic process, the planning of the interventions, and the evaluation of the results obtained in relation to the focus "balance".

Chart 2. Nursing focus: balance. Porto, Portugal, 2022

(continue)

Nursing focus: Balance

Diagnostic process

Relevant data for diagnoses

 Puerperal patient with damage to the muscular system associated with sequences in the left hemibody following the stroke. Presents sitting postural control, with the ability to maintain body symmetry when sitting; however, evidences difficulty in keeping the postural control standing.

Instruments to support decision-making

• Tinetti Index: manages to maintain the static balance sitting in the chair, but on the remaining items score 0.

Diagnostics

- Compromised balance
- Potential to improve awareness of the relationship between balance training exercises and balance
- Potential to improve knowledge about balance training exercises
- Potential to improve the ability to perform balance training exercises

Chart 2. Nursing focus: balance. Porto, Portugal, 2022

(conclusion)

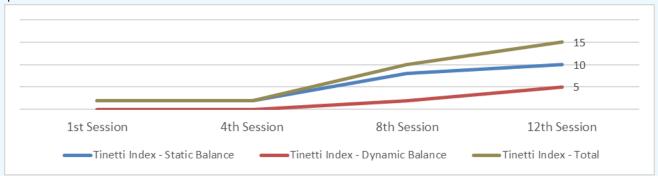
Intervention planning

Interventions

- Analyze with the person the relationship between balance training exercises and balance
- Teaching the person about balance training exercises
- Instruct the person about balance training exercises
- Training Balance Exercises
- Strengthening Balance Training Exercises

Evaluation of interventions and results

The evaluation of static and dynamic balance using the Tinetti Index evolved from 2 in the first evaluation to 15 at the time of elevation, with the maximum expected value being 28. At the time of the initial evaluation, the puerperal patient showed only sitting balance. In high, he was able to get up with fixed bar support, tolerate orthostatics with parallel feet, and expanded support base with pedestrian support. He also tolerated small imbalances in the same position, being able to sit with arm support and walk with one person support, even though the width, height, and symmetry of the step were still not normal.



• The puerperal patient's awareness and knowledge of the relationship between the balance training exercises and the improvement of balance, significantly contributed to her involvement in the rehabilitation process, demonstrating the ability to perform the exercises taught to her.

Nursing results:

- Improved balance
- Awareness of the relationship between balance training exercises and effective balance
- Knowledge of effective balance training exercises
- Ability to perform effective balance training exercises

Source: The authors (2022).

Given the limitations inherent to this type of publication, in relation to self-care, it was chosen to present the focuses "Capacity to take a bath", "Dressing/Undressing", "Use the toilet", "Transfer", and "Walk" in the same frame (Chart 3).

Chart 3. Nursing focuses: Ability to take a bath, Dressing/Undressing, Use the toilet, Transfer and Walk. Porto, Portugal, 2022

Nursing focuses: Capacity to take a bath, Dressing/Undressing, Use the toilet, Transfer and Walk

Diagnostic process

Relevant data for diagnoses

Motor deficit in the left hemibody, which associated with changes in balance, compromise
the realization of self-care. The puerperal patient needs help from a person or device to carry
out the activities inherent in taking a bath, dressing/undressing, using the toilet, moving and
walking. Presents cognitive ability, willpower and desire to become independent to take care of
the newborn child.

Instruments to support decision-making

- Modified Barthel scale
- Self-care Dependency Assessment Form

Diagnostics

- Potential for improving the ability to: [take a bath]; [dress/undress]; [use the toilet]; [transfer]; [walk]
- Potential for improving awareness of commitment in: [to take a bath]; [to dress/to undress]; [to use the toilet]; [to move]; [to walk]
- Potential to improve awareness of the relationship between device use and autonomy for: [to take a bath]; [to dress/to undress]; [to use the toilet]; [to move]; [to walk]
- Potential to improve knowledge about adaptation technique for: [take a bath]; [dress/undress]; [use the toilet]; [transfer]; [walk]
- Potential to improve the ability to use adaptation technique for: [to take a bath]; [to dress/to undress]; [to use the toilet]; [to move]; [to walk]

Intervention planning

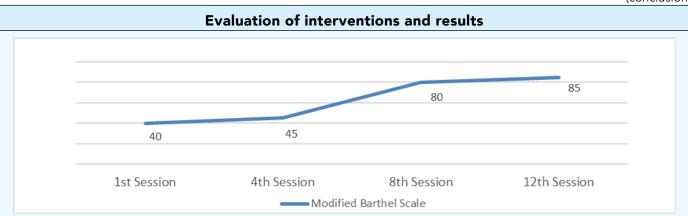
<u>Interventions</u>

- Watch the person to: [take a bath]; [dress/undress]; [use the toilet]; [transfer]; [walk]
- Analyze with the person the relationship between device use and autonomy for: [to take a bath];
 [to dress/to undress]; [to use the toilet]; [to move]; [to walk]
- Teaching about adaptation techniques for: [to take a bath]; [to dress/to undress]; [to use the toilet]; [to move]; [to walk]
- Instructions on adaptation techniques for: [take a bath]; [dress/undress]; [use the toilet]; [transfer]; [walk]
- Training adaptation technique for: [take a bath]; [dress/undress]; [use the toilet]; [transfer]; [walk]
- Praise the performance of the person

Evaluation of interventions and results

On the Barthel Scale Modified it was found that the score oscillated between 40 in the first evaluation and 85 at the time of the high, with the maximum expected value being 100. At admission, the puerperal patient depended on a person to carry out all activities inherent in self-care. The Self-Care Dependency Evaluation Form allowed us to follow the evolution in the ability to carry out each of the activities.

Chart 3. Nursing focuses: Ability to take a bath, Dressing/Undressing, Use the toilet, Transfer and Walk. Porto, Portugal, 2022 (conclusion)



The awareness of commitment to self-care and the knowledge of the puerperal patient regarding adaptation strategies in the face of deficits significantly contributed to their involvement in the rehabilitation process, as well as in the gradual recovery of the ability to realize the activities inherent to each self-care.

Nursing results:

- Ability to: [Improved bathing]; [Improved dressing/undressing]; [Improved toilet use]; [Improved bathing]; [Improved walking]
- Awareness of commitment to: [effective bathing]; [effective dressing/undressing]; [effective sanitary use]; [effective transfer]; [effective walking]
- Awareness of the relationship between device use and autonomy for: [effective bathing]; [effective ve dressing/undressing]; [effective sanitary use]; [effective transfer]; [effective walking]
- Knowledge of adaptation techniques for: [effective bathing]; [effective dressing/undressing]; [effective sanitary use]; [effective transfer]; [effective walking]
- Ability to use adaptation technique for: [improved bathing]; [improved dressing/undressing];
 [improved sanitary use]; [improved transfer]; [improved walking]

Source: The authors (2022).

To demonstrate the SNRN interventions during the rehabilitation nursing program, Chart 4 presents the specifics inherent in their implementation.

Chart 4. Operationalization of Rehabilitation Nursing Interventions - Rehabilitation Nursing Program. Porto, Portugal, 2022 (continue)

Operationalization of Rehabilitation Nursing Interventions - Rehabilitation Program								
	Intervention/activity	Repeats	Frequency	Duration	Intensity			
1st TO 3rd S e s i o n	Adaptation training for self-care people (take a bath, dress/undress, use the toilet, transfer and walk)	1x	1x day	30min				
	Active-Assisted Exercises* (LUL) with Direct Sensitive Feedback - Flexion, extension, abduction, adution, internal and external rotation of the shoulder - Flexion and elbow extension; Pronation and supination - Handle flexion and extension; radial deviation and cubital deviation - Flexion, extension, abduction, hand fingers and thumb opposition	10x	1x	8min				
	Passive exercises* (LLL) - Flexion/extension/abduction and hip addition - Flexion and extension of the knee - Dorsiflexion and plantar flexion; Eversion and Inversion of the foot*	10x	1x	6min	Level tolerated			
	Rolling and getting up in bed	5x	1x	3min				
	Pelvic and scapular waist/dissociation	5x	1x	3min				
	Sitting Dynamic Balance Training - Sitting in the chair (feet on the floor), raising arms vertically and horizontally and standing (with eyes open and then with eyes closed) - Cross stimulation - Instability caused by oscillations	10x	1x	10min				

Chart 4. Operationalization of Rehabilitation Nursing Interventions - Rehabilitation Nursing Program. Porto, Portugal, 2022 (conclusão)

	indising i rogiani. I of	ito, i ortu	Jai, 2022		(conclusão			
	Operationalization of Rehabilitation Nursin	g Intervent	ions - Rehabi	litation Pro	gram			
	Intervention/activity	Repeats	Frequency	Duration	Intensity			
4th	Adaptation training for self-care people (take a bath, dress/undress, use the toilet, transfer and walk)	1x	1x	30min				
то	Active Exercises (LUL) - all previously described	10x 10x	1x	8min				
8th	Active-assisted exercises (LLL proximal/medial) - all previously described		1x	4min				
S e	Passive exercises (LLLdistal) - all previously described 10x 1x 2 min							
	Rolling and getting up in bed	5x	1x	3min	tolerated			
s s	Pelvic and scapular waist/dissociation	5x	1x	3min				
i o n	Sitting Dynamic Balance Training - all previously described State balance training standing - hands supported on the walker, strength in the arms, feet supported on the ground and centered at the base of the walker, body in orthostatic, contracted buttocks and abdomen, looking forward	10x	1x	10min				
				Tot	al: 60 minutes			
	Adaptation training for self-careers (take a bath, dress/undress, use the toilet, transfer and walk)	1x	1x	20min				
9th	Active-Resistant Exercises (LUL) - all previously described with elastic strips, weight of 500gr and 1kg bracket	10x	1x	8min				
ТО	Active exercises (LLL proximal/medial) - all previously described	10x	1x	4min				
12th	Passive exercises (LLLdistal) - all described above	10x	1x	2min	Level			
S	Rolling and getting up in bed	5x	1x	3min	tolerated			
е	Pelvic and scapular waist/dissociation	5x	1x	3min				
s s i o n	State balance training standing - all previously described Dynamic balance training standing - small imbalances, with eyes open and then closed; 360o turns; walking on unstable surfaces of different texture; obstruction contour/ transposition	3x	1x	15min				
	Walking training - with the help of 1 person and "foot up" for ankle-foot stabilization	1x	1x	5min				

Note: *Inciding in antispastic movements.

Source: The authors (2022).

In line with the decision-making support instruments used in the puerperal rehabilitation process, Chart 5 shows the observed evolution.

Chart 5. Results obtained with the Rehabilitation Nursing Program. Porto, Portugal, 2022

Session	Esc NIHSS	Esc Barthel Modified	Esc MRC LULProx Medial/Distal	Esc MRC LLL Prox	Esc MRC LLL Medial	Esc MRC LLL Distal	Statistic Tinetti Index	Dynamic Tinetti Index	Índ Tinetti Total
1a	4	40	3	1	1	0	2	0	2
4a	4	35	3	2	2	0	3	0	3
8a	3	80	4	3	3	0	7	3	10
12a	2	85	4	3	4	0	10	5	15

Note: *Esc = Scale; Ind = Index; Prox = Proximal.

Source: The authors (2022).

As shown in Chart 5, the favorable evolution in muscle strength of the upper and lower left limbs, as well as balance, has a positive impact on functional ability to perform daily activities, which is promising for the rehabilitation process during puberty.

DISCUSSION

To establish a process of rehabilitation nursing care adapted to the needs of each person, it is essential that the SNRNs use the nursing process systematically, identifying focus points, formulating diagnoses, planning interventions and evaluating the results, to become facilitators in the transition process and, consequently, in the recovery of the person ¹⁴⁻¹⁵.

After 12 rehabilitation sessions with the implementation of an early rehabilitation nursing program, personalized, reformulated several times with puerperal patient knowledge/partnership, with investment in interventions in the field of teaching, instructing and training, the health gains in the level of muscle strength, balance and, fundamentally, self-care capacitation were evident. This was possible because the rehabilitation nursing program focused on motor functional reeducation, balance, and training of the activities inherent in self-care. For motor functional reeducation, passive exercises were performed through active-resistant exercises adapted to the muscle strength of each body segment.

During the program, exercises for balance and perception training contributed to a significant improvement in both static and dynamic balance. These results contradict what other authors have stated, namely that functional training, which combines musculoskeletal and sensory interventions, appears to be effective in improving balance and postural stability, respectively¹⁶⁻¹⁸.

It should be noted that in the 9th session, the muscle strength and static balance in the standing position ensured the safety conditions, enabling the start of walking training, which corroborates other authors who state that balance in the standing position is significantly related to the ability to walk¹⁹⁻²⁰. Before starting the dynamic balance training and the walk, an orthesis was applied to stabilize the tibiotarsic joint to prevent complications such as sprains or falls since the end of the distal LLL remained without visible movements.

In conjunction with the gains in muscle strength and balance, with teaching, instruction and training of adaptation techniques for self-care patients, at the time of hospital discharge, the puerperal only needed support to walk and climb and descend stairs, which goes against the claim that balance is a prerequisite to recover the ability to walk and realize the activities of daily life^{16,20-21}.

All health gains mentioned above are reflected in the final assessment on the severity and magnitude scale of the neurological deficit, as assessed by the NIHSS, which decreased from four to two, indicating improvement in motor deficits, mobility, balance, and the ability to perform daily life activities. The achieved results also show that specialized nursing care for rehabilitation plays an important role in early intervention in the post-stroke post-puerperal, as it influences the gradual transition from a state of dependence to independence, the reconstruction of autonomy, physical and psychological well-being, and the improvement of quality of life²².

Following the theoretical reference of Afaf Meleis, and as defended by some authors¹³, the intervention of the SNRN in the "awareness", "knowledge" and "capacity" of the puerperal allowed her empowerment, in the sense of developing skills and, consequently, feeling empowered to deal with the challenges that arise in the day-to-day, resulting from the transitional processes she experiences.

It is essential to note that nursing in rehabilitation is experiencing significant growth in Brazil, as acknowledged by the Federal Council of Nursing. The results presented in this case report are crucial in reinforcing the importance of Rehabilitation Nursing in the transition processes experienced by individuals. The study highlights the benefits of personalized care, which meets the specific needs of each patient, through the development of evidence-based practices and interventions. These practices not only assist in functional recovery, but also promote the social reintegration of individuals, providing a positive impact on their quality of life.

In addition, the operation of SNRNs plays a crucial role in expanding health benefits, especially in areas where multidisciplinary health teams are scarce, which can compromise the ability to meet the population's health needs.

FINAL CONSIDERATIONS

Rehabilitation nursing produces health gains in all contexts of practice, as evidenced by the prevention of disabilities and the recovery of remaining abilities following sudden illnesses, such as strokes, thereby enabling individuals to achieve greater autonomy. The design, implementation and evaluation of the Rehabilitation Nursing Program in a personalized way, allowed, in the case presented, significant gains in self-care, muscle strength, balance and walking, favoring the process of functional readaptation/reeducation and satisfaction of the postpartum, promoting health and preventing complications in the unceasing search for well-being. These

gains allowed the puerperal to increase her self-esteem and belief in her ability to carry out daily activities related to newborn care and to expect that she could fulfill her role as a mother in the near future.

REFERENCES

- 1. Manikinda J, Kaul S. Stroke around pregnancy; protection and prevention! Ann Indian Acad Neurol [Internet]. 2023 [cited 2024 Mar 15];26(5):631-7. Available from: https://doi.org/10.4103/aian.aian_492_23
- 2. Richardt A, Aarnio K, Korhonen A, Rantanen K, Verho L, Laivuori H, et al. Etiology and risk factors of ischemic stroke during pregnancy and puerperium: a population-based study. Eur Stroke J [Internet]. 2023 [cited 2024 Mar 9];8(2):475-82. Available from: http://dx.doi.org/10.1177/23969873231170096
- 3. Swartz RH, Cayley ML, Foley N, Ladhani NNN, Leffert L, Bushnell C, et al. The incidence of pregnancy related stroke: a systematic review and meta-analysis. Int J Stroke [Internet]. 2017 [cited 2024 Mar 9];12(7):687-97. Available from: http://dx.doi.org/10.1177/1747493017723271
- 4. Bushnell CD, Kapral MK. Advances in stroke: stroke in women. Stroke [Internet]. 2022 [cited 2024 Mar 21];53(2):605-7. Available from: http://dx.doi.org/10.1161/strokeaha.121.036975
- 5. McDermott M, Miller EC, Rundek T, Hurn PD, Bushnell CD. Preeclampsia: association with posterior reversible encephalopathy syndrome and stroke. Stroke [Internet]. 2018 [cited 2024 Mar 21];49(3):524-30. Available from: http://dx.doi.org/10.1161/STROKEAHA.117.018416
- 6. Powers WJ, Rabinstein AA, Ackerson T, Adeoye OM, Bambakidis NC, Becker K, et al. Guidelines for the early management of patients with acute ischemic stroke: 2019 update to the 2018 Guidelines for the early management of acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. Stroke [Internet]. 2019 [cited 2024 Mar 15];50(12):e344-e418. Available from: https://www.ahajournals.org/doi/full/10.1161/STR.00000000000000011
- 7. Ribeiro O, editor. Enfermagem de Rehabilitação: conceitos e práticas. Lisboa: Lidel; 2021. 719 p.
- 8. World Health Organization (WHO). WHO STEPS stroke manual: enfoque passo a passo da OMS para a vigilância de acidentes vascular cerebrais [Internet]. Geneva: WHO Press; 2009 [cited 2024 Feb 9]. 88 p. Available from: https://www.paho.org/hg/dmdocuments/2009/manualpo.pdf
- 9. Boumer TC, Firmino TC, Devetak GF, Martello SK, Moser AL, Manffra EF. Efeitos do treino de marcha com suporte parcial de peso corporal associado a fisioterapia convencional sobre o equilíbrio funcional e a independência da marcha pós-AVC: estudo clínico randomizado. Rev Inspir, Mov Saúde [Internet]. 2019 [cited 2024 Feb 9];19(4):1-21. Available from: http://revistams.inspirar.com.br/277287-2/
- 10. Conselho Federal de Enfermagem (COFEN). Resolução COFEN n° 728 de 9 de novembro de 2023. Diário Oficial da União [Internet]. 2023 Nov 16 [cited 2024 Mar 23];217(Seção 1):137. Available from: https://www.cofen.gov.br/wp-content/uploads/2023/11/Publicacao-Diario-Oficial-Resolucao-728-2023.pdf
- 11. Ordem dos Enfermeiros (PT). Regulamento n°. 392/2019. Regulamento das competências específicas do enfermeiro especialista em Enfermagem de Reabilitação. Diário da República (PT) [Internet]. 2019 May 3 [cited 2024 Mar 23];85:13565-8. Available from: https://www.ordemenfermeiros.pt/media/11871/1356513568.pdf
- 12. Riley DS, Barber MS, Kienle GS, Aronson JK, Schoen-Angerer T, Tugwell P, et al. CARE guidelines for case reports: explanation and elaboration document. J Clin Epidemiol [Internet]. 2017 [cited 2024 Jan 21];89:218-35. Available from: http://dx.doi.org/10.1016/j.jclinepi.2017.04.026
- 13. de Sousa L, Martins MM, Novo A. A Enfermagem de Reabilitação no empoderamento e capacitação da pessoa em processos de transição saúde-doença. Rev Port Enf Reab [Internet]. 2020 [cited 2014 Sep

- 2];3(1):64-9. Available from: https://doi.org/10.33194/rper.2020.v3.n1.8.5763
- 14. Ribeiro OMPL, Martins MMFPS, Tronchin DMR, Forte ECN. Implementation of the nursing process in Portuguese hospitals. Rev Gaúcha Enferm [Internet]. 2018 [cited 2024 Mar 19];39:e2017-0174. Available from: https://doi.org/10.1590/1983-1447.2018.2017-0174
- 15. Ribeiro OMPL, Martins MMFPS, Tronchin DMR, da Silva JMAV, Forte ECN. Professional practice models used by nurses in Portuguese hospitals. Rev Bras Enferm [Internet]. 2019 [cited 2024 Mar 19];72(Suppl 1):24-31. Available from: http://dx.doi.org/10.1590/0034-7167-2017-0670
- 16. De Matos MFG, Simões JAG. Enfermagem de Reabilitação na transição da pessoa com alteração motora por AVC: revisão sistemática da literatura. Rev Port Enf Reab [Internet]. 2020 [cited 2024 Mar 19];3(2):11-9. Available from: http://dx.doi.org/10.33194/rper.2020.v3.n2.2.5770
- 17. Li J, Zhong D, Ye J, He M, Liu X, Zheng H, et al. Rehabilitation for balance impairment in patients after stroke: a protocol of a systematic review and network meta-analysis. BMJ Open [Internet]. 2019 [cited 2024 Mar 23];9(7):e026844. Available from: http://dx.doi.org/10.1136/bmjopen-2018-026844
- 18. Teasell R, Hussein N, Iruthayarajah J, Saikaley M, Longval M, Viana R. Stroke rehabilitation clinical handbook [Internet]. Ontário, CA: EBRSR Evidence-Based Review of Stroke Rehabilitation; 2020 [cited 2024 Mar 23]. Available from: http://www.ebrsr.com/sites/default/files/EBRSR%20Handbook%20Intro.pdf
- 19. Hugues A, Di Marco J, Ribault S, Ardaillon H, Janiaud P, Xue Y, et al. Limited evidence of physical therapy on balance after stroke: a systematic review and meta-analysis. PLoS One [Internet]. 2019 [cited 2024 Mar 23];14(8):e0221700. Available from: http://dx.doi.org/10.1371/journal.pone.0221700
- 20. Oliveira PA, Martins MM, Mendes M, Vandresen L, Gomes BP, Ribeiro OMPL. Balance and gait of elderly people: evaluation using technology. Rev Port Enf Reab [Internet]. 2023 [cited 2024 Mar 29];6(2):e338. Available from: https://rper.aper.pt/index.php/rper/article/view/338/572
- 21. Seo KC, Kim JS, Wi GS. The effects of stair gait exercise on static balance ability of stroke patients. J Phys Ther Sci [Internet]. 2014 [cited 2024 Mar 23];26(11):1835-8. Available from: http://dx.doi.org/10.1589/jpts.26.1835
- 22. Araújo P, Soares A, Ribeiro O, Martins M. Processo de cuidados de Enfermagem de Reabilitação à adulta/idosa com compromisso no sistema nervoso. In: Ribeiro O, editor. Enfermagem de Reabilitação: conceções e práticas. Lisboa: Lidel Edições Técnicas; 2021. p. 164-233.

Received: 01/05/2024 **Approved:** 30/01/2025

Associate editor: Dra. Tatiane Herreira Trigueiro

Corresponding author:

Mariana Mendes

Universidade Federal de Santa Catarina

R. Delfino Conti, S/N - Trindade, Florianópolis - SC, 88040-370

E-mail: mariana.mendes@unochapeco.edu.br

Role of Authors:

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - Leão RMN, Teixeira MGG, Mendes M, Ribeiro OMPL. Drafting the work or revising it critically for important intellectual content -Leão RMN, Teixeira MGG, Mendes M, Ribeiro OMPL. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - Ribeiro OMPL. All authors approved the final version of the text.

ISSN 2176-9133



This work is licensed under a Creative Commons Attribution 4.0 International License.