IMPLEMENTAÇÃO DE PROGRAMA DE ENFERMAGEM DE REABILITAÇÃO EM IDOSO COM FRAGILIDADE/SÍNDROME DE DESUSO – ESTUDO DE CASO

IMPLEMENTACIÓN DE UN PROGRAMA DE ENFERMERÍA DE REHABILITACIÓN EN PERSONAS MAYORES CON FRAGILIDAD/SÍNDROME DE DESUSO - ESTUDIO DE CASO

IMPLEMENTATION OF A REHABILITATION NURSING PROGRAM IN ELDERLY PEOPLE WITH FRAGILITY/DISUSE SYNDROME - CASE STUDY

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RESUMO

Introdução: A pessoa com síndrome de desuso pode apresentar alterações do equilíbrio e uma condição de fragilidade, com consequente défice no desempenho das suas atividades de vida diária.

Objetivo: Identificar os ganhos sensíveis aos cuidados de enfermagem de reabilitação com um programa de atividades e exercícios terapêuticos na recuperação do equilíbrio e melhoria da fragilidade.

Método: Estudo de abordagem qualitativa, tipo estudo de caso. É apresentado o caso de uma pessoa idosa com síndrome de desuso admitida num internamento de adultos. Os princípios éticos em investigação foram cumpridos.

Resultados: Foram evidenciados ganhos no equilíbrio postural e na fragilidade após implementação de 9 sessões de exercícios terapêuticos e treino de equilíbrio.

Conclusão: A implementação de cuidados de enfermagem de reabilitação revelou-se eficaz na recuperação do equilíbrio corporal na pessoa com síndrome de desuso, assim como numa melhoria da fragilidade, otimizando a sua autonomia.

Palavras-chave: enfermagem de reabilitação, equilíbrio postural, exercícios terapêuticos, fragilidade, síndrome de desuso

RESUMEN

Introducción: La persona con síndrome de desuso puede presentar cambios de equilibrio y una condición de fragilidad, con el consecuente déficit en el desempeño de sus actividades de la vida diaria.

Objetivo: Identificar las ganancias sensibles al cuidado de enfermería rehabilitadora con un programa de actividades terapéuticas y ejercicios para recuperar el equilibrio y mejorar la fragilidad.

Método: Estudio cualitativo, estudio de caso. Se presenta el caso de un anciano con síndrome de desuso ingresado en un hospital de adultos. Se han seguido los principios éticos de la investigación.

Resultados: Se evidenciaron ganancias en el equilibrio postural y la fragilidad luego de la implementación de 9 sesiones de ejercicios terapéuticos y entrenamiento del equilibrio.

Conclusión: La implementación de los cuidados de enfermería rehabilitadora demostró ser efectiva en la recuperación del equilibrio corporal en personas con síndrome de desuso, así como en la mejora de la fragilidad, optimizando su autonomía.

Palabras clave: enfermería de rehabilitación, equilibrio postural, ejercicios terapéuticos, fragilidad, síndrome de desuso

ABSTRACT

Introduction: The person with disuse syndrome may present with balance changes and a condition of frailty, with a consequent deficit in the performance of their activities of daily living.

Objective: To identify the gains sensitive to rehabilitation nursing care with a therapeutic activity and exercise program in restoring balance and improve frailty.

Method: Qualitative study, case study. The case of an elderly person with disuse syndrome admitted to an adult hospital is presented. The ethical principles in research have been followed.

Results: Gains in postural balance and frailty were evidenced after the implementation of 9 sessions of therapeutic exercises and balance training.

Conclusion: The implementation of rehabilitation nursing care proved to be effective in recovering body balance in people with disuse syndrome, as well as in improving frailty, optimizing their autonomy.

Keyword: rehabilitation nursing, postural balance, therapeutic exercises, fragility, disuse syndrome

INTRODUCTION

Population aging is a question that has been increasingly debated. The National Statistics Institute (NSI) even states that it is expected that in 2080, for every 100 young people, 317 will be elderly. The aging rate in Portugal is 157.4%, with 153 elderly people for every 100 young people, compared to the 1965 aging rate of 27.5%[1]. Considering this population framework, there is a social, economic and health concern, in order to find answers to this new reality.

Human aging can be defined as the process of progressive change in the biological, psychological and social structure of individuals that, starting even before birth, develops throughout life[2]. This should not be seen as an obstacle, but as an integral part of the life cycle, and it is desirable that the elderly live in a healthy and autonomous way, as long as possible. For that to happen, a restructuring/adaptation of the attitude of the population in general, of the health services, of investment in the training of health professionals and of social support is necessary, in order to prevent the frailties that often accompany the elderly person[2].

There are several concepts to assess aging, with frailty being one of the fundamental concepts. It is directly related to aging, and is characterized by a decrease in physiological reserves and an increase in functional decline, associated with multiple physical changes[3]. Decreased muscle mass and strength, exhaustion, changes in gait and balance, anorexia and progressive weight loss[4] are some of the physical changes associated with aging and the frailty syndrome in the elderly. Although frailty is age-related, it is not exclusively the result of the aging process; it is also associated with the presence of comorbidities, which accumulate in this process [4].

According to several studies, the factors associated with frailty are age, in which 3.9% are between 65-74 years and 25% are aged 85 years or older, female gender, black race and low level of education. There is also a study that states that the use of excessive medication, the high number of pathologies and the reduced perception of health are factors associated with frailty[4].

Early identification of frailty is essential, in order to promote earlier action and the use of more effective interventions. For this identification, it is necessary to apply validated and reliable instruments. A group of researchers from Canada studied a way to detect frailty in the elderly and proposed a scale for its assessment: the *Edmonton Frail Scale* (EFS), with nine domains and eleven items. According to the result, the degree of frailty varies from non-frail to severe frailty[6].

In a longitudinal study carried out in Brazil with 262 participants, 50.4% were frail and 21.0% were vulnerable[5]. To combat these numbers, it is essential to invest in rehabilitation of the elderly. The practice of physical exercise in the lower limbs is considered the most effective method to preserve mobility, thus preventing the functional decline of the elderly[4].

Mobility is the ability to move around, it is a complicated function and is composed of multiple actions, which depend on an integration of multiple characteristics: physical, cognitive and psychological[7]. In 1986 Tinetti developed a scale to assess static and dynamic balance and mobility, which is characterized by the absence of sophisticated equipment, being reliable to detect significant changes during gait. The use of this assessment instrument has important implications on the quality of life of people with frailty, since it enables preventive actions, care and rehabilitation actions.

The evidence on postural stability decrease with age is described in the literature. Physical activity, with aerobic and strength exercise, can prevent the decline of many structures related to maintaining balance. Muscle strength, cell capillarization, innervation of active muscle fibers and flexibility in the elderly can be worked on and improved through a strength exercise program[8]. Thus, it is essential to implement an exercise program in order to promote balance.

MATERIAL AND METHODS

The case study, as a research method, allows the researcher to study individual or group phenomena, in a real context, with the purpose of exploring, describing and explainung an event based on the research problem in order to clearly understand the phenomenon, using various sources of evidence [9]. In line with the above, Yin and Stake's references were used for the elaboration of this case study.

The study describes the case of an elderly woman with altered postural balance and frailty syndrome due to prolonged hospitalization in an intensive care unit due to pneumonia and demonstrates a functional balance reeducation program developed at home, evidencing the results obtained, with a decrease in fragility. Data collection was performed through anamnesis and consultation of the clinical file.

The rehabilitation program took place during the month of March 2019, from admission to the inpatient service to home, for 9 days. The results achieved during the sessions were monitored and for the present study they are represented in tables 3 and 4. The person involved was designated as “Mrs. M”, safeguarding the confidentiality of the data and her

anonymity. Mrs. M was informed of her rights to participate in the study and informed consent was obtained prior to data collection.

In order to assess, quantify and highlight balance and the frailty syndrome, measurement instruments were used, namely the Tinetti Scale, which is easy to apply and does not require sophisticated equipment, and the adapted Edmonton Frailty Scale.

CASE PRESENTATION

Anamnesis

The case under study corresponds to a 65-year-old female, caucasian, of portuguese nationality. Married, has 3 adult, financially independent children and 3 grandchildren. She's a retired doctor.

She was admitted on February 6, 2020, due to respiratory failure with severe hypoxemia, smoker of 20 cigarettes a day since the age of 15. No known drug allergies. Patient was reffered to permanent care with a dry cough that started 5 days ago, myalgias, asthenia and dyspnea for minor effort, having already taken azithromycin 500mg for three days.: ph7.46; pO2 40.9; pCO2 34.8 and HCO3 24.1. A CT angio was performed without evidence of pulmonary thrombus embolism (PTE) but with ground glass and bilateral infiltrates suggesting acute respiratory distress syndrome (ARDS). She collected blood cultures and Influenza A. Normotensive and normocardic, apyretic and with an SPO2 of 84%, gasimetry was performed.

She was admitted to the intensive care unit (ICU), with adjusted FiO2, performed antigenuria research, initiating antibiotics. A transthoracic echo was performed and blood was collected for Cerebral Natriuretic Peptide (BNP).

Regarding the evolution during the 20 days of hospitalization at the ICU, in the first 13 days she was with orotracheal intubation, under mechanical ventilation (strategy - protective lung ventilation + prone position). Extubated on February 19 without complications. Was on 9 days of ceftriaxone 2gr per day plus 10 days of oseltamivir 75mg 2x/day for ventilator-associated pneumonia. Also had 6 days of Piperacillin / Tazobactam 4g / 0.5g and 2 days of gentamicin. Subsequently, with isolation of Pseudomonas Aeruginosa resistant to Piperacillin/Tazobactam 4g/0.5g and cefftazidime and sensitive to Meropenem and levofloxacin, underwent 7 days of levofloxacia.

Myopathy, critically ill, under physical therapy since February 19, day of orotracheal extubation. At first, was not very cooperative and with periods of disorientation in time and space, passive mobilization of the four limbs was performed. Didn't follow simple orders. From February 24, patient was more collaborative with active mobilization of the four limbs and performs lifting, without static and dynamic balance. On the 27th of February, was transferred to the adult wards in a wheelchair. Patient started gait training with a walking frame and on the 28th was discharged home, after starting the first assessments and the first training of the rehabilitation program. Consequently, these factors led to loss of balance and gait ability. In this process, Mrs. “M.” lost her self-esteem and ability to carry out her activities of daily living, leaving her in a situation of fragility associated with altered cognition, feelings of sadness and functional performance.

Mrs. M has as medical history of: depression, psoriasis, obesity, cutaneous atopy and vertigo syndrome and as a surgical history of: cholecystectomy in 2017, disc herniorrhaphy (L2) and total right hip replacement. Mrs. M was medicated with: fluoxetine 20 mg, aldactone 25 mg, olcadil 2mg, metformin 1000mg and livazo 2mg.

Semi-dependent in activities of daily living at the time of discharge home. With family support and a housekeeper who help to meet her needs and encourage adherence to the rehabilitation program and subsequent recovery.

Rehabilitation Nursing Assessment

For the implementation of a rehabilitation program, it is necessary to include data obtained through anamnesis, the observation of complementary diagnostic tests and the implementation of measurement instruments.

The evaluation and follow-up of Mrs. M. began during her hospital stay, at the time of discharge, and continued and ended at home, lasting 9 days, with the denomination for the days being: D1 to D9. Subsequently, it was necessary to complete the rehabilitation process due to the COVID19 pandemic.

The beginning of the program had a first moment, the holding of a pre-discharge family meeting, since it was necessary to reinforce to the family the new health status of their relative, in order to understand who would take care at home, and also to inform about the existing resources in the community, and finally, to present the proposal of the rehabilitation program, all for an improvement of the continuity of care. After acceptance and consent to participate in the study, we outline the plan.

Based on the assessment of balance and frailty, it was possible to identify nursing diagnoses and determine sensitive gains in rehabilitation nursing care.

Balance assessment

The Tinetti Index classifies sitting and standing balance, gait, as well as changing direction. It assesses the static balance in the chair, through the assessment of sitting balance, standing up, immediate balance, standing balance with parallel feet, small imbalances in the same position, closing the eyes in the same position, 360° turn, unipodal support and sitting up. In the evaluation of dynamic balance - gait, the beginning of the gait, the width and height of the step of the right and left foot, symmetry of the step, continuity of the step, 3-meter course, trunk stability and base of support during the gait are evaluated.

Mrs. M. presented an initial score of 19/28 when implementing the rehabilitation program, with more evident alterations in the static balance in the chair. Throughout the program there were gains in static and dynamic balance with a score of 27/28.

Frailty Assessment

To assess frailty, the adapted Edmonton frailty scale was used, which assesses cognition, general health status, functional independence, social support, medication use, nutrition, mood, continence and functional performance, and in its interpretation 0 points correspond to non-frail, 1-2 points pre-frail and more than 3 points, fragile. At the beginning of the program, Mrs. M. was fragile and in D9 she was already in a pre-frail state.

Nursing diagnosis

Within the scope of the rehabilitation program, the compromised body balance diagnosis related to the focus "body balance" was identified and nursing interventions were developed based on the documental standard of nursing care of the Rehabilitation Nursing Specialty[10].

Table 1. Nursing diagnoses and interventions

Nursing diagnosis	Nursing interventions
Compromised body balance	To apply postural correction strategies: - stand on the opposite side of the imbalance, use tactile stimuli, touch the shoulder homolateral to the imbalance with two fingers; - postural reeducation technique in the mirror; To stimulate to maintain body balance, through postural correction; To perform balance training technique lying, sitting and standing: - hook and bridge exercise, - disassociation of waists, - to roll, - balance within the anatomical axes and return to the original position, - cross facilitation, - movement coordination To guide in balance training technique
Potential to improve knowledge of balance training technique	To teach about sitting and standing body balance technique; To instruct on sitting and standing body balance technique;
Potential to improve ability to use body balance technique	To train on sitting and standing body balance technique

In addition to the planned nursing interventions, a training plan was defined for muscle strengthening and results enhancement.

Following the most recent recommendations for exercise for the elderly and the goals outlined for Mrs. M, we have designed the following exercise program, emphasizing that the type of exercise should focus on specific functional activities, taking into account the needs and patient goals[11]. The intervention plan was designed taking into account the type of exercise, intensity, duration and frequency[12].

The beginning of each exercise was exemplified by the researchers, continuing the verification of the execution, correcting and positively reinforcing the effort and the execution of the same. The sessions were intensified according to Mrs. M.'s ability to avoid tiredness and lack of motivation. In the first two days there was a need for more reinforcement, attention and a decrease in the number of repetitions of each exercise. With the evolution of the program, the intensity of the exercises increased and, consequently, Mrs. M increased her capacity for resistance and perseverance in correctly performing the proposed exercises.

Table 2. Exercises program

Time	Exercises	Material
10' Warming-up	Breathing exercises Seated, isometric glute contraction, 3x10 reps Sitting ankle dorsiflexion exercises, 3x10 rep. Supported on the back of the chair standing on tiptoe, 3x10 rep. Supported on the back of the chair on heels. 3x10 rep.	Chair
30' strengthening	Supported on the back (3x 10 rep.): - hip abduction-adduction - hip flexion-extension	Chair Marker

and balance	- knee flexion-extension Flexion and abduction/adduction movement to 3 points, 3X10 rep. for each leg Lifting and Sitting Exercises Without Support, 3X 10 rep. Eyes Closed Finger Nose Exercises, 1x10 rep. for each hand Sitting flexion-extension of the upper limbs with dumbbells 0.5Kg, 3x10 rep. each member	
	Controlled walking with walker, 4x3 meters	Dynamic balance training mat Walker
	Controlled walking, 4x3 meters	Balance training mat
	Free walking with walker, 4x3 meters	Hall
	Free walking, 4x3 meters	Hall
	Training up and down stairs, 4x15 steps	Stairs
10' Cooling-down	Breathing exercises Stretches (upper limbs, lower limbs, spine)	

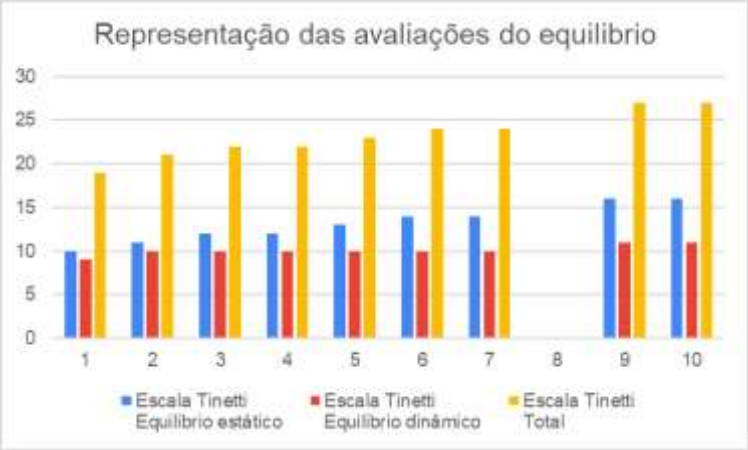
RESULTS

The rehabilitation program was instituted for 9 days during the month of March 2020, 5 sessions of 45 minutes in the first week and 4 sessions of 45 minutes in the second week. Due to the pandemic, it was necessary to finish the program initially planned for 20 sessions, earlier.

It is described in a literature review that muscle strengthening improves muscle strength, functional mobility and balance in elderly individuals. These authors analyzed studies that established correlations between muscle strengthening programs and the functional performance of the elderly in balance and gait, having managed to determine that the more fragile elderly obtained more significant improvements in function[13]. In the frail elderly, the use of strength training is recommended and considered extremely important by the American College of Sports Medicine[14].

Assessment of static and dynamic balance

The evolution of balance was evaluated using the Tinetti scale, assessing static and dynamic balance daily, assuming that at the end of the rehabilitation plan, Mrs. M. would obtain gains, presenting a total score of the sum of the static balance and dynamic evaluation of 28.



Graphic 1. Body balance assessment using the Tinetti scale

On D1 of the Tinetti scale application, the patient had a score of 10 in static balance and a score of 9 in dynamic balance, for a total of 19. On D9 of application of the Tinetti scale, the patient already had a score of 16 in the static balance and a score of 11 in the dynamic balance, adding up to a total of 27. The item, in which the total score of the Tinetti scale, was not obtained, was related to the previously marked 3-meter course, as Mrs. M still deviates slightly from the marked course. The final average of the Tinetti scale evaluation was 23.

We consider that if the application of the rehabilitation program was extended for a longer period of time, this value was closer to the intended score[15], taking into account the assessments from D6 onwards. The following aspects should be highlighted:

• D1 to D4, Mrs. M needed her husband's help for self-care and hygiene and from D5 onwards was already able to perform this task independently;

• D1 to D6 Mrs. M was not able to go up and down the stairs in her room. From D7 onwards, was already using the handrail;

• D8 Mrs. M was already able to go to the cafe with the help of others, and in D9 has already made the same route, alone, without loss of balance.

Table 3. Score of the Tinetti Index evaluation

Day	D1	D2	D3	D4	D5	D6	D7	D8	D9
Static Balance: Chair	10/16	11/16	12/16	12/16	13/16	14/16	14/16	16/16	16/16
Dynamic Balance: Walking	9/12	10/12	10/12	10/12	10/12	10/12	10/12	11/12	11/12
Total	**19/28**	**21/28**	**22/28**	**22/28**	**23/28**	**24/28**	**24/28**	**27/28**	**27/28**

Frailty assessment

To assess frailty, the adapted Edmonton frailty scale was applied on D1 and D9, in which, in the interpretation of the scale, 0 points correspond to non-frail, 1-2 points pre-frail and more than 3 points, frail. Through the analysis of the results obtained, it was possible to perceive that Mrs. M went from a state of frailty, with 9 points in D1, to a state of pre-frailty, with 2 points in D9. Although the results are quite positive, with evidence of the effectiveness of implementing rehabilitation programs in the frailty syndrome, we consider that Mrs. M has the potential to evolve into a non-frail state, as the points assigned to her in D9 were related to functional independence (using transport), in which there was no possibility of effectively assessing whether the patient was able to do so autonomously, and Mrs. M was based on what she considered capable or not, and functional performance, still taking 11-20s on the 3 meter course. With an increase in the period of implementation of the rehabilitation program, and taking into account the assessment on D1 and comparison of this parameter on D9, we consider that it would then be possible for Mrs. M to go from pre-frail to non-frail.

Graphic 2. Frailty assessment using the adapted Edmonton scale

Table 4. Edmonton Frailty Scale - adapted

Domain	Item	0 point	1 point	2 points	D1	D9
Cognition	Imagine that this circle is a clock. Put the numbers in the correct positions and then mark the hours and then mark the hours eleven and ten	Without errors	Minor errors in spacing	Other erros	1	0
General health status	In the past year, how many times have you been admitted to the hospital?	0	1-2	»2	0	0
	Overall, how would you describe your health?	excellent, very good, good	More or less	Weak	2	0
Functional independence	How many of the following activities do you need help with? (preparing meals, shopping, using transportation, using the phone, cleaning the house, doing laundry, managing money, taking medication)	0-1	2-4	5-8	2	1
Social support	When you need help, is there someone you can count on to help you?	Always	Sometimes	Never	0	0
Medication use	Take five or more medications regularly	No	Yes		0	0
	Do you often forget to take your medication?	No	Yes		0	0
Nutrition	Have you lost weight lately that made a difference in your clothes?	No	Yes		1	0
Humor	Do you often feel depressed?	No	Yes		1	0
Continence	Do you sometimes urinate when you don't want to?	No	Yes		0	0
Functional performance	Sit in this chair with your arms at your sides. When I say “now”, get up and walk at a normal pace to the mark on the floor (about 3 meters), then return to the chair and sit down.	0-10s	11-20s	>20s or patient refuses help	2	1
Total					**9**	**2**

DISCUSSION

In Portugal, due to the growing number of elderly people, there are more and more hospital discharges of people over 65 years-old, who require continuity of care, support in rehabilitation and social reintegration[16]. In the case of Mrs. M, planning the implementation of the rehabilitation program with the

patient, as well as the breakdown of the entire process at home, was fundamental for its total availability. As Mrs. M had a housekepper for a long period of the day, it was not difficult to schedule home discharge as defined by the medical team. With hospital discharge planning, it is intended to guarantee the continuity of care and the efficient use of both hospital and community resources[16]. It also aims a safe transfer, avoiding readmissions, cost increasing for the health system and overcoming possible difficulties for the patient and family[17].

Frailty is described as a syndrome in which involuntary weight loss, exhaustion, weakness, decreased gait speed and balance and decreased physical activity are identified, which can lead to a high risk of falling, functional decline, hospitalization and death[17,18,19]. In the case study, Mrs. M manifests exhaustion, weakness, decreased gait speed and balance, which leads to her inclusion in this syndrome. The elderly person has frailty syndrome when four of the following criteria are present: age 80 or older, depression, balance or gait instability, decreased hand grip strength, use of medication, decreased strength of the shoulder and knee joints, lower limb deficits and visual deficits[19,20]. In Mrs. M case, the criteria for the frailty syndrome are: depression, instability in balance and gait, and use of medication. It has a higher prevalence in females, which is in line with the gender of our patient under study, and its essential characteristic is the notion of risk resulting from instability[18,19]. Mrs. M is discharged from the hospital with the support of a walker, as she does not feel safe to walk without it.

To assess the degree of frailty, the Edmonton Frail Scale was used. According to the value obtained, the degree of frailty varies from severe frailty, pre-frail and non-frail[6,18]. Mrs. M went from a state of frailty to a state of pre-frailty, through the interpretation of the results obtained from the application of the scale. This improvement was due to the implementation of a rehabilitation program. Adequate rehabilitation programs help in the prevention and even reversal of frailty conditions. There is also evidence of the effectiveness of rehabilitation programs in improving balance, gait and strength of the lower and upper limbs[12,18,20]. Through the interpretation of the results obtained, it was possible to confirm gains in health, with an increase in balance and an improvement in the state of frailty, as a result of the application of a rehabilitation program, which is in line with the results obtained in different studies[17,18].

Based on the analysis of the studies found, the rehabilitation programs implemented have an average duration of 10 to 12 weeks, with a frequency of 3 times a week, with an average duration of 60 minutes and with the number of repetitions of 3 sets of 10 are similar to each other, focusing on warm-up, muscle strengthening, balance training, stretching and relaxation[15,17,18,20,21,22]. They recommend inspiration before lifting and expiration during loading[18]. The implementation of the rehabilitation program was initially planned for a period of 20 days, from Monday to Friday, for a month, starting at the hospital and continuing at home. The literature found refers that the frequency should be 3 times a week, with a rest period of 48 hours between each session, for muscle recovery[18], contrary to what was established in our rehabilitation program. This fact did not compromise Mrs. M's adherence, but the fact that she had information of “muscle pain” when she started the rehabilitation program is highlighted. Due to the COVID-19 pandemic, it was necessary to reduce its implementation to 9 days. Even with this reduction to half of the planned time and very far from the average described in the various studies found, the results obtained were positive, with evident health gains.

Balance was assessed using the Tinetti scale, assessing static and dynamic balance daily. Studies report that balance training exercises can be static and/or dynamic, involving changes in visual input, changes in the support surface and reduction in the support base, with a gradual increase in the level of difficulty and complexity of positions [15,18,21]. For the case study, the gait mat was used to assess balance, where the following exercises were applied: rotate 360º, walk with feet together, walk backwards, walk sideways, walk on tiptoes and walk with the feet together. A 4-point exercise was also used, which consisted of the following sequence: placing 5 disks on the floor, one central, one in front of the patient, another behind and 2 on the sides, one on the right and one on the left. When performing the exercise, the patient performed flexion exercises up to the marked points and extension exercises up to the central disc, without support, going through all the discs.

Through the interpretation of the results obtained, it was possible to perceive a significant improvement in balance, going from a total of 19 points (out of a total of 28) of the D1 assessment, to a total of 27 points (out of a total of 28) of the D9 assessment, being in line with the bibliography found, where there is evidence of significant improvement in muscle strength, balance, coordination and cadence [15,1720].

With the evolution of the days, there is an anticipation of the exercises, due to knowledge of the rehabilitation plan, and a significant improvement in balance, thus making it easier to perform and implement the exercises.

Mrs. M. realized the importance of her dedication to achieving her personal goals, one of which would be to go to Algarve after completing the program. Its failure was not due to a failure in the program, but to the current pandemic situation in the country. It is also important to point out that, after the first day of application of the rehabilitation program at home, it was necessary to readjust it, taking into account the architectural barriers of the house and Ms. M.'s ability to successfully perform all the exercises.

FINAL THOUGHTS

With this study, it was possible to mobilize and deepen knowledge about the role of the rehabilitation nurse in the training of people with disuse and frailty syndrome. Through a program of exercises that

promote muscle strengthening, it was possible to promote Mrs. M autonomy and the restitution of her independence on activities of daily living and leisure activities.

The limitation found in carrying out this case study is related to the little experience of the researchers in carrying out and implementing rehabilitation programs, as well as in the ability to analyze all the focuses inherent to the person with disuse and frailty syndrome.

It is suggested in further studies that rehabilitation programs be implemented over a longer period of time and also with an impact on other nursing focuses such as the assessment of muscle strength and walking, in order to have a more complete assessment of the patient.

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