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RESEARCH

Impact of home visits on the functional capacity of patients with venous ulcers

Impacto da visita domiciliar na capacidade funcional de pacientes com úlceras venosas

Impacto de la visita domiciliaria en la capacidad funcional de pacientes con úlceras venosas

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ABSTRACT

Objective: to assess the impact of protocol home visits on the functional capacity of adult and elderly patients with venous ulcers, before and after guidance received at home. **Method:** clinical experimental, randomized, nonblinded and controlled study, developed with 32 patients (case and control groups). Fields of research were the Wound Outpatient Care Unit of the Antônio Pedro University Hospital and households of patients treated in the outpatient unit. Data collection occurred from February to June 2014, by means of an assessment tool of the health care unit, the TINETTI index and a script for directions to be provided to study participants who received home visits. **Results:** participants in the case group showed significant and differentiated improvement post-intervention when compared to the control group, which remained stable. **Conclusion:** directions provided in the home context were beneficial to the members of the case group.
Descriptors: Nursing Care; Varicose Ulcer; Home Visit; Adult; Aged.

RESUMO

Objetivo: avaliar o impacto da visita domiciliar protocolar na capacidade funcional de pacientes adultos e idosos com úlceras venosas antes e após as orientações recebidas em domicílio. **Método:** estudo clínico experimental, randomizado não cego e controlado, desenvolvido com 32 pacientes (grupos caso e controle). Os campos de investigação foram o Ambulatório de Reparo de Feridas do Hospital Universitário Antônio Pedro e os domicílios de pacientes atendidos no referido ambulatório. A coleta ocorreu de fevereiro a junho de 2014, por meio de instrumento de avaliação da unidade de saúde, do índice de TINETTI e de roteiro de orientações a serem prestadas aos sujeitos da pesquisa que receberam visita domiciliar. **Resultados:** os participantes do grupo caso apresentaram melhora significativa e diferenciada pós-intervenção quando comparados aos do grupo controle, que se mantiveram estáveis. **Conclusão:** as orientações no contexto domiciliar foram benéficas aos integrantes do grupo caso.
Descritores: Cuidados de Enfermagem; Úlcera Varicosa; Visita Domiciliar; Adulto; Idoso.

RESUMEN

Objetivo: evaluar el impacto de la visita domiciliaria protocolar en la capacidad funcional de pacientes adultos y ancianos con úlceras venosas antes y después de las indicaciones recibidas en domicilio. **Método:** estudio clínico experimental, randomizado no ciego y controlado, desarrollado con 32 pacientes (grupos caso y control). Los centros de investigación fueron el Ambulatorio de Curación de Heridas del Hospital Universitario Antônio Pedro y los domicilios de pacientes atendidos, a través de instrumento de evaluación de la unidad sanitaria, del índice de TINETTI y de la rutina de indicaciones a brindarse a los sujetos de la investigación que recibieron visitas domiciliarias. **Resultados:** los participantes del grupo caso presentaron mejoras

significativas y diferenciadas luego de la intervención, en comparación a los del grupo control, que se mantuvieron estables. **Conclusión:** las indicaciones en el marco domiciliario resultaron beneficiosas para los integrantes del grupo caso.
Descriptores: Atención de Enfermería; Úlcera Varicosa; Visita Domiciliaria; Adulto; Anciano.

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INTRODUCTION

According to the International Classification of Impairments, Disabilities and Handicaps of the World Health Organization[1], functional capacity is the lack of difficulty in performing everyday activities. Assessment of this ability is related to aspects such as personal care practices and maintenance of routine simple and complex tasks[2]. Thus, it is important to assess functional capacity in patients with chronic illness, since this population presents compromise in this aspect[3].

Impairment of functional capacity causes social seclusion, tendency towards a sedentary lifestyle, loss of self-esteem and, consequently, carelessness in respect to self-care and absence from work life. For patients with venous ulcers, nurses should be aware of this problem starting with appearance of the lesion[4-5], as absence from work negatively affects the patient's financial situation, and impacts health care, since missed consultations become frequent due to difficulty getting to and from the health care unit.

Missed consultations compromise the care provided, and hinder effective follow-up of therapy, which makes assessment of these patients fundamental to developing therapeutic strategies for improvement of quality of life, and reintegration into the labor market. Nursing needs to be committed to these goals[6].

Therefore, nurses play a very important role in the care of venous ulcers, and their attention is focused on activities to evaluate costs of treatment, quality of life, the healing process and adoption of new therapeutic technologies to support the practice/deepen the issues linked to care[7]. Thus, specifically regarding care of lesions and disabilities, law no. 8842, of 4 January 1994, which provides the National Policy for the Elderly - a population widely affected by venous ulcers - is not restricted to controlling and preventing noncommunicable chronic diseases, but to providing improvements in functionality and the biological, psychological and social spheres[8].

From the perspective of looking beyond the injury, at everything surrounding the patient being treated, home visits are inserted as a home care strategy. The main objectives of home visits are to bring health care and directions to the individual in their own residence, through the provision of care, supervision of care conducted by family members or caregivers, data collection on families during observation and interview, and provision of care guidelines[9].

Therefore, because care is the main instrument of nursing work, nursing professionals should treat the lesion as well as provide education aimed at the recovery, well-being and empowerment of patients and their families for self-care at home[10]. The directions provided by nurses favor both care of the patient during treatment, as well as preventive actions, understood as intervention.

As regards health care directions, nurses seek to verify adaptive means of patients to overcome their clinical condition, designing effective recovery and consequently improving quality of life[11]. In this context, educational support is critical so that behavior adopted for recovery are discussed and gradually incorporated, so as to make the treatment effective and satisfactory to the biopsychosocial conditions of those who are being treated.

This study is relevant because it enables understanding that the health care of patients with venous ulcers requires a holistic model of care, in which the human being is cared for based on their real needs. This is especially important because the pathology generates fear, anxiety and anticipation about loss of quality of life, restriction and impediment to the exercise of daily living, social and professional activities, thus generating social and economic costs. Chronic wounds that can persist for years can lead to loss of self-esteem and disabling conditions for patients, which reaffirms the importance that these patients be offered holistic support by health care professionals[12].

Based on the above, the objective of the present study was to assess the impact of protocol home visits on the functional capacity of adult and elderly patients with venous ulcers, before and after directions given during the home visits.

METHOD

Ethical aspects

Development of the study adhered to resolution no. 466, of December 12, 2012, of the National Council of Health/Ministry of Health which, through its legal powers, established guidelines and standards governing research involving human subjects. The study was approved by the Research Ethics Committee of the Antônio Pedro University Hospital (HUAP).

Design, study location and period

This was a clinical experimental, randomized, nonblinded and controlled study. The study was developed in two different fields of research: the Wound Outpatient Care Unit of HUAP, located in Niterói, in the Brazilian state of Rio de Janeiro, and the homes of patients treated in the outpatient unit. Data were collected from February to June 2014, based on outpatient demand.

Population or sample: inclusion and exclusion criteria

The study had 32 participants. Study inclusion criteria were: adult and elderly patients with venous ulcers on one or both lower limbs, who had cognitive conditions (because the unit serves patients with cognitive deficit) to follow health care guidance provided during the study period, and voluntarily

participate in the research. Exclusion criteria were: adults and elderly patients with arterial ulcers; diabetic foot; lack of adherence to recommended care, and ongoing absence from scheduled nursing consultations.

After selection of the participants, a lottery was drawn to define which participants would compose the case and control groups, by means of the software Biostat 5.0. In order to avoid selection bias, the lottery was drawn by a statistician, and 16 people were allocated in each group.

Study protocol

For the case group, the protocol was conducting home visits to change and apply dressings, followed by directions focused on treatment and prevention of venous ulcers, including cleaning the wound, dressings, food and nutrients needed for healing, compressive elastic and inelastic therapies, use of elastic stockings for preventing recurrences, and elevation of the lower limbs to improve venous return. The control group received home visits for wound dressing, but without further guidance other than that received in the outpatient context. Reevaluation of the participants occurred 15 days after the home visit.

For data collection, the authors decided to use the health care unit's instrument for evaluation of patients with venous ulcers, based on social and demographic data of patients, records pertaining to treatment time and number of relapses; the balance and gait assessment scale (TINETTI); and, a script developed for guidance to be provided to research subjects who received home visit.

Analysis of results and statistics

Analysis of the results involved descriptive and inferential statistical analyses, the first being presented in the form of a table, and the collected information expressed by frequency (n) and percentage (%) for categorical data, and for numeric data by mean, standard deviation, median, minimum and maximum values.

Inferential analysis was composed of the following tests: X^2 test or Fisher's exact test, Student's t and Mann-Whitney tests, to verify any significant difference in basal social and demographic variables, and the TINETTI Index between the groups (case and control); McNemar's test, to analyze evolution before and after the intervention in each group, being applied also to the individual questions; and Wilcoxon signed-rank test, applied to assess the scores of their scales.

The Mann-Whitney test was also used to check for the existence of significant differences in the delta of the scores of the scales that make up the TINETTI Index between the groups.

The significance determination criteria adopted in the study was the level of 5% (α); power of the statistical test of 80% (1-β) and expected increase in scoring in the group with "moderate" intervention, known as the effect size (ES ≈ 1).

RESULTS

Table 1 provides descriptive sociodemographic and clinical analysis of the case and control groups by frequency (n), percentage (%) and the corresponding descriptive level (p value) from the Chi-square test (χ^2) or Fisher's exact test. Age was expressed by mean ± standard deviation (SD) and compared by Student's t test for independent samples.

Tables 2 and 3 present the data related to the case group, and tables 4 and 5, the control group. All tables presented below (2, 3, 4 and 5) provide the frequency (n) and percentage (%) of the questions from the TINETTI Index on scales of balance and gait before and after intervention, in the case and control groups, respectively, and the corresponding descriptive level (p value) from the McNemar test. Partial and total scores were expressed by median (minimum-maximum), and analyzed by means of the Wilcoxon signed-rank test.

Table 1 – Analysis of sociodemographic and clinical variables according to the case and control groups, Niterói, Rio de Janeiro, Brazil, 2014

Characteristics	Categories	Case group (n = 16)		Control group (n = 16)		*P* value [a]
		n	%	n	%	
Sex	Female	10	62.5	8	50.0	0.48
	Male	6	37.5	8	50.0	
Age (years) *		60.1 ± 9.7		66.9 ± 11.6		0.08
Level of education	Functional illiterate	1	6.3	1	6.3	0.99
	Elementary school	9	56.3	8	50.0	
	High school	5	31.3	6	37.5	
	Higher education	1	6.3	1	6.3	
Marital status	Single	3	18.8	2	12.5	0.63
	Married	6	37.5	9	56.3	
	Divorced	3	18.8	1	6.3	
	Widowed	4	25.0	4	25.0	
City	Niterói	8	50.0	7	43.8	0.78
	São Gonçalo	6	37.5	8	50.0	
	Itaboraí	2	12.5	1	6.3	
Treatment time	6 months to 1 year	4	25.0	6	37.5	0.85
	1 to 5 years	1	6.3	1	6.3	
	> 5 years	11	68.8	9	56.3	
Number of recurrences	Never	5	31.3	8	50.0	0.45
	1 to 4	7	43.8	4	25.0	
	5 or more	4	25.0	4	25.0	

*Notes: a = χ2 or Fisher's exact; * = expressed by the mean ± SD and compared by Student's t test for independent samples.*

Analysis of the absolute deltas (after-before intervention) obtained from the scores of the TINETTI index (scales of balance and gait) according to the groups (case and control), as well as the corresponding descriptive level (p value) of the Mann-Whitney test, indicated that the case group presented delta values of the balance score ($p = 0.001$), of the gait score ($p = 0.0002$) and total score of the TINETTI Index ($p = 0.0001$) that were significantly higher than in the control group.

Table 2 – Balance assessment scale of the TINETTI Index before and after intervention in the case group, Niterói, Rio de Janeiro, Brazil, 2014

Domains of the Balance Assessment Scale	Response	Before		After		*P* value [a]
		n	%	n	%	
D1. Sitting balance	Poor	3	18.8	0	0	0.25
	Good	13	81.2	16	100	
D2. Standing up	Poor	0	0.0	0	0.0	
	Average	13	81.2	11	68.8	0.50
	Good	3	18.8	5	31.2	
D3. Attempts to stand up	Poor	0	0.0	0	0.0	
	Average	7	43.8	4	25.0	0.25
	Good	9	56.2	12	75.0	
D4. As soon as standing up	Poor	9	56.3	3	18.8	
	Average	2	12.5	4	25.0	0.05
	Good	5	31.3	9	56.2	
D5. Standing balance	Poor	3	18.8	1	6.3	
	Average	5	31.2	5	31.3	0.15
	Good	8	50.0	10	62.5	
D6. Test of three times	Poor	3	18.8	3	18.8	
	Average	3	18.8	2	12.5	0.31
	Good	10	62.5	11	68.8	
D7. Eyes closed	Poor	5	31.2	2	12.5	0.25
	Good	11	68.8	14	87.5	
D8. Spinning 360° (steps)	Poor	3	18.8	2	12.5	1
	Good	13	81.2	14	87.5	
D8. Spinning 360° (balance)	Poor	4	25.0	3	18.8	1
	Good	12	75.0	13	81.2	
D9. Sitting	Poor	2	12.5	1	6.2	
	Average	6	37.5	7	43.8	0.60
	Good	8	50.0	8	50.0	
Balance score *		11.5 (3 - 16)		13.5 (4 - 16)		0.004

*Notes: [a] = McNemar test; * = expressed by the median (minimum-maximum) and compared by testing the Wilcoxon signed-rank test.*

Table 3 – Gait assessment scale of the TINETTI Index before and after intervention in the case group, Niterói, Rio de Janeiro, Brazil, 2014

Domains of the Gait Assessment Scale	Response	Before		After		*P* value [a]
		n	%	n	%	
D10. Beginning of gait	Poor	10	62.5	3	18.8	**0.016**
	Good	6	37.5	13	81.2	
D11a. Length of steps (right foot)	Poor	1	6.2	1	6.2	1
	Good	15	93.8	15	93.8	
D11a. Height of steps (right foot)	Poor	2	12.5	2	12.5	1
	Good	14	87.5	14	87.5	
D11b. Length of steps (left foot)	Poor	1	6.2	1	6.2	1
	Good	15	93.8	15	93.8	
D11b. Height of steps (left foot)	Poor	2	12.5	2	12.5	1
	Good	14	87.5	14	87.5	
D12. Symmetry of steps	Poor	4	25.0	3	18.8	1
	Good	12	75.0	13	81.2	
D13. Continuity of steps	Poor	6	37.5	4	25.0	0.50
	Good	10	62.5	12	75.0	
D14. Direction	Poor	1	6.2	0	0	0.25
	Average	8	50.0	7	43.8	
	Good	7	43.8	9	56.2	
D15. Trunk	Poor	2	12.5	0	0.0	0.25
	Average	5	31.3	6	37.5	
	Good	9	56.3	10	62.5	
D16. Distance of the ankles	Poor	1	6.2	0	0	1
	Good	15	93.8	16	100	
Gait score *		9 (2 - 11)		10 (4 - 11)		**0.002**
Total score - TINETTI Index *		20 (5 - 27)		24 (9 - 27)		**0.0005**

*Notes: [a] = McNemar test; * = expressed by the median (minimum-maximum) and compared by testing the Wilcoxon signed-rank test.*

Table 4 – Balance assessment scale of the TINETTI Index before and after intervention in the control group, Niterói, Rio de Janeiro, Brazil, 2014

Domains of the Balance Assessment Scale	Response	Before		After		*P* value [a]
		n	%	n	%	
D1. Sitting balance	Poor	0	0	0	0	NP
	Good	16	100	16	100	
D2. Standing up	Poor	1	6.3	1	6.3	0.31
	Average	12	75.0	11	68.8	
	Good	3	18.8	4	25.0	
D3. Attempts to stand up	Poor	1	6.3	1	6.3	1
	Average	4	25.0	4	25.0	
	Good	11	68.8	11	68.8	
D4. As soon as standing up	Poor	5	31.3	5	31.3	1
	Average	2	12.5	2	12.5	
	Good	9	56.3	9	56.3	

To be continued

Table 4 (concluded)

Domains of the Balance Assessment Scale	Response	Before		After		*P* value [a]
		n	%	n	%	
D5. Standing balance	Poor	3	18.8	3	18.8	1
	Average	2	12.5	2	12.5	
	Good	11	68.8	11	68.8	
D6. Test of three times	Poor	3	18.8	3	18.8	1
	Average	3	18.8	3	18.8	
	Good	10	62.5	10	62.5	
D7. Eyes closed	Poor	4	25.0	4	25.0	1
	Good	12	75.0	12	75.0	
D8. Turning around 360° (steps)	Poor	4	25.0	4	25.0	1
	Good	12	75.0	12	75.0	
D8. Turning around 360° (balance)	Poor	4	25.0	4	25.0	1
	Good	12	75.0	12	75.0	
D9. Sitting	Poor	0	0	0	0	1
	Average	5	31.2	5	31.2	
	Good	11	68.8	11	68.8	
Balance score *		13 (2 - 16)		13 (2 - 16)		1

*Notes: [a] = McNemar test; NP: statistical test not processed. * = expressed by the median (minimum-maximum) and compared by testing the Wilcoxon signed-rank test.*

Table 5 – Gait assessment scale of the TINETTI Index before and after intervention in the control group, Niterói, Rio de Janeiro, Brazil, 2014

Domains of the Gait Assessment Scale	Response	Before		After		*P* value [a]
		n	%	n	%	
D10. Beginning of gait	Poor	5	31.2	5	31.2	1
	Good	11	68.8	11	68.8	
P11a. Length of steps (right foot)	Poor	4	25.0	4	25.0	1
	Good	12	75.0	12	75.0	
D11a. Height of steps (right foot)	Poor	5	31.2	5	31.2	1
	Good	11	68.8	11	68.8	
D11b. Length of steps (left foot)	Poor	3	18.8	3	18.8	1
	Good	13	81.2	13	81.2	
D11b. Height of steps (left foot)	Poor	9	56.2	9	56.2	1
	Good	7	43.8	7	43.8	
D12. Symmetry of steps	Poor	7	43.8	7	43.8	1
	Good	9	56.2	9	56.2	
D13. Continuity of steps	Poor	6	37.5	6	37.5	1
	Good	10	62.5	10	62.5	
D14. Direction	Poor	2	12.5	2	12.5	1
	Average	6	37.5	6	37.5	
	Good	8	50.0	8	50.0	
D15. Trunk	Poor	1	6.3	1	6.3	1
	Average	5	31.3	5	31.3	
	Good	10	62.5	10	62.5	

To be continued

Table 5 (concluded)

Domains of the Gait Assessment Scale	Response	Before		After		*P* value [a]
		n	%	n	%	
D16. Distance of the ankles	Poor	0	0	0	0	NP
	Good	16	100	16	100	
Score of the gait *		7.5 (0 - 11)		7.5 (0 - 11)		1
Total score - TINETTI Index *		21.5 (2 - 27)		21.5 (2 - 27)		1

*Notes: [a] = McNemar test; NP: statistical test not processed; * = expressed by the median (minimum-maximum) and compared by testing the Wilcoxon signed-rank test.*

DISCUSSION

Characterization of socio-demographic variables of the case and control groups identified that 56.2% of survey participants were female, and 43.8% were male. The predominance of women in development of venous ulcers is related to female hormones and pregnancy[13-14]. According to the authors of the studies cited above, hormonal disorders predispose women to chronic venous insufficiency and, consequently, formation of venous ulcers.

Values for age indicate a mean of 63.5 years, 46.9% being in the age group of 40 to 59 years, and 53.1% from 60 to 79 years. Chronic venous insufficiency presents increased incidence as of the third decade of life, affecting active, mature individuals with regard to labor activities[15]. This statement was observed in our study, since 46.9% of the participants were adults (40 to 59 years), which raises concern due to the difficulty of healing ulcerative lesions, leading victims to absence from work activities or even retirement.

Chronic venous insufficiency and ulcerations are related to the presence of an etiological factor - venous insufficiency caused by venous hypertension. Thus, venous hypertension can be caused in the population that presents one or more of the following risk factors: valvular insufficiency, which prevents retrograde flow; failure of the calf muscle, resulting in incomplete venous emptying; deep vein thrombosis; multiple pregnancies, edema, obesity, ascites, congenital anomaly, severe lower limb trauma or tumors; congestive heart failure and sedentary lifestyle or work[16].

The study participants had a low level of education: 6.3% were functionally illiterate; 53.1% had completed elementary school; 34.3% had completed high school; and 6.3% had completed a higher education degree. These findings are similar to other studies carried out in the outpatient context[17-21]. It is important to be aware of the level of education of the patient, because a low level of education may affect understanding of the pathology, assimilation of the care process, applicability of interventions related to treatment of injuries, and changes of behavior and attitude in the home context[22].

Most people with venous ulcers do not receive family support during treatment, and suffer from discrimination of family members[11]. In this sense, the prevalence of married people in our study highlights the support of domestic partners to deal with the pathology, since the changes caused by the lesion, such as change in lifestyle and isolation resulting from pain, difficulty getting around and changes in physical appearance, can generate family crises, abandonment by domestic partner, and consequent depression of the subject with venous ulcers.

In relation to the home municipality of the participants, the city of Niterói (46.9%) predominated, followed by São Gonçalo (43.8%) and Itaboraí (9.3%). Because the patients were treated at the Wound Recovery Outpatient Care Unit of HUAP, special attention should be given to functional capacity, since the subjects need to travel from their home for hours in order to receive care.

The high number of patients from other municipalities that receive nursing consultations at the Wound Recovery Outpatient Care Unit of HUAP is due to the following reasons: the unit is a reference in the treatment of chronic injuries in Niterói, care is provided by a multidisciplinary team, and the city where these patients live does not have a reference outpatient unit for treatment of this type of lesion[19].

The research data showed that 62.5% of participants had been in treatment for more than 5 years, which reiterates the fact that treatment of lesions is prolonged and difficult[23]. As for number of relapses, 40.6% had never had the lesion healed, 34.4% presented recurrence of 1 to 4 times, and 25% had 5 or more recurrences in the period they were receiving treatment.

The high number of cases of relapses in venous ulcers arises from lack of follow up by post-healing angiologists, not undergoing surgeries, and other factors such as lack of cooperation from patients in regard to preventive measures[24].

Thus, when evaluating the groups before and after intervention, it was found that the case group showed improvement after intervention in the following domains: sitting balance, standing up, attempts to stand up, as soon as standing up, standing balance, test of three times, eyes closed, turning around 360º, sitting down, starting gait, symmetry of steps, continuity of steps, direction, thunk and distance of the ankles. In the domains length and height of the steps, there was no percentage change post-intervention.

After statistical analysis, the presence of significant improvements in the following areas was verified: as soon as standing and starting to walk, which means that even with improvements in other areas, these were not significant at the level of 5% adopted in this study.

The control group showed improvement in the area standing up after revaluation. The domains sitting balance and distance of the ankles showed 100% positive response to this item in the evaluation and reevaluation, demonstrating the

impossibility of participants to further improve in this regard. There was no variation in the other domains of the data collection instrument, i.e., the control group did not show significant variation and was stable.

It is notable that participants in the case group showed significant and differentiated post-intervention improvement when compared to the control group, which remained stable.

The TINETTI Index helps estimate the risk and level of protection against falling, however, this risk depends on the conditions in which the subject lives or is inserted into at the time of fall and the presence of intrinsic and extrinsic factors contributing to difficulty of balance and gait[25]. Thus, the percentage gains in the TINETTI Index after intervention indicate motor improvement in balance and walking, and consequent quality of life[26] of the subjects.

One limitation of this study was the lack of receptivity on the part of some participants, since many were fearful because they did not live in secure locations, which could have put at risk the safety of the professionals visiting them. Another limitation was the restricted number of articles in national and international databases that would contribute to discussion of the proposed research topic, a fact that underscores the importance of developing new studies related to the functional capacity of subjects with venous ulcers, providing more data collection to health care researchers, professionals and students, given that it presents high population incidence and prevalence.

The main contribution of this study to the field of scientific research on venous ulcers and nursing was that it identified the effect on functional capacity of directions for treatment and prevention of venous ulcers. This finding is particularly relevant since the reduction or absence of such ability can compromise the performance of activities of daily living, employment and leisure, significantly affecting quality of life.

As regards advances in the area of knowledge, these involve the production and improvement of nursing care in prevention of diseases arising from venous ulcers, through the construction and adoption of new technical interventions in nursing and health care. Such actions aim at recovery and rehabilitation not only of the subject, but of the family members involved in the care process.

CONCLUSION

This study evaluated the impact of protocol home visits on the functional capacity of adult and elderly patients with venous ulcers before and after guidance received during home visit, by means of a scale to assess balance and gait (TINETTI Index).

When using the clinical characterization of the participants in the case group to compare before and after the intervention by means of the TINETTI Index, the case group showed significant improvements. The clinical characterization of the participants in the control group in the comparison before and after the intervention, according to the TINETTI Index, shows that there was no significant variation in the questions and scores of balance, gait and total of the TINETTI scale, indicating absolute stability in the group.

Use of the TINETTI Index as a research instrument enabled demonstration that the case group presented delta values of the scores for balance ($p = 0.001$), gait ($p = 0.0002$) and total score of the Index ($p = 0.0001$) significantly higher than the control group, i.e. the statistical results indicate improvement in the functional capacity of the case group that was significantly higher than the control.

In summary, the study results show that the TINETTI Index expressed compromise of functional capacity of adults and elderly patients with venous ulcers, demonstrating significant improvement in the case group when compared to the control group, which remained absolutely stable.

Based on the results that evaluated the impact of the protocol home visits on the functional capacity of adults and elderly patients with venous ulcers, and demonstrated that interventions in the home context were beneficial to the participants of the case group, the authors of the study recommend the adoption of interventions for patients in treatment of venous ulcers, aiming at monitoring and improving functional capacity.

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