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## INTEGRATIVE REVIEW OF THE LITERATURE

Cuidados de enfermagem aos clientes com úlceras venosas: uma revisão integrativa da literatura

Nursing care to clients with venous ulcers: an integrative review of the literature

Cuidados de enfermería para clientes con úlceras venosas: una revisión integral de la literatura

Patrícia Britto Ribeiro de Jesus <sup>1</sup>, Euzeli da Silva Brandão <sup>2</sup>, Carlos Roberto Lyra da Silva <sup>3</sup>

### ABSTRACT

**Objective:** To describe the nursing care recommended in the literature to customers with venous ulcers. **Method:** Integrative literature bases VHL, LILACS, MEDLINE and SciELO. There were selected 10 articles, based on the inclusion criteria. **Results:** The analysis of the items resulted in thematic categories: the importance of nurses in the assessment of the client with venous ulcers and strategies used in the care of clients with venous ulcers. The first deals with the actions of the nurse go beyond the execution of dressing, requiring the evaluation of the client in its entirety in the second treatment strategies. **Conclusion:** The analysis of the articles showed the concern regarding the evaluation of the client in its entirety. Despite the diversity of technologies presented in the literature, highlights the need to conduct research with significant levels of evidence in order to optimize healing time, relapse prevention, encouragement of self-care and comfort of the client. **Descriptors:** Nursing, Venous ulcers, Nursing care.

### RESUMO

**Objetivo:** Descrever os cuidados de enfermagem recomendados na literatura aos clientes com úlcera venosa. **Método:** Revisão integrativa da literatura nas bases BVS, LILACS, MEDLINE e SCIELO. Selecionados 10 artigos, baseando-se nos critérios de inclusão. **Resultados:** A análise dos artigos resultou nas categorias temáticas: importância do enfermeiro na avaliação do cliente com úlcera venosa e estratégias utilizadas no cuidado de clientes com úlceras venosas. A primeira aborda que as ações do enfermeiro vão além da realização de curativos, exigindo a avaliação do cliente em sua integralidade; na segunda, as estratégias de tratamento. **Conclusão:** A análise dos artigos evidenciou a preocupação em relação à avaliação do cliente em sua integralidade. Apesar da diversidade de tecnologias apresentadas na literatura, evidencia-se a necessidade realizar pesquisas com níveis de evidência significativos, visando a otimização do tempo de cicatrização, prevenção de recidivas, estímulo ao autocuidado e conforto do cliente. **Descritores:** Enfermagem, Úlcera venosa, Cuidados de enfermagem.

### RESUMEN

**Objetivo:** Describir los cuidados de enfermería se recomienda en la literatura a los clientes con úlceras venosas. **Método:** Literatura Integrativa, bases BVS, LILACS, MEDLINE y SciELO. Seleccionado 10 artículos, sobre la base de los criterios de inclusión. **Resultados:** El análisis de los elementos resultó en categorías temáticas: la importancia de las enfermeras en la evaluación del cliente con úlceras venosas y estrategias utilizadas en la atención de clientes con úlceras venosas. La primera trata de la actuación de la enfermera van más allá de la ejecución de vestir, lo que requiere la evaluación del cliente en su totalidad en el segundo estrategias de tratamiento. **Conclusión:** El análisis de los artículos mostró la preocupación con respecto a la evaluación del cliente en su totalidad. A pesar de la diversidad de las tecnologías presentadas en la literatura, se destaca la necesidad de llevar a cabo la investigación con importantes niveles de pruebas con el fin de optimizar el tiempo de curación, prevención de recaídas, el fomento del autocuidado y la comodidad del cliente. **Descriptor:** Enfermería, Úlceras venosas, Cuidados de enfermería.

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1 Nurse . Master in Nursing. Substitute Professor of Nursing and Midwifery Course at UFRJ , Campus Macae (RJ ) . Brazil . Email: patty\_brj@hotmail.com 2 Nurse . PhD in Nursing . Associate Professor, Department of Nursing Fundamentals and Management of Aurora Nursing Afonso Costa - Universidade Federal Fluminense - EEAAC / UFF . Niteroi (RJ ) . Brazil . Email: euzeli@terra.com.br 3 Nurse . Doctor of Nursing / UFRJ . Adjunct Professor DEF / EEAP / UNIRIO . Email: profunirio@gmail.com br

## INTRODUCTION

**D**uring the nursing residence in Internal Medicine and General Surgery in a health institution of the State of Rio de Janeiro, I could see the importance of knowledge of nurses in serving customers with lower limb ulcers, especially those with venous ulcers.

Venous ulcers account for approximately 70-90% of cases of lower limb ulcers and feature as the main cause chronic venous insufficiency <sup>1</sup>. Its prevalence increases with age, affecting more often people aged over 65 years old. <sup>2</sup>

A venous ulcer is characterized by chronic venous insufficiency caused by varicose veins, thrombosis sequel to deep venous valvular abnormalities or other causes that interfere with venous blood return. Normally, the customer presents the following clinical characteristics: hot end, edema, presence of varicose veins, skin changes and stasis eczema, and hyperpigmentation sclerosis, the most common location being the region of the malleolus and the distal leg. The ulcer usually presents slow progression edges infiltrated background of fibrin and, in most cases, secondary infection. Generally, the ulcer appears after trauma may be preceded by frame erysipelas, cellulitis or stasis eczema. <sup>3</sup>

Venous ulcers cause significant social and economic repercussions due to their recurrence and the long period between recurrence and scarring. When not properly managed, about 30% of healed venous ulcers relapse in the first year, and this increases to 78% after two years. <sup>2</sup>

Because of the need for constant therapy, for recovery of skin integrity, the customer affected by venous ulcers, often do not need only medical treatment, as well as nursing care. This fact requires the nurse a solid foundation of knowledge to conduct integrated professional, competent and committed. Thus, as a matter of great importance and epidemiological importance, the client with venous ulcer deserves particular attention from nurses regarding their care.

In this sense, it is noteworthy that the treatment of ulcers is no longer just a healing practice, but incorporates all the methodology of nursing care, with assessment of the client, including the social and emotional, physical examination and laboratory evaluation of the lesion itself said, defining the products and coverages to be used in addition to other specific care and essential for tissue repair.

Given these considerations, rose the following research question: What are the nursing care recommended in the literature for the client with venous ulcers?

Objective with this study describe the nursing care recommended in the literature for the client with venous ulcers.

It is believed this study may contribute to synthesize the scientific literature on this topic, which can assist in updating nurses, and to promote discussion and further research.

## METHOD

The methodology chosen was the literature, or literature, which uses dense literature to study and analyze the various aspects of a topic, contributing to a more elaborate future research <sup>4</sup>.

For this literature review, we used an integrative literature review, which appears as a methodology that enables the synthesis of knowledge and the incorporation of the applicability of study results significant in practice. Thus, the integrative review can be considered an instrument of Evidence-Based Practice (EBP), which is characterized by being a focused approach to clinical care and teaching based on knowledge and quality of evidence in clinical practice <sup>5</sup>.

The integrative review is a valuable method for nursing, because many times professionals do not have the time to perform the reading of all the available scientific knowledge, then using this method it is possible the compilation of published studies, which leads to conclusions General regarding a particular area of study <sup>6</sup>.

To conduct this study will use the following steps / stages: preparation of the research question; establishment of criteria for inclusion and exclusion; online search to identify and collect the most relevant search, defining the information to be extracted from selected articles, analysis of results, discussion and presentation of results <sup>6</sup>.

To conduct this integrative review, we used the following question: what nursing care recommended in the literature for clients with venous ulcers?

After raising the issue of research, we established the following inclusion criteria: published articles by nurses or in partnership with other health professionals, available in its entirety on national and international journals indexed in electronic databases, published in English, Spanish and Portuguese, in the period 2006-2011, addressing nursing care to clients with venous ulcers. Exclusion criteria refer to non-compliance with the criteria described above.

The search for articles was conducted in March 2012, using the following descriptors: venous ulcers, nursing care and wound healing. For location of the items we used the following databases: Latin American and Caribbean Health Sciences (LILACS), Scientific Electronic Library Online (SciELO) and Medical Literature Analysis and Retrieval System Online (MEDLINE).

Combining the descriptors, "venous ulcer" and "nursing care" found 129 articles, of which only 02 available in full.

With the combination of descriptors, "venous ulcer" and "wound healing" was found 963 articles, but only 75 available in full. Of these, 65 did not answer the research question, 01 had been repeated in the database, leaving only 07 articles suitable for inclusion criteria.

With the combination of descriptors, "wound healing" and "nursing" found 843 articles, of which only 26 complete 23 did not meet the research question, repeated 02 in the data base, only 01 total product.

Adding the first 02 items of the combination with the second combination of the items 07 and 01 over the third article combination, there was obtained a total of 10 items selected for the study.

For analysis, we used the content analysis, a set of analysis techniques of communication, using systematic and objective procedures to describe the content. Content analysis is a systematic organization of decisions ordering the results during the analysis. <sup>7</sup>

The classification of articles was performed as described below: Level 1: meta-analysis of multiple randomized controlled trials, level 2: individual studies with experimental design, level 3: quasi-experimental time-series or case-control, level 4: studies descriptive; Level 5 case reports or experience; Level 6 opinions of expert committees, including interpretations of information is not based on research, regulatory or legal opinions. <sup>8</sup>

## RESULTS AND DISCUSSION

To analyze the selected articles, we used a summary table describing the findings concerning the following information: name of scientific, database, professional category / authors, journal / method and results, as shown in Figure 1.

FIGURE 1. Particularities and main results of the found articles. Rio de Janeiro-RJ, May, 2012.

Scientific Production	Database	Professional Category/Autors	Journal/Method	Results
Wound assessment by the nurses of public hospitals <sup>9</sup>	LILACS	Nurses Morais, GFC; Oliveira, SHS; Soares, MJGO	Texto & contexto enferm;17(1): 98-105, jan.-mar. 2008  Field study	It was evaluated the need to create the material conditions and improve scientific knowledge in relation to the evaluation process, including venous ulcers.
Stomatherapy nursing: clinical care to the carrier of Ulcus Cruris <sup>10</sup>	LILACS	Nurses Silva FAA, Freitas CHA, Jorge MSB, Moreira TMM, Alcântara MCM	Rev Bras Enferm, Brasília, 2009, Nov-dez; 62(6): 889-93.  Bibliographic Review	A literature review on analysis of nursing scientific production on Ulcus Cruris, from 2002 to 2007, demonstrating that the subject is poorly researched and there is little qualitative research that address this content.
Lower extremity ulcer management:	MEDLINE	Nurses	Journal of Clinical Nursing, Volume	The use of care algorithm can be used in collaboration with other

best practice algorithm <sup>11</sup>		Simms WK, Ennen K	20, Issue 1-2, pages 86-93, Jan 2011  Literature review	health care providers to promote the stabilization of ulcers on the lower limbs.
A systematic review of health-related quality of life instruments used for people with venous ulcers: an assessment of their suitability and psychometric properties <sup>12</sup>	MEDLINE	Enfermeiros  Palfreyman JS, Tod AM, Brazier JE, Michaels JA	Journal of Clinical Nursing, Volume 19, Issue 19-20, pages 2673-2703, Oct 2010  A systematic review of the Literature	It should be noted that the literature does not distinguish the quality of life in relation to customers with venous ulcers, with the others. Therefore, there seems to be problems regarding the use of instruments to detect changes in quality of life related to venous ulcer healing.
Survey of the cost of the procedure with Unna boot in patients with venous ulcer <sup>14</sup>	LILACS	Enfermeiros  Baptista CMC; Castilho V	Rev Latino-am Enfermagem, nov-dez 2006; 14(6)  Exploratory field research	The identification of socio-demographic characteristics and of the lesions of patients with Ulcus Cruris (UV) and calculating the total cost of direct materials and nursing staff used in the procedure with Unna boot.
Effects of physical therapy decongestive on healing of venous ulcers <sup>15</sup>	LILACS	Enfermeiro/ Fisioterapeutas  Azoubel, R; Torres, GV; Silva, LWS; Gomes, FV; Reis, LA	Rev Esc Enferm USP;44(4): 1085-1092, dez. 2010  A nearly experimental study	Decongestive physical therapy (PDT) showed significant results in reducing swelling and pain, in addition to the improvement in the healing process.
Etiology of the microbiota present in venous ulcers of users of unna boot <sup>16</sup>	LILACS	Nurses  Vicentim, AL; Gatti, MAN; Weckwerth, PH; Carvalho, RCO	Salusvita;28(1): 65-72. 2009  A retrospective study	The use of unna boot guests with Ulcus Cruris seeking to minimize the damage caused by the infection in the wound healing, as for example, in the orientation to self-care.
Biological effects of light: application of low power therapy employing LEDs on the healing of venous leg ulcer: case study <sup>17</sup>	LILACS	Nurses  Siqueira, CPC M; Filho, DOT; Lima, FML; Silva, FP; Durante, H; Dias, IFLD; Duarte, JL; Kashimoto, RK; Castro, VAB	Semina: Ciências Biológicas e da Saúde, Londrina, v.30, n.1, p.37-46, jan/jun. 2009  Case study	The use of low-power light sources such as light-emitting diodes, LEDs provide a therapeutic feature of venous ulcer.

The effect of a cryotherapy gel wrap on the microcirculation of skin affected by chronic venous disorders <sup>18</sup>	MEDLINE	Nurse  Kelechi TJ, Mueller M, Zapka JG, King DE	Journal of Advanced Nursing, Volume 67, Issue 11, pages 2337-2349, Nov 2011  Randomized clinical essay	The effects of cryotherapy in the prevention of venous ulcers through the improvement in blood flow.
Protocol for a pilot randomised controlled clinical trial to compare the effectiveness of a graduated three layer straight tubular bandaging system when compared to a standard short stretch compression bandaging system in the management of people with venous ulceration:3VSS2008 <sup>19</sup>	MEDLINE	Nurse  Weller CD; Evans S; Reid CM; Wolfe R; McNeil J	Trials;11: 26, 2010  Multicentric clinical essay of parallel group, randomized	The applicability of multi-layer high compression system for the treatment of venous ulcers.

Of the 10 selected articles, there was a predominance of authors nurses, and only one article written in partnership with physiotherapists. As for the database, the items were found both in the LILACS database (06) and MEDLINE (04), 06 articles were in Portuguese and 04 in English. Regarding the method, there is a predominance of publications classified in four levels of evidence, so descriptive.

It was found that the focus of attention of the articles are focused on the use of new products and hard technologies in caring for clients with venous ulcers, but without significant evidence.

After analyzing the articles, there were two categories titled 7: Importance of the nurse in the assessment of the client with venous ulcers and strategies used in customer care with venous ulcers.

Importance of the nurse in the assessment of the client with venous ulcer

After reading these articles reveals that 05 of them highlights the key role of the nurse in the assessment of the client with venous ulcers, considering holistic care, local factors, systemic and external condition the appearance of the wound or interfere with the healing process. <sup>9</sup> Among the information to be grouped cite age, presence of underlying diseases such as hypertension and diabetes, nutritional conditions, rest, medication use, among others. <sup>9</sup>

To facilitate the acquisition of relevant information, one of the publications cited the creation and implementation of a protocol for assessment and monitoring customers, instrument considered essential as it allows the recording of information and the application of knowledge and skills, in addition to setting goals for making decisions. <sup>9</sup>

In clinical practice, nurses must plan, implement and evaluate nursing care to the client, including those with venous ulcers, based on the philosophical, scientific and technical, using the methodology of assistance. Thus, nurses work both in prevention and in the evaluation of patients, strengthening the preventive health practices aiming at individualized care.

However, nurses have as objectives for customer care with venous ulcers, the strengthening of the guidelines in relation to self-care, involving a range of issues related to health care. Thus, nursing seeks a more humanistic and less technical process of care and is responsible for providing the necessary assistance to the client if it has some limitation or inability to perform self-care.

Algorithms "best nursing practices" resides on a suggestion to the management and treatment of venous ulcers of the lower limbs, which are: hyperglycemia - treatment and control; prevent and / or control of infection of the ulcer; ulcer debridement as routine nurse; product (healing) suitable for each client / feature ulcer, and application of compression therapy.<sup>11</sup>

One article highlights the nurses as primary care providers for clients with venous ulcers, being an ideal position to assess and develop the quality of life questionnaires to assess the impact of the ulcer in the lives of clients.

It is evident that the actions of nurses currently involve the principle of completeness, as opposed to curative approach focusing only on technical procedures, and values the holistic view of care for patients with venous ulcers. Consequently, the patient must actively participate in the prevention of the ulcer and / or wound healing.<sup>12</sup>

Note also that health professionals, particularly nurses, are involved in the management of materials and inputs of health facilities, and consequently in their costs. Therefore, it is important to know the expenses related to the treatment of wounds, particularly venous ulcers. In this regard, one of the articles discussed the use of unna boot for treating venous ulcers, through the measurement of cost helped to know the pattern of consumption and spending, but they did not clarify if its cost is high or not.<sup>14</sup> This fact reveals the need to conduct studies on the cost of different types of treatments available.

#### *Strategies used in care for the client with venous ulcers*

In this category we emphasize the various technologies employed, as the unna boot elastic and inelastic compression bandages, wraps with multilayer coverages with various primary functions and presentations.<sup>10</sup>

One article addresses the physical decongestive therapy (PDT) in the healing of venous ulcers, a procedure where customers were submitted to both the daily dressing of the ulcer made by nurses about treatment with decongestive physical therapy three times a week on alternate days duration of 40 minutes each session done by physiotherapists.<sup>15</sup> demonstrated the importance of the multidisciplinary team to accelerate the healing process.

Another article highlights the concern with the microorganisms present in the ulcer of users Unna Boot. After collecting the material, it was demonstrated the presence of bacteria that retarded healing. To modify this reality, developed newsletters, intent on improving self-care related specifically to care for the wound at home.<sup>16</sup>

A case study highlighted the use LEDs-LEDs, demonstrating the healing and pain reduction in client with venous ulcers in both lower limbs, with a wavelength of 625nm.<sup>17</sup> Despite the favorable outcome in the case mentioned, there is a need for studies with significant levels of evidence.

The cryotherapy gel wrap (wrap gel criotherapy ®) is another alternative of the articles cited in customers for treating venous ulcer. This suggests the improvement in blood flow, reducing movement within the microcirculation being cited as beneficial for preventing venous ulcers in limbs inferiors.<sup>18</sup> Allied to this treatment, it is recommended to perform compression and elevation of the lower limbs.

The system of multi-layer high compression has been described as the gold standard for the treatment of venous ulcers. Therefore, the selected article did not present clinical trial results multicenter, parallel-group, randomized, only described the purpose of answering the question whether the compression system 3L (straight tubular bandage) or the compression system SS (short excerpt default) are associated with better results.<sup>19</sup>

Warning that the chronic nature of venous ulcers, the use of the technologies mentioned in the literature is costly to customers and the public health service.<sup>10</sup> Therefore, do not follow the financial reality of many people with venous ulcers. In addition, health services do not yet have many technologies proposed.

In this sense, alert to the precariousness of studies with significant evidence regarding the technologies mentioned, an essential condition for the provision of such health services. Thus, there is the importance of nurses to appropriate technical and scientific knowledge for assessment / intervention with the client and conducting research that show the effectiveness of care implemented.

## CONCLUSION

It is noteworthy that the customer carrier venous ulcer should undergo conducting daily dressings, change in lifestyle and a commitment to treatment. The development of new strategies for a comprehensive evaluation of the client, and the healing of venous ulcers in the best position to provide evaluation, choosing the most appropriate therapy, and especially the implementation of preventive processes for clients with venous insufficiency.

This review revealed a gap in the scientific literature in the area facing the nursing care to this specific population. It was noticed that the content is directed to the use of new technologies still little explored scientifically.

International publications reveal an advance against our reality, thus demonstrating how the socioeconomic situation presents its differential.



So for the health system to invest in new strategies for the treatment of venous ulcers, it is necessary to prove its efficacy prior, through scientific studies with significant levels of evidence, directed not only to the development of treatment strategies, but also in the practice of clinical nurse.

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Contact of the corresponding author:  
Carlos Roberto Lyra Silva  
Avenida Pasteur, 296 - Urca - Rio de Janeiro - RJ - Cep 22290-240  
E-mail: profunirio@gmail.com