Implementation of assistant protocol tailored to people with venous ulcers in primary health care

Implantação de protocolo assistencial voltado a pessoas com úlceras venosas na atenção primária a saúde

Implementación de protocolo asistente a la medida de personas con úlceras venosas en atención primaria de salud

Fernanda Araújo Valle Matheus[1], Juliana dos Reis Neponuceno de Oliveira[2], Carliana de Melo Oliveira[3], Larissa Pereira de Azevedo[4], Larissa Lima dos Santos[5], Sheyla Santana de Almeida[6], Simone Barbosa Santos7, Janaína Nascimento Lassala[8]

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1. Universidade Estadual de Feira de Santana. Feira de Santana, Bahia, Brasil. https://orcid.org/0000-0001-7501-6187

2 Empresa Brasileira de Serviços Hospitalares- EBSERH, Salvador, Bahia, Brasil https://orcid.org/0000-0002-7039-3837

3 Empresa Brasileira de Serviços Hospitalares- EBSERH, Salvador, Bahia, Brasil https://orcid.org/0009-0005-7563-3704

4 Empresa Brasileira de Serviços Hospitalares- EBSERH, Salvador, Bahia, Brasil https://orcid.org/0009-0008-2682-2076

5 Empresa Brasileira de Serviços Hospitalares- EBSERH, Salvador, Bahia, Brasil https://orcid.org/0000-0002-3629-0164

6 Empresa Brasileira de Serviços Hospitalares-EBSERH. Uberlândia, Minas Gerais, Brasil https://orcid.org/0000-0001-8855-8698

7 Empresa Brasileira de Serviços Hospitalares-EBSERH. Aracaju, Sergipe, Brasil https://orcid.org/0009-0008-1137-0177

8 Curativa Clin. Joinville, Santa Catarina, Brasil. https://orcid.org/0000-0001-5817-6664

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RESUMO

Objetivo: Relatar a experiência da implantação de um protocolo assistencial voltado a pessoas com úlceras vasculares com foco nas úlceras venosas na atenção primária a saúde. **Método:** Trata-se de um estudo descritivo, realizado de março a julho de 2023, no Distrito Sanitário do Subúrbio Ferroviário, Salvador/BA. **Resultados**: A elaboração de um protocolo assistencial para pessoas com úlceras vasculares, com foco nas úlceras venosas, contou com apoio da enfermeira distrital, duas enfermeiras da assistência e um médico clínico e com a implementação dor referido protocolo por meio de reuniões online e presenciais para treinamento da verificação do índice tornozelo- braquial. **Considerações finais:** A elaboração do protocolo poderá favorecer a organização das unidades da atenção primária de modo que as pessoas portadoras de úlceras venosas possam receber um cuidado prestado de forma integral, holística e humanizada pelos profissionais que compõem a atenção primária a saúde.

Descritores: Protocolos Clínicos; Ulcera Venosa; Atenção Primária a Saúde.

ABSTRACT

Objective: To report the experience of implementing a care protocol aimed at people with vascular ulcers with a focus on venous ulcers in primary health care. **Methodology**: This is a descriptive study, carried out from March to July 2023, in the Health District of Subúrbio Ferroviário, Salvador/BA. **Results:** The development of a care protocol for people with vascular ulcers, focusing on venous ulcers, had the support of the district nurse, two care nurses and a clinical doctor and the implementation of this protocol through online and in-person meetings to training in checking the ankle-brachial index. **Final considerations**: The development of the protocol may favor the organization of primary care units so that people with venous ulcers can receive care provided in an integral, holistic and humanized manner by professionals who make up primary health care.

Descriptors: Clinical Protocols; venous ulcer; Primary Health Care

RESUMEN

Objetivo: Reportar la experiencia de implementación de un protocolo de atención dirigido a personas con úlceras vasculares con enfoque en úlceras venosas en la atención primaria de salud. **Metodología:** Se trata de un estudio descriptivo, realizado de marzo a julio de 2023, en el Distrito de Salud del Subúrbio Ferroviário, Salvador/BA. **Resultados:** El desarrollo de un protocolo de atención a personas con úlceras vasculares, con foco en las úlceras venosas, contó con el apoyo de la enfermera distrital, dos enfermeras asistenciales y un médico clínico y la implementación de este protocolo a través de reuniones online y presenciales para capacitaciones en comprobando el índice tobillo-brazo. **Consideraciones finales**: El desarrollo del protocolo puede favorecer la organización de las unidades de atención primaria para que las personas con úlceras venosas puedan recibir una atención brindada de manera integral, holística y humanizada por los profesionales que integran la atención primaria de salud.

Descriptores: Protocolos Clínicos; Úlcera Venosa; Atención Primaria de Salud.

Introduction

Chronic ulcers in the lower limbs have several etiologies, of which the following stand out: venous, arterial, traumatic, infectious and diabetic. Among these, venous ulcers affect 1% of the world's population and account for 75% of all chronic ulcers.[1,2]

A chronic venous ulcer of the lower limb is defined as a wound that takes more than 2 to 4 weeks to heal, whose etiopathogenesis is chronic venous hypertension. Its characteristics are irregular and superficial wounds, which can become deep, with well-defined borders, commonly presenting yellowish exudate, with edema in the lower limbs and hyperpigmentation of the skin in the lower limbs.[3] The chronicity of venous ulcers causes pain and physical dysfunction to the patient, and takes them away from their daily activities, which generates a significant socioeconomic impact.[4]

The costs for venous ulcer treatment are high. It is estimated that in the United States, approximately $30,000 is spent per patient per year. The prevalence of chronic ulcers is higher in Western countries, where it already consumes up to 2% of health budgets[4]. In Germany, the average annual cost of leg ulcer treatment has been estimated at €9,060 per patient per year. In Brazil, this expense is unknown.5 In the United Kingdom, the estimated cost is 3000 euros per healed ulcer.[6]

In addition to the high costs, venous ulcers affect the adult population in different age groups and cause an important social and economic impact, distancing patients from daily activities, generating early retirement and reducing their quality of life.[7]

It is known that the gold standard for the treatment of venous ulcers is compression of the lesion to treat the cause of the underlying disease and consequently wound healing, however there is a gap in the care provided to this population at the primary health care level, which inevitably contributes to the chronicity of the lesions and increased occurrence of complications, culminating in the demand for care from other levels of health care.[8]

In addition, the search for specialized services, such as angiologists and imaging tests that confirm the diagnosis, increase the healing time of venous ulcers. It is urgent that care protocols be devised to standardize the care provided to patients with venous ulcers within primary health care International studies show the lack of standardization of care for venous ulcers at the various levels of the SUS, which hinders the success of treatment.[9]

Care protocols are a set of actions on a certain area of knowledge, built within the principles of evidence-based practice with the purpose of systematizing the team's care, ensuring order, quality, uniformity and agility in care.10 In this sense, including the measurement of the ankle-brachial index in the protocol is the gold standard for the treatment of venous ulcers due to its low cost. A French study argues that nurses specifically trained in wound care are key to performing and interpreting this measurement.[11] It is urgent that primary health care nurses be trained in the management of venous ulcers.

The objective of this study is to report the experience of implementing a care protocol aimed at people with vascular ulcers, focusing on venous ulcers in primary health care. The purpose of this report is to standardize the actions

performed during the work activity, aiming at success during care, with a focus on comprehensive, holistic and humanized care.

Method

This is a descriptive study, in the form of an experience report. This is a type of knowledge production that deals with professional experience, whose main characteristic is the description of the intervention for replication in other scenarios.

The scenario chosen to develop the construction of the pilot protocol of the Municipal Health Department of Salvador, Bahia was the Sanitary District of the Railway Suburb, which consists of an intermediate administrative unit, connecting the level of the Municipal Health Secretary with the Health Units and aggregating 35 neighborhoods of Salvador, Bahia, Brazil with a territorial extension of 63.33 km2. being considered the 3rd largest district in population of the capital (Salvador -Bahia) and is responsible for providing assistance to an estimated population in 2020 of 347,521 people. The setting was chosen because it is the locus of action of the reference nurse in wounds and skin care and of health professionals who work in direct and indirect care in the referred district.

The population that accesses dressing services in 23 Basic Health Units, 22 of which have a Family Health Strategy (FHS) and 01 without FHS. The district also has 03 expanded Family Health Centers in Primary Care (Nasf-AB). It should be noted that 315 people with complex wounds are monitored in the 23 basic health units, 140 of them with venous ulcers and many other etiologies without a confirmed diagnosis.

A standard operating procedure (SOP) entitled "Evaluation of the person with vascular ulcer and prescription of the unna boot" was elaborated with the objective of: Qualifying nursing care in the management of vasculogenic ulcers (Arterial ulcers and Venous ulcers); Evaluate the patient with vasculogenic ulcer based on anamnesis, physical examination and complementary examination, in order to make the nursing diagnosis, prognosis and care plan; Describe and distinguish between venous ulcers and arterial ulcers (pain, effect of limb elevation, distribution and appearance of wounds, and special tests); Perform examination of the ankle-brachial index (ABI); Prescribe boots according to primary health care protocol. This SOP was organized by the dressing reference of the aforementioned district and reviewed by two clinical nurses and a clinical physician.

The period of organization of the care protocol for the care of people with venous ulcers was from March to July 2023, through virtual meetings between the district dressing reference of the referred district and the professionals who are in the direct and indirect care of people with venous ulcers in order to train everyone on the subject.

In addition, meetings were held between medical and nursing professionals from the 23 units in the suburb district, and theoretical and practical training was provided for the performance of the ankle brachial index and its interpretation so that the care provided to this person could generate effectiveness and problem-solving. To this end, manuals from the Ministry of Health, the wound protocol of the city of Salvador and documents that guide the

care of people with venous ulcers and national and international scientific articles with successful experiences were used.

Results

The elaboration of a care protocol for people with vascular ulcers, with a focus on venous ulcers, in a health district in primary health care, had the support of several categories that developed care protocols for these people in order to facilitate access and minimize unsuccessful treatment seeks. Welcoming in the Family Health Strategy Units (FHU) is now an integral part of the work process, ensuring the principle of universal accessibility. Through it, care should be given to all people who seek health services. It is noteworthy that this document, prepared by the team of the Railway Suburb District, under the coordination of the district technical reference, guides the reception in the health units and organizes the care for patients with vascular wounds, with a focus on venous ulcers.

Elaboration of the (SOP) entitled "Evaluation of the person with vascular ulcer and prescription of the unna boot

The elaboration was done by the district nurse and was evaluated by 02 nurses from the assistance and a clinical doctor. In the description of the procedure, the evaluation of the patient with venous ulcer with the clinical history and physical examination focused on the aforementioned pathology was listed, with the evaluation of edema, pain and palpation of the femoral, popliteal, posterior tibial, pedial pulses. The evaluation of the patient with arterial ulcer is based on the clinical history, physical examination and performance of the complementary Ankle/Brachial Pressure Index test:

The ankle-brachial index (ABI) is a test that shows high sensitivity for patients with arterial vascular insufficiency of the lower limbs, carotid atherosclerotic disease, and patients with left ventricular hypertrophy with hypertension. ABI is considered the gold standard for diagnosing peripheral arterial obstructive disease (PAD) in patients with type 2 diabetes. Intermittent claudication is the most common clinical manifestation of PAOD. The index is calculated by rationing the systolic pressure of the right or left brachial artery (the highest value) to the systolic pressure of the anterior tibial malleolar or posterior tibial arteries (the highest value).

Calculate the ABI as follows:

ABI = Ankle pressure
Arm pressure

The ABI measurement protocol was elaborated, establishing the step-by-step for performing this test:

1. Make sure that the patient has not smoked at least 2 h before the test
2. Place the patient in the supine position with the head and heels fully supported on the bed. Keep it at rest for 5 to 10 min
3. Ask the patient to remain still during the exam
4. Place the sphygmomanometer around at least 40% of the limb, apply the gel to the Doppler sensor and position it in the wrist zone at an angle of 60°

to the probable trajectory of the analyzed vessel (usually 45° to 60° with the skin). Move the probe until the clearer sound becomes audible

5. The cuff should be inflated progressively up to 20 mmHg above the vanishing level of the flow signal and then slowly deflate to detect the pressure level on the reappearance of the signal

6. The sequence of systolic blood pressure measurements should preferably be the right arm, right ankle, left ankle, left arm, and again the right arm (repeated to avoid falsely high values resulting from anxiety or the "white coat effect"). SBP should be measured in the pedisous (on the dorsum of the foot) and posterior tibial (posterior to the medial malleolus) arteries.

Interpretation of the results should be combined with clinical results and other complementary tests that are deemed necessary. Physical examination of the vascular component should include, at least, palpation of the pedal and posterior tibial pulses. If the examination suspects vasculopathy (decreased or non-palpable pulses), the patient should be referred for further vascular evaluation.

An ABI score between 0.9 and 1.2 indicates that the patient has normal circulation and, therefore, the unna's boot can be indicated and prescribed.

If the ABI is between 0.8 and 0.9, the patient has a mild peripheral disease and also has the indication and prescription of the unna boot. If the ABI is between 0.6 and 0.8 the patient has significant arterial disease and therefore should be referred to an angiologist.

Do not use compression therapy in patients with ABI <0.5: refer to a vascular surgeon for possible revascularization. This ABI value should be evaluated together with the clinical characteristics of the patient, and thus, a table was prepared with a differential diagnosis of venous and arterial ulcers, which contained characteristics about the location of the lesion, evolution, depth, margins, lesion bed and perilesion, palpation of pulses and pain.

To indicate and prescribe the unna boot, the individual should have at least one wound in progress, edema and at least two related characteristics: venous ulcer and ABI between 0.8 and 1.2.

Implementation of the care protocol for people with vascular ulcers with a focus on venous ulcers in primary health care

The implementation of this protocol initially took place with an online meeting that was recorded to pass on all theoretical knowledge on the subject. Soon after, meetings were scheduled for practical training on the implementation of the ITB in the 23 units of the suburb district.

Every time a patient was scheduled, the district referral made an appointment at the unit to monitor the performance of the ABI and consequent evaluation and prescription of the unna's boot. It is noteworthy that the first application of the boot was recommended from Monday to Thursday to be removed after 24 hours and to be reassessed if the prescribed therapy led to any complication or pain to the patient.

Discussion

Embracement is seen as an instrument that reorganizes the work process, enabling the use of the FHS as a gateway, provided that it positively influences the user's pattern of use of services, corroborating the longitudinality of care, since it aims to form lasting bonds, enhancing comprehensiveness and strengthening care coordination.12 Thus, this construction contributed to organize the line of care in PHC and provide access to other levels of care.

In order for this whole process of elaboration of the multidisciplinary care protocol to occur, the importance of communication between teams and professionals of different categories is emphasized.[13] Thus, the elaboration of flows requires interprofessional and collaborative communication between professionals from different health categories, in order to conduct a shared work process, dialogic and transformative.[14]

Thus, it should be noted that the elaboration of multidisciplinary care protocols is an important instrument for health management with a focus on the safety of professionals and users, organizing the work of the categories, standardizing conducts and incorporating them into professional practice. This is evidenced in national and international studies that report that protocols, flows, and rules should be socialized and respected by all professionals in order to meet the objectives of a health service.[15] Nevertheless, the focus of the care protocol is the person and not the wound, considering that several factors alter healing, such as clinical issues, nutritional, psychological, social and financial aspects, a fact that has been evidenced in national and international studies10. Studies reveal that care protocols, flows, and Standard Operating Procedures (SOP) favor the minimization of costs arising from the treatment of people with complex wounds.[16]

Considering that 70% to 90% of ulcers are of venous etiology and that about 3% of the population has venous ulcers, the dimension of the problem is given. In the DSSF, there are 23 dressing rooms that use special dressings, totaling 70 people followed up using unna boots and, therefore, with a closed diagnosis. However, about 30% of them were undiagnosed, requiring consultation with a specialist, and they ran into this bottleneck of difficulty in accessing specialized services.1 In addition, after the diagnosis of venous ulcers, the nurse may prescribe the use of an unna boot that helps in the healing of wounds. This is evidenced in national and international studies that reveal the improvement of venous flow in the use of compression therapy and, consequently, the healing of ulcers.3 This can be verified by clinical evaluation and measurement of ABI.

ABI is considered the gold standard for diagnosing peripheral arterial obstructive disease (PAD) in patients with type 2 diabetes. The index is calculated by the ratio of the systolic pressure of the right or left brachial artery (the highest value) to the systolic pressure of the anterior tibial malleolar or posterior tibial arteries (the highest value).[17] A Brazilian national study revealed an update for the treatment of venous ulcers supported by the ABC Model in ulcer management, which comprises: (A) assessment and diagnosis; (B) good practices in wound and skin management; and (C) compression in optimizing the treatment of the lesion and preventing recurrences. The adoption of the Model allows the professional to follow a systematized path for the treatment of patients with venous ulcers.[3]

It should be noted that studies show that ABI between 0.8 and 1.3 is indicated for unna boot or compression therapy and encourages patients to be active and to walk. A national study that applied a protocol for venous ulcer management in PHC related, in addition to ABI values, the location of the venous ulcer, the time of existence of the venous ulcer, the measurement of venous ulcers, and the evaluation of edema in the lower limbs, which is related to the findings of this study that evaluates signs and symptoms of the patient.[8] Another study revealed that ABI can be relevant for the differential diagnosis of chronic ulcers (venous, arterial, neuropathic, and hypertensive ulcers), as well as the management of each.[4]

Studies that address the clinical characteristics that should be associated with ABI are: edema, ulcer location, irregular borders, extensive lesion, pain-free patient. Successful German experiences such as the Caring for Venous Ulcers project were established to develop a disease management concept to improve the outpatient treatment of patients.[18]

The elaboration of a care protocol has scientific relevance, addresses the following benefits to people: prevention of new diseases, early discharge, greater comfort and quality of life for people with wounds, proving to be an excellent strategy for care by standardizing the conduct of professionals and consequent training of the health team

Conclusion

The study allows us to conclude that in order to organize the care protocol for people with vascular ulcers, especially venous ulcers, previous meetings were necessary with health professionals, such as nurses and nursing technicians, physicians for theoretical and practical training.

Thus, it should be recognized that theory aligned with practice favored the entire process for the elaboration of a care protocol for people with vascular ulcers.

The elaboration of this care protocol may favor the better organization of PHC units in other health districts of several municipalities and states, so that people with venous ulcers can receive multidisciplinary care provided in a comprehensive, holistic and humanized way by the professionals who make up primary health care. It is urgent that the care of people with venous ulcers be multidisciplinary in order to avoid the prolongation of treatment, extension of the severity of the injuries, minimize costs to the Unified Health System in order to provide well-being of the individual, with a better quality of life and their possible return to social activities as soon as possible

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Fernanda Araújo Valle Matheus
Universidade Estadual Feira de Santana.
Transnordestina Avenue, s/n. Novo Horizonte.
ZIP: 44036-900. Feira de Santana, Bahia, Brazil.
nanmatheus@yahoo.com.br