

Self-care deficits in women with leg ulcers and sickle cell disease

Déficits de autocuidado em mulheres com úlceras de perna e doença falciforme Déficits de autocuidado en mujeres con úlceras en las piernas y enfermedad de células falciformes

Flávia Karine Leal Lacerda¹

ORCID: 0000-0003-0222-3825

Sílvia Lúcia Ferreira

ORCID: 0000-0003-1260-1623

Enilda Rosendo do Nascimento¹

ORCID: 0000-0001-6993-3747

Deise Oliveira Costal

ORCID: 0000-0002-0935-7925

Rosa Cândida Cordeiro"

ORCID: 0000-0002-3912-1569

' Universidade Federal da Bahia. Salvador, Bahia, Brazil. " Universidade Federal do Recôncavo da Bahia. Santo Antônio de Jesus, Bahia, Brazil.

How to cite this article:

Lacerda FKL, Ferreira SL, Nascimento ER, Costa DO, Cordeiro RC. Self-care deficits in women with leg ulcers and sickle cell disease. Rev Bras Enferm. 2019;72(Suppl 3):72-8. doi: http://dx.doi.org/10.1590/0034-7167-2018-0005

Corresponding Author:

Flávia Karine Leal Lacerda E-mail: flavia_k23@hotmail.com



Submission: 07-13-2018 **Approval:** 08-26-2018

ABSTRACT

Objective: to identify self-care deficits in women with leg ulcers and sickle cell disease. **Method:** a qualitative, descriptive, exploratory approach with 14 women. The collection was performed from December 2015 to January 2016, while the analysis was supported by Orem's Self-Care Deficit Theory. **Results:** self-care requirements are not fully met. The following were identified as universal: balance between loneliness and social interaction, rest and proper nutrition; development: inability to perform work, abrupt changes in the environment due to hospitalization, educational deprivation and dropout; health deviations: ulcer recurrences, pain, changes in skin appearance and gait changes. **Conclusion:** nursing care for women with leg ulcers and sickle cell disease requires planned actions for comprehensive care. **Descriptors:** Sickle Cell Disease; Leg Ulcer; Self-Care; Nursing Care; Nursing Theory.

RESUMO

Objetivo: identificar os déficits de autocuidado em mulheres com úlceras de perna e doença falciforme. **Método:** abordagem qualitativa, descritiva, exploratória com 14 mulheres. A coleta foi realizada em dezembro de 2015 a janeiro de 2016, enquanto a análise foi sustentada pela Teoria Geral do Déficit de Autocuidado de Orem. **Resultados:** os requisitos de autocuidado não são plenamente atendidos. Foram identificados como universais: equilíbrio entre solidão e interação social, repouso e alimentação adequada; desenvolvimento: incapacidades para realizar o trabalho, mudanças abruptas de ambiente pelo internamento, privação educacional e evasão escolar; desvios de saúde: recidivas de úlceras, dor, alterações no aspecto da pele e alterações na marcha. **Conclusão:** o cuidado de enfermagem às mulheres com úlcera de perna e doença falciforme requer ações planejadas para o cuidado integral.

Descritores: Doença Falciforme; Úlcera da Perna; Autocuidado; Cuidados de Enfermagem; Teoria de Enfermagem.

RESUMEN

Objetivo: para identificar déficits de autocuidado en mujeres con úlceras en las piernas y enfermedad de células falciformes. **Método:** abordaje cualitativo, descriptivo, exploratorio con 14 mujeres. La colección se realizó de diciembre de 2015 a enero de 2016, mientras que el análisis fue respaldado por la Teoría del Déficit de Autocuidado de Orem. **Resultados:** los requisitos de cuidado personal no se cumplen por completo. Los siguientes fueron identificados como universales: equilibrio entre soledad e interacción social, descanso y nutrición adecuada; desarrollo: incapacidad para realizar el trabajo, cambios abruptos en el entorno debido a internamiento, privación educativa y deserción; desviaciones de salud: recurrencias de úlceras, dolor, cambios en la apariencia de la piel y cambios en la marcha. **Conclusión:** el cuidado de enfermería para mujeres con úlceras en las piernas y enfermedad de células falciformes requiere acciones planificadas para el cuidado integral.

Descritores: Enfermedad de Células Falciformes; Úlcera en la pierna; Autocuidado; Cuidado de Enfermería; Teoría de Enfermería.

INTRODUCTION

Sickle cell disease (SCD) is hereditary, monogenic and often disabling, with leg ulcers (LU) being the most severe skin manifestations with significant morbidity burden, whose prevalence is 22%⁽¹⁾. Thus, knowing the requirements for self-care of women with LU is a priority for both nurses and affected women.

Orem's Self-Care Deficit Theory, which consists of three theories: Self-Care Theory (SCT), Self-Care Deficit Theory (SCDT), and Nursing System Theory (NST) $^{(2-3)}$. This study is supported by SCT and TDAC.

SCT relates to the person, being an action performed for their own care. This theory presents the universal requirements of development and health deviation to understand self-care demands. SCDT guides nursing actions by recognizing the inability of individuals to self-care activities, defining which nursing interventions will be necessary^(2,4).

OBJECTIVE

To identify self-care deficits in women with LU and SCD.

METHOD

Ethical aspects

This study was approved by the Research Ethics Committee of the *Universidade Federal da Bahia's* School of Nursing and complied with the ethical and legal aspects of the Brazilian National Health Board (*Conselho Nacional de Saúde*), Resolution 466/12. After presenting the research objectives during consultation and interview, guaranteeing anonymity, all participants signed the Free and Informed Consent Term.

Theoretical-methodological framework and type of study

This is a qualitative, exploratory and descriptive study that adopted as the theoretical-methodological framework the SCDT. There were use of the three domains of COREQ research type and reflexivity, study design and analysis and findings⁽⁵⁾, respectively.

Study setting

The study was conducted at the reference blood center in the city of Salvador, state of Bahia. This unit has approximately 4,484 people with SCD who seek health care registered. Included are individuals from Salvador and other municipalities that make up the state.

Study participants and data source

Women with LU secondary to SCD participated in the study. The sample consisted of fourteen women who sought the reference blood center from May 2015 to November 2015 through nursing consultations. Participants were intentionally selected in the dressing room, contacted personally by the researcher and invited to participate in the research, after the reasons and objectives were explained. Interviews were held in December/2016.

Inclusion criteria were: having a confirmed diagnosis of SCD, with LU secondary to the disease; follow up at the state reference

blood center; over 18 years old. Exclusion criteria were: no LU and SCD; not be accompanied by the blood center; under 18 years old.

Collection and organization of data

For a rapprochement with women, non-participant observation was carried out during the activities of the extension project called *Práticas educativas em saúde: a enfermagem na promoção do autocuidado de pessoas com DF.*

To begin data collection, systematic observation was performed during dressing and nursing consultations. After this stage, a new meeting was scheduled for the interview, which consisted of issues that involved the practices and experiences in self-care, difficulties and routine ulcer care. These issues were supported by a field diary for systematic observation, with a script for recording nonverbal expressions and themes that emerged during the meeting.

Nursing consultation took place in a private room, lasting approximately one hour. Some objective data were noted as: a) laboratory information, history of family disease, information related to social life, sexual and reproductive health, work-related activity and LU; b) objective data from the physical examination (vaccination schedule check and laboratory tests) and subjective data (information mentioned by participants); c) ulcer assessment and self-care research and d) care plan.

Data analysis

For data analysis, we used the content analysis technique⁽⁶⁾, while Orem's SCDT was used to support the analysis. During nursing consultation, interview and observation, the findings were the most frequent self-care deficits related to diet, difficult sleep, lack of rest, sociability, self-care difficulty, impaired mobility, education, recurrence, pain, infection, skin integrity, and health care.

RESULTS

Fourteen women aged 23 to 61 years participated in the research. Regarding marital status, 12 were single and 2 in stable union. The educational level ranged from non-literate to complete high school. Regarding the occupation of women, 11 were retired, 2 received BPC * and 1 had no formal job. The predominant family income was between 1 and 2 minimum wages (13) and without fixed income (1). The ulcer's existence time was 2 to 47 years of injury. The age at which the first wound arose ranged from 21 to 60 years.

Self-care requirements are the sum of individual or collective care needs and, when not met, lead to universal, developmental, and health deviation self-care deficits. Based on the requirements, self-care deficits were traced.

Self-Care Deficits

The most frequent self-care deficits found in women living with LU secondary to SCD will be presented. The deficits found were

* The Continuous Cash Benefit (BPC - Benefício de Prestação Continuada da Assistência Social) is benefit of an individual, non-life and non-transferable minimum wage, established by the Federal Constitution of 1988. To access it, it is not necessary to have contributed to the social security. Source: http:// mds.gov.br/assuntos/assistencia-social/beneficios-assistenciais/bpc. then classified according to the universal self-care, developmental and health deviations requirements, as proposed by Orem⁽²⁾.

It was observed that women who participated in the research presented self-care deficits related to sociability. This impaired sociability deficit was significant in the participants' lives (10). Ulcer presence causes discomfort and discomfort in social situations, causing disruptions in living with friends and family. Fear of dressing exposure results in decreased social and daily activities and consequent self-isolation:

It has made me very sad, because I couldn't go out, everybody went out [...] but I couldn't [...] and then I was always indoors with this wound, unable to go anywhere. My colleagues got married and engaged, but I couldn't go to either of them because I couldn't go because of the injury. (13)

[...] sometimes going on the street, because there is ... there was this wound. I still have, right? [...] to go on a birthday of my colleagues, to go to my neighbor's house, like that, you know? Then, I'm always afraid! Always ashamed! And I always ... stayed at home! (18)

Women reported embarrassing situations experienced in public, which led them away from previously common activities. Often hide from colleagues, fearing to expose their problems and possible rejection. Occasions that make them leave home are going to medical appointments and taking exams. Isolation was justified by the participants' desire to be alone due to changes in health and physical appearance:

I stopped having fun [...] I just stay indoors. Before I lived my life well, fun. Traveled, enjoyed. [...] later I got discouraged. (I11)

I'm not going anywhere! My colleagues call, call me, I'm not going. (112)

Another frequent and important deficit found was related to diet. This deficiency was called *ineffective and/or insufficient food intake for ulcer healing* (9). Women's eating habits are characterized by inadequate or insufficient meals, such as reduced protein intake, fruits and vegetables, and consumption of processed foods.

Because of the wound I don't eat cabbage, I don't eat chayote my mother says it's harmful, and maxixe [In Brazil, maxixe is a vegetable widely consumed in the northeastern and northern regions in popular cuisine, being a cucurbit of African origin] my mother thinks it's harmful. (I5)

Back at the hospital I went on a diet. I got home, I made another one. And this diet that I did at home, she didn't help me [...] I ate things I couldn't: frying, liver, bullshit. Then it opened [...] snacks, soda, crackers, pastries, coxinha [Coxinha is a popular food in Brazil consisting of chopped or shredded chicken meat, covered in dough, molded into a shape resembling a teardrop, battered and fried]. (113)

The doctor told me to eat fish, [...] fish and chicken, free-range chicken. Then I caught some fish and bought it, right? [...] then the wound opened. But it wasn't my fault, the doctor told me to do so. (16)

Another identified deficit was *absence of rest* (3). This self-care deficit is related to universal self-care requirements. Speeches point to the lack of rest due to the performance of work activities,

for the preservation of domestic work. Participants performed house cleaning activities, standing for an extended period of time, making progressive efforts at work and walking a lot, as follows:

Ikept doing the chores: sweeping home, cleaning dog piss in the garage, and so on; then I was told [...] and I could not make any efforts but [...] then it was opening, opening, by undue efforts and no rest [...] (11)

When you start to work, make effort because there at work I was climbing stairs, it was a cover ... then you had to wash up there [...] Then you have no way to be careful. (I5)

[...] every monday and tuesday, going up a hill, taking a full bus and standing [...] (17)

The chronic state deficit affecting mobility was identified in the speeches of 12 woman. The condition was detrimental to women individuation, which makes it difficult to support the foot, walk, run and perform activities. These restrictions clearly appear in the lines:

[...] I can't run because if I run I can fall because of the modification of the foot. (I3)

Sometimes when I'm on my feet, I beat myself, I can't stand upright, because my leg doesn't support me right. (17)

Another identified deficit was disruption of social life (7), due to the complications of SCD associated with the involvement of ulcers and the various periods of hospitalization. In speeches, participants reveal prolonged hospitalizations for treatment. A rural resident participant reports that she has moved from the city for a long time seeking ulcer treatment:

I was hospitalized for three months in case of this same injury. (13)

I got 4 months hospitalized. (I14)

I already lived in the hospital a year, you know, right? [...] here in Salvador, I lived a year. I lived in Santo Amaro a year too, all dealing with this wound. (16)

The low educational deficit that hinders self-care (7), has been identified as a complicating element that deserves attention. Low education makes it difficult to employ appropriate and effective self-care actions. Often women drop out of school and are not literate due to the difficulties imposed by the ulcer. Thus, the reduced level of education is a factor that hinders the reading of the care plan and the prescriptions of health professionals.

[...] If you know how to read, you're reading, seeing what you have to do and what you don't have. If you go through a list with everything, food, what I have to eat. Then ... two three days, I know ... But that's over, I forgot. Then it gets hard! [...] the time to take some medicine, something. A prescription was there, but I just didn't understand. Sometimes I did not understand the time, these things [...] because of forgetfulness and have no guidance to be able to read the recipes, looking, guiding. (15)

Self-care deficit of ulcer recurrences was built because it is a manifestation that affects several aspects of the 14 participants'

lives. Its reappearance may be associated with the absence of preventive measures, such as skin hydration, maintenance of compressive therapy after healing, adequate nutrition, rest, hemoglobin level, use of hydroxyurea and environmental factors.

Grafting was rejected, right? The one I did three times. (I1)

The dressing closed the wound, but then it opened, out of the blue ... so much so that one closed, it was a year and six months, then it reopened again. (12)

Then it opened, a lump appeared a lump with a bubble. (13)

It opened because it closed, but I think it got a little hole. Then it filled and started to come out secretion. (I7)

It healed, then when it came home, in the fields, in a place where we lived, in another city, the wound would come back again, the pigs would crush, the chickens. Then the wound came back all over again [...] it closes and opens again. (16)

Pain was expressive in the routine of 13 participants'. Thus, *chronic pain* was characterized by sudden onset and recurrent tissue injury lasting hours, days or months. Daily episodes of pain due to SCD have been reported, but mainly in the ulcer bed:

When I have pain, I do not eat; then I lose even more weight. Just as if the pain lasts two days. I only eat after the pain goes away. Hurt so much! The pain is so strong from the wound [...] it makes you want to pee, to bend over so much pain [...] (I3)

It is an unbearable pain [...] it is throbbing inside, it seems to be pulling everything out and it is burning. (I11)

When I feel pain, my color changes, my eye changes, my lips change color too. (I13)

Painful seizures manifest after infectious conditions. That said, we come to infection deficit (14). In addition to being susceptible to infection due to inadequate self-care measures and SCD behavior, the presence of ulcers also increases the chances of contamination.

During the investigation, the health care deficit was observed. The women (8) had an outdated vaccine card, unaware of the importance of immunization to prevent possible infectious conditions. Participants mentioned exposure of the ulcer without the use of an occlusive dressing or cleaning without aseptic measures such as wearing gloves:

Then the wound lived uncovered, as it was small, of this size so, I walked inside the creek, from the river, fishing, the fish gnawed, critter and fly would alight on it; at that time, I didn't dress it. (16)

At first I washed without a glove without anything. [...] sometimes I took my dressing to do it, then I did it without gloves. (I9)

More than half of participants in this study (8) had an outdated vaccination card:

I don't get a vaccine anymore. I get vaccinated at the clinic when they have it taken, when there's the advertisement to take at the clinic, I do. (I2) I didn't look at the dates and didn't tell me it was from year to year. (17)

I once had a vaccine, it was until a time when I was giving a lot at ABADFAL, it was in 2011 [...] I had a swollen face, my arms swelled [...] then after that I got afraid of getting a vaccine, I didn't take it anymore, I didn't go there anymore. (114)

During the sessions, it was observed that the appearance of altered skin in participants (12) led to a deficit of skin integrity affected by decreased blood flow in the extremities. Skin care to prevent dryness and to protect against new ulcers is incorporated into the participants' habits as a measure of skin integrity promotion. There are some reports below:

Any wound, a scratch, opens the wound, sometimes out of nowhere too, got it? Sensitivity is very small, anything we already feel. [...] Skin is rougher, a little more sensitive than before. (12)

The doctor applied that oil, Dersani, she gave me to use [...] now Dersani too ... even though I apply, is dry [...] is with very thin skin, then any little thing dries up too much, then it opens in another corner. (I5)

Another deficit evidenced due to the presence of ulcers, which cause an important obstacle to walk, was impaired ambulation and gait impairment (9). In speeches, movement limitation was mentioned due to changes in gait, reduced ability to walk, climb stairs and run, as follows:

[...] and also to support the foot. We have difficulty to support the foot. (I2)

[...] I can't run because if I run I can fall because of the modification of the foot. (13)

[...] sometimes when I'm on my feet, I beat myself, I can't stand upright, because my leg doesn't support me right. (17)

Sometimes I feel a little unable. (113)

[...] it is a freak. (114)

The deficits identified in the research contribute directly to the aggravation of ulcers, since essential care such as food, hydration, as well as access to health services are not structured in some cities of the state. Therefore, they have negative repercussions, postponing the healing process. Reflecting beyond physical changes, self-image, self-esteem and social life of women.

DISCUSSION

Self-care deficits were categorized from a set of unmet universal demands for self-care, development, and health deviation, factors that are essential for driving nurse's actions. The main self-care deficits found during the investigation were: universal (impaired sociability, lack of rest and ineffective and/or insufficient food intake for ulcer healing); developmental (chronic state, which affects mobility); break in social life; (low education, which makes self-care difficult); health deviation (ulcer relapses, chronic pain,

infection, integrity of skin affected by decreased blood flow in the extremities, impaired ambulation, and gait impairment).

Universal Self-Care Deficits

Regarding the impaired sociability deficit, women may experience changes in daily life imposed by the presence of ulcers, causing isolation and suffering. The ulcer limits social relations in different contexts, in family, educational and work life. Success in interpersonal life will be influenced by the level of dependence, pain, odor, mobility, perception of self-image, self-esteem and quality of life⁽⁷⁻⁸⁾.

Another factor that affects sociability and self-isolation is the discomfort caused by ulcer odors, excessive and recurrent exudation, which cause feelings such as stress and anguish. Directing the eyes of third parties to the legs of those affected, even with the use of pants, generates discomfort and leads women to social and family distancing, in addition to the degradation of quality of life⁽⁸⁾.

As for food, most of the women in the study were without nutritional monitoring, an indispensable factor for the presence of relapses and cure. It was also identified a lack of knowledge of the proper diet for the maintenance of body needs and healing. These aspects may be influenced by issues of: socioeconomic status; lack of follow-up with a nutritionist; episodes of prolonged pain leading to inappetence; beliefs and taboos about certain types of foods and their influence on relapses.

Nutritional balance influences the healing process, and it is essential to deconstruct ulcers related to socially constructed food myths and taboos. Participants report not eating fish, liver, egg and some vegetables as they are considered harmful to health. Daily protein intake aids epithelialization, and vitamin A intake acts on defense mechanisms. Moderate intake of zinc, oral protein, amino acid and mineral supplements can contribute to healing⁽⁹⁾. By mistakenly considering foods such as chicken, eggs and fish to be harmful, participants ingest foods of insufficient protein for their dietary needs.

Nutritional deficiencies affect skin health and are evidenced by insufficient fluid intake and body mass index (BMI) less than 20 kg/m² or greater than or equal to 25 kg/m², which inhibits healing⁽⁹⁾.

Rest was considered a deficit that requires attention and care throughout the disease process. It is recommended to avoid standing for a long time and raising the leg so that it is higher than the hip, as it favors venous return⁽¹⁰⁾.

Lack of rest, especially when associated with the absence of other care measures, makes healing difficult. Lack of rest was influenced as an important social and gender marker, as they are adult women who tend to exercise self-collection in terms of their productive capacity. All reported that once the healing process had begun, they returned to their household chores, preventing opportunities for rest.

Regarding the inability to perform daily activities, women highlighted limitations imposed by SCD and LU that interfere with their productive activities, as a result of fatigue, pain and discomfort.

Difficulty balancing is characterized by distressing sensation and an important complicating factor in daily activities and functional capacity, exacerbated by the presence of chronic pain. Alteration of mobility in the presence of an ulcer translates into social isolation and the inability to wear clothes, walk, shower with the concern not to wet dressings. Another factor detrimental

to mobility is the discomfort caused by edema, exudate and fear of trauma that may contribute to the onset of new ulcers⁽¹¹⁾.

Developmental Self-Care Deficits

Frequent hospitalization causes a *break in social life*, removing women from usual activities. A Nigerian study⁽¹²⁾ showed that people with SCD spend 1,056 days each year for health care. Length of hospital stay ranged from 1 to 52 days. Another study in Brazil⁽¹³⁾ points to a permanence time of 5 days. This data may be related to acute manifestations such as the painful crisis. The results allow us to conclude that hospitalizations for LU due to the chronic condition exceeded 120 days and exceeded the length of stay reported in the literature for SCD.

The period of hospitalization impacts on social relations and women's autonomy. The usual coexistence with the group of family and friends is abruptly interrupted and needs to compose new bonds until recovery. It is noteworthy that, even with the long period of hospitalization, ulcers often do not reach full healing, generating frustration and loss of hope.

Low education, which was observed among participants, is an aspect that produces a knowledge deficit for self-care and compliance with the therapeutic plan, which includes dressing, rest measures and skin protection.

Due to the clinical manifestations that require hospitalization, people with SCD have numerous difficulties to continue their studies. It is common to demonstrate low level of education, which influences a decrease in performance and attendance, loss of school year and even dropout. The continuity of studies becomes complex. People with SCD can have up to 50% more absences compared to students without the disease⁽¹⁴⁾. Pedagogical strategies during hospitalizations⁽¹⁴⁾ should include flexibility and individuality based on clinical manifestations and length of hospitalization, overcoming existing traditional methodologies and involving innovative evaluative strategies.

Health Deviation Self-Care Deficits

Relapses, very common in the daily lives of people with LU, usually happen after a period of healing. Prevention depends on following self-care recommendations, proper nutrition and disease control. Unlike the profile of people with ulcers of other etiologies, which are predominant over 60 years of age, in SCD, ulcers affect young people in full functional capacity, which is a factor that makes adherence to preventive measures difficult.

The recurrent condition and long time for ulcer healing impact on women's social, economic life and autonomy. When not handled properly, approximately 30% of healed venous ulcers recur in the first year and this rate rises to 78% after two years⁽¹⁵⁾.

Pain was an expressive symptom in the report of women, who have had acute and chronic painful experiences since childhood. The main reason for this discomfort is the result of episodes of vaso-occlusion, tissue hypoxia and local infection. Pain, when in the ulcer bed, can be characterized by infection, presence of biofilm, necrosis, adhesion of covers or harmful stimuli in the lesion. Statements showed that painful experience results in reduced and difficult eating until stabilization, overuse of medications,

change in physical appearance and general condition, such as intense pallor and jaundice, consecutive of anemia.

Pain may be expressed acutely and chronic, followed by fever, swelling, and heat in the area, which may last for days or weeks. The event is characterized by intense and continuous microcirculatory ischemia with the presence of neuropathic components, causing sensations such as burning and numbness⁽¹⁶⁾. A clinical study of three patients at a specialized SCD center in the United States showed a progressive increase in pain in even small ulcers and a constant use of opioids⁽¹⁷⁾. Painful episodes may occur vigorously in the perilesional area seven days before recurrence.

Infection is the most common cause of morbidity in SCD and can lead to death within 12 hours⁽¹⁶⁾. From an early age, women experience infectious processes, both in the ulcer bed and due to the susceptibility caused by SCD, such as Streptococcus pneumoniae and Haemophilus influenzae. Osteomyelitis is also a significant cause of infection that potentiates pain and was a factor reported by participants⁽¹⁾. Given this, performing aseptic measures when dressing to prevent new infections is important.

Signs such as increased pain, flushing, heat, and fever may be suggestive of local or systemic infection and require constant evaluation. A review study on LU treatment interventions in people with SCD showed that the process of infection or colonization is most commonly caused by *Staphylococcus aureus* and *Pseudomonas aeruginosa*⁽¹⁸⁾.

Vaccination schedule should follow the specific schedule for people without chronic disease, including hepatitis A, antipneumococcal 23, antimeningococcal and anti-haemophilus influenza. In addition, the update of tetanus due to LU should be observed⁽¹⁹⁾.

Awareness about immunization, guidance for self-care and monitoring of the vaccination card is essential. In this study, most participants do not recognize vaccination as an important component of self-care and mortality reduction.

Regarding the skin, there had been impaired integrity evidenced by the presence of eczema as a result of protein extravasation into the subcutaneous space, causing intense hyperemia, itching and dryness. Another factor that can cause a change in skin characteristics is allergy to the components of therapies to treat ulcers. Altered circulation and insufficient nutritional intake of fluids also damage its integrity.

Inefficient circulation due to red blood leakage into the interstitium causes hyperpigmentation or ocher dermatitis. Decreased blood flow and low oxygenation through sickled red blood cells make tissue perfusion difficult and inhibit healing. Impaired circulation causes damage to the layers of the skin causing the ulcer. Visible changes are hyperemia, edema, decreased wrists in the extremities, pallor to leg elevation, hemosiderosis, and hypotrichosis⁽¹¹⁾.

Functional capacity in people with chronic ulcers becomes impaired and compromises autonomy, quality of life, well-being and addiction, as well as impacting self-esteem and preventing daily actions to maintain health and basic needs⁽⁷⁾.

Joint stiffness influences locomotion, inhibits venous function and return, and consequently delays healing. Complete and permanent ankylosis transforms users' condition to an incurable condition by limiting and disabling the action of calf muscles. People with ulcers show reduced muscle strength, functional capacity and range of motion, resulting in poorer quality of life⁽²⁰⁾.

This condition reflects negatively on the self-esteem and self-image women build. Living with the ulcer brings irreparable repercussions, supported by the difficulty of mobility, acceptance of the body and body image.

Discussion about the demands of people with LU and SCD can contribute to the planning and execution of nurses' activities.

Participants have many needs and reveal important self-care deficits. This requires the nurse to act, from care for ulcers to social and economic aspects, vulnerabilities and reintegration into social and family life.

Study limitations

Some limitations regarding the time of study development were noted; the inclusion of another step in the research, such as a workshop for nurses in the service to subsidize care for women with LU and SCD. The workshop was under a perspective that goes beyond technicalism and includes comprehensive care, gender issues and the impacts of institutional racism on the interviewees' quality of life.

Contributions to nursing, health or public policies

Nurses are directly linked to care and health promotion. Thus, recognizing the self-care deficits of women with LU secondary to SCD to direct the nursing consultation is necessary. Besides enabling a reflection on the conduct in the service and improvements in the care provided, aiming at comprehensive care, ordering and maintenance of the care network and preventive practices. Thus, these actions make it possible to fill research gaps focused on the theme, with the objective of guaranteeing equity, access to health services and comprehensiveness.

FINAL CONSIDERATIONS

The development of LU in SCD is a commonly observed clinical manifestation that generates disability and compromises the physical, social and mental health of people. Major risk factors are associated with vasculopathy, hypoxia, ischemia, increased viscosity, and vascular obstruction.

Based on the magnitude of this problem, the use of Orem's SCT and SCDT was useful, since it allows us to understand which types of nursing interventions should be dispensed to guarantee autonomy and proper care.

The most relevant deficits in women with LU due to SCD are related to impaired sociability; ineffective and/or insufficient food intake for ulcer healing; chronic state that affects mobility; recurrence of ulcers; chronic pain due to vaso-occlusion and ischemia plus integrity of skin affected by decreased blood flow in the extremities and outdated vaccine card.

It was noted that fragmented care interfered with the recovery of women's self-care deficits. In addition, the nurse's intervention restricted to dressing and without contemplating aspects that envision comprehensive care are obstacles to be overcome.

The identification of self-care requirements and deficits is expected to assist nurses and other health professionals in modifying care actions with people with LU and SCD at the various levels of health care, with a view to strengthening autonomy and freedom for self-care.

REFERENCES

- Ministério da Saúde (BR). Secretaria de Atenção à Saúde, Departamento de Atenção Especializada. Úlceras: prevenção e tratamento. Brasília: Ministério da Saúde; 2013.
- 2. Orem DE. Nursing concepts of pratice. 6. ed. Saint Louis (US): Mosby; 2001, 369 p.
- Meneguessi G, Teixeira J, Jesus C, Pinho D, Kamada I, Reis P. Rehabilitation in spinal cord: reflection on the applicability of the Orem's self-care theory. Rev Enferm UFPE [Internet]. 2012[cited 2017 Jul 24];6(12):3006-12. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/2801
- 4. Vitor AF, Lopes MVO, Araujo TL. [Self-care deficit theory: analysis of importance and applicability in the nursing practice]. Esc Anna Nery [Internet] 2010[cited 2015 Nov 15];12(3):611-6. Available from: http://www.scielo.br/pdf/ean/v14n3/v14n3a25.pdf Portuguese
- Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care [Internet]. 2007[cited 2017 Jul 20];19(6):349-57. Available from: https://doi.org/10.1093/intghc/mzm042
- 6. Bardin L. Análise de conteúdo. São Paulo: Edições 70; 2016, 288 p.
- 7. Silva MH, Jesus MCP, Oliveira DM, Merighi MAB. Unna's boot: experience of care of people with venous ulcers. Rev Bras Enferm [Internet]. 2017[cited 2015 Nov 15];70(2):349-56. Available from: http://dx.doi.org/10.1590/0034-7167-2016-0219
- 8. Santos W, Fuly P. Association analysis among odor, exudate and social isolation in patients with neoplastic wounds. Rev Enferm UFPE[Internet]. 2015[cited 2017 Jul 24];9(4):7497-500. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/7489
- Soriano JV, Pérez EP. Nutrition and chronic wounds. Technical Document Series GNEUPP nº 12 [Internet]. National Group for the Study and Advice on Pressure Ulcers and Chronic Wounds. Logroño. 2011[cited 2017 Feb 24]. Available from: http://gneaupp.info/wp-content/ uploads/2014/12/nutricao-e-feridas-cronicas.pdf
- 10. Barbosa JAG, Campos LMN. Guidelines for treatment of venous ulcer. Enferm Glob [Internet]. 2010[cited 2016 Mar 02];20:1-2. Available from: http://scielo.isciii.es/scielo.php?pid=S1695-61412010000300022&script=sci_arttext&tlng=pt
- 11. Malaquias SG, Bachion MM, Martins MA, Nunes CAB, Torres GV, Pereira LV. Impaired tissue integrity, related factors and defining characteristics in persons with vascular ulcers. Texto Contexto Enferm [Internet]. 2014[cited 2017 Apr 04];23(2):434-42. Available from: http://dx.doi.org/10.1590/0104-07072014001090013
- 12. Adegoke SA, Abioye-Kuteyi EA, Orji EO. The rate and cost of hospitalisation in children with sickle cell anaemia and its implications in a developing economy. Afr Health Sci [Internet]. 2014[cited 2016 Apr 22];14(2):475-80. Available from: http://dx.doi.org/10.4314/ahs.v14i2.27
- 13. Loureiro MM, Rozenfeld S. Epidemiology of sickle cell disease hospital admissions in Brazil. Rev Saúde Pública [Internet]. 2005[cited 2017 Jul 24];39(6):943-49. Available from: http://dx.doi.org/10.1590/S0034-89102005000600012
- 14. Holanda ER, Collet, N. The difficulties of educating children with chronic illness in the hospital context. Rev Esc Enferm USP [Internet]. 2011[cited 2017 Apr 04];5(2):381-9. Available from: http://www.scielo.br/pdf/reeusp/v45n2/en_v45n2a11.pdf
- Abbade LPF, Lastória S. Management of patients with venous ulcers. An Bras Dermatol [Internet]. 2006 [cited 2017 Mar 14];81(6):509-22.
 Available from: http://www.scielo.br/pdf/abd/v81n6/v81n06a02.pdf
- 16. Ministério da Saúde (BR). Secretaria de Atenção à Saúde. Departamento de Atenção Hospitalar e de Urgência. Doença falciforme: enfermagem nas urgências e emergências: a arte de cuidar. Brasília: Ministério da Saúde; 2014.
- 17. Minniti CP, Kato GJ. How we treat sickle cell patients with leg ulcers. Am J Hematol [Internet]. 2016[cited 2016 Apr 09];91(1):22-30. Available from: http://dx.doi.org/10.1002/ajh.24134
- 18. Carvajal AJM, Madden JMK, Zapata MJM. Interventions for treating leg ulcers in people with sickle cell disease. Cochrane Database Syst Rev [Internet]. 2014[cited 2017 Nov 09];12:CD008394. Available from: http://dx.doi.org/10.1002/14651858.CD008394.pub3
- 19. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Departamento de Vigilância das Doenças Transmissíveis. Manual de normas e procedimentos para vacinação. Brasília: Ministério da Saúde; 2014.
- Lopes CR, Figueiredo M, Ávila AM, Soares LMBM, Dionisio VC. Evaluation of limitations of venous ulcers in legs. J Vasc Bras [Internet].
 2005[cited 2016 Apr 20];2013;12(1):5-9. Available from: http://www.scielo.br/pdf/jvb/v12n1/en_03.pdf