

Nursing diagnoses in patients with chronic venous ulcer: observational study

Diagnósticos de enfermagem em pacientes com úlcera venosa crônica: estudo observacional

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ABSTRACT

This study aimed to analyze nursing diagnoses in people with chronic venous ulcer. An observational, descriptive, quantitative research conducted in an ambulatory specialized in wound treatment, with a non-probabilistic sample of 20 patients. Data collection was performed in an institutional form denominated Assessment Protocol for Clients with Tissue Lesions. Diagnoses were established by consensus among four researchers with experience in nursing diagnoses and wound treatments. From data analysis, 16 diagnoses were identified, with 100% of participants presenting: Impaired tissue integrity, Ineffective peripheral tissue perfusion, Risk of infection, Impaired physical mobility and Ineffective health self-control. These diagnoses are found in Safety/Protection, Activity/Rest and Health promotion domains, which from the clinical practice stand point should be priority focuses in nursing intervention and assessment.

Descriptors: Varicose Ulcer; Nursing Diagnosis; Nursing Care.

RESUMO

Este estudo teve como objetivo analisar os diagnósticos de enfermagem em pessoas com úlcera venosa crônica. Pesquisa observacional, descritiva, de abordagem quantitativa realizado em um ambulatório especializado no tratamento de feridas, com amostra não-probabilística de 20 pacientes. A coleta de dados foi feita no formulário institucional denominado Protocolo de Avaliação dos Clientes com Lesões Tissulares. Os diagnósticos foram estabelecidos por consenso entre quatro pesquisadores com experiência em diagnósticos de enfermagem e tratamento de feridas. Da análise dos dados identificaram-se 16 diagnósticos, sendo que 100% dos participantes apresentaram: Integridade tissular prejudicada, Perfusão tissular periférica ineficaz, Risco de infecção, Mobilidade física prejudicada e Autocontrole ineficaz da saúde. Estes diagnósticos encontram-se nos domínios Segurança/Proteção, Atividade/Repouso e Promoção da Saúde, que do ponto de vista da prática clínica devem ser focos prioritários na intervenção e avaliação de enfermagem.

Descritores: Úlcera Varicosa; Diagnóstico de Enfermagem; Cuidados de Enfermagem.

INTRODUCTION

Venous ulcers constitute a serious public health issue, responsible for a considerable economic impact to health systems and determinant for suffering and social isolation, as well as, causing absence at work and unemployment⁽¹⁻³⁾.

Prevalence of venous ulcers vary within studies, due to heterogeneity of diagnose methods and epidemiological characteristics of samples. In Brazil, the prevalence of active and/or cured venous ulcers are described as almost 3,6% in individuals older than 15 years, increasing among older people⁽⁴⁾.

Venous ulcer represents the most advanced stage of chronic venous insufficiency that is associated with dysfunction of the muscle pump from the calf and, consequently, venous hypertension. This muscle pump is the primary mechanism for blood return on inferior limbs to the heart, formed by calf muscles, deep venous system, superficial venous system and piercing/communicating veins system⁽⁴⁾.

One of the nursing objectives when caring for patients with leg ulcers is to systematize healthcare, upbringing diagnoses to plan interventions and assess the quality of the provided care⁽⁵⁾.

The application of nursing diagnoses from NANDA-I allow identification of problems from patients aiming reestablishment and health promotion⁽⁶⁾. Thus, they are fundamental for an organized practical care, once from them, nursing care are planned and conducted and will determine results of health improvement in patients. The assessment of these results gives visibility and corroborates with the nursing team relevance in healthcare.

In Brazil, there are few studies of nursing diagnoses in wound patients, and, even those published, they are about specific diagnoses, as Impaired skin integrity, Impaired tissue integrity and Risk of impaired skin integrity⁽⁷⁻⁹⁾. That is, diagnoses are not identified from care integrity, addressing other care needs that those patients can have, besides those related to their skin.

Only one study was found in this sense, but it is restricted to females⁽¹⁰⁾. Thus, it is fundamental to produce knowledge referring to nursing diagnoses in patients with chronic wounds.

Therefore, the aim of the study was to analyze nursing diagnoses in people with chronic venous ulcer.

METHODS

This is an observational, descriptive, study with quantitative approach, conducted in an ambulatory specialized in wound treatment of a university hospital.

The sample was non-probabilistic, established according to the flux from the ambulatory service, between the months of July and August of 2012, composed by 20 patients with venous wounds. Inclusion criteria were: presence of venous ulcer; age above 18 years and attendance to five or more nursing consultations in the ambulatory. Exclusion criteria were considered: patients with psychiatric disorder and pregnant patients.

The data collection instrument, denominated Assessment Protocol for Clients with Tissue Lesions, is institutionalized and constituted by three parts: patient identification (sociodemographic data), clinical and specific lesion exam. This form was analyzed, regarding appearance and content, by three specialist assessors (nurses with care experience for patients with wounds and in nursing diagnoses) who suggested the inclusion of temperature assessments around the lesion and capillary perfusion, needed for a more accurate clinical judgement.

After instrument adequacy, data from anamnesis, the researcher collected data during nursing consultations and delivered it to specialists to conduct the nursing diagnosis, in a separated instrument.

Data collected with the research instrument were organized in spreadsheets on Microsoft Excel 2007 software and SPSS version 13.0, to assess the distribution of nursing diagnoses (simple frequency and percentages), presented in a table. Diagnoses obtaining 50% of

agreement between specialists were considered for analysis.

This study was approved by the Ethics in Research Committee from Medical Faculty from the University Hospital Antônio Pedro under nº 293/09, meeting the precepts of the Resolution nº 466/12 from National Health Council.

RESULTS

From 20 patients participating in the study, most of them were female (80%), between 50 and 69 years old (75%), with incomplete middle school (60%) and had their retirement as main source of income (75%).

Regarding risk factors, most prevalent were: varicose veins (75%), family history of venous disease (45%), long periods standing up or sitting (40%), deep venous thrombosis (35%) and previous venous surgery (25%).

Among base diseases found, the most evident ones were: chronic venous insufficiency (100%), systemic arterial hypertension (65%) and diabetes Mellitus (30%).

On Table 1, 16 nursing diagnoses found on patients with venous ulcer are presented, following the NANDA-I classification, pooled in accordance with the eight domains that they belong to.

Table 1: Frequency of identified nursing diagnosis following NANDA-I domains in patients with venous ulcer. Niterói/ RJ, 2012

Domains	Nursing Diagnoses	N	%
Health promotion	Inefficient health self-control	20	100
	Excessive liquid volume	19	95
	Poor liquid volume risk	14	70
Nutrition	More than body needed unbalanced nutrition	14	70
	Unstable risk of glycaemia	6	30
	Less than body needed unbalanced nutrition	1	5
Activity/Rest	Impaired physical mobility	20	100
	Inefficient peripheral tissue perfusion	20	100
	Impaired sleep pattern	6	30
Self-perception	Deficit on self-care for bathing	1	5
	Body image disorder	15	75
Roles/Relationships	Impaired social interaction	4	20
Coping/Stress tolerance	Anxiety	13	65
Safety/Protection	Risk of infection	20	100
	Impaired tissue integrity	20	100
Comfort	Chronic pain	16	80

DISCUSSION

Of the 13 domains from the NANDA-I classification there was prevalence of eight related to bio-physiological and psychosocial standards. The diagnoses described reinforce the need to relocate attention of nursing professionals from the physical and biological wound aspects to the individual as a whole. For that, it is fundamental to use methods able to fundament this planning.

The main nursing diagnose for patients with venous ulcers was impaired tissue integrity. A study shows that nurses have been researching more about diagnoses of impaired skin integrity and impaired skin risk of integrity than about impaired tissue integrity, which represents the most advanced wound stage, when there is harm to skin layers, affecting the most deep tissues⁽¹¹⁾.

The fact that diagnose of impaired tissue integrity appears little in incidence and prevalence nursing diagnose studies, could mean that nurses have not been

identifying this diagnosis in the clinic or that it is being diagnosed mildly and treat as impaired skin integrity⁽¹¹⁾. New studies of validation and occurrence of these diagnoses have been conducted in Brazil and will bring more complete and updated results^(7,9).

In order to establish distinctions between impaired skin integrity and impaired tissue integrity, those terms were defined from epidermal layers. That is, the patients with lesions affecting fat and muscle tissue were diagnosed as impaired tissue integrity. In a research with 42 patients presenting vasculogenic ulcers, the impaired tissue integrity diagnosis was also understood this way⁽⁹⁾.

Because they are venous ulcers, the ineffective peripheral tissue perfusion diagnosis is relevant for those patients. Inadequate perfusion compromises the whole healing process, once oxygen deficiency stops the collagen synthesis, decreasing cellular proliferation and migration and reduce tissue resistance to infection. Thus, treatment of those ulcers should involve measures to help venous return and decrease edema⁽¹²⁻¹³⁾.

Edema, on its turn, was the main clinical characteristic that indicated the presence of excessive liquid volume diagnosis in these patients. In general, it is observed in the perimalleolar region or it extends to the inferior third of the leg and it is frequently associated to chronic venous insufficiency. Measures should be used to control the edema, once it harms blood flow and, with that, slows down the wound healing process while it interferes on oxygenation and nutrition on developing tissues^(12,14).

Two efficient techniques to reduce edema are manual lymphatic drainage, which main action occurs on the superficial lymphatic system, favoring return blood flow, and elastic compression, acting on the micro- as well as macro-circulation of lower limbs, decreasing pathologic reflux during ambulation and increase the ejection volume during muscle activation of calf muscles^(12,14).

Besides that, it is important to highlight that wound patients have higher risk of infection. The establishment

of infections on wounds is one of the responsible factors for slowing the healing process. Thus, it is convenient to define that open wounds can be colonized when there is presence of microorganisms on it, without tissue invasion or infected, when microorganisms invade wound tissues, spreading themselves and causing local inflammation reactions⁽¹⁵⁻¹⁶⁾.

Another important diagnosis, arising from the impaired healing process of venous ulcers and its chronicity, is the impaired physical mobility, especially resulting from chronic pain, edema on lower limbs and decreased muscle strength⁽¹⁰⁾.

Wound chronicity associated to base diseases and lack of knowledge of patients related to their pathology are factors that commonly contribute to inefficient health self-control diagnosis, leading to frequent relapses. Thus, besides guiding the patient about venous ulcer care, it is necessary to clarify them about their base disease and needed activities for self-care, and the professional should be attentive for the prevention of new wounds appearance^(14,17).

The nursing chronic pain diagnosis refers to sensorial and emotional unpleasant experience associated to real or potential tissue lesion, or described in terms of this lesion. It presents sudden or slow start, with light to moderate intensity, constant or recurrent, without an anticipated or predictable end and with duration of more than six months⁽⁶⁾. It is one of the main complaints of people with wounds. It is estimated that, in every 10 people with chronic ulcers, six experience continuous pain or cannot alleviate it⁽¹⁸⁾.

Factors as sleep alteration, impaired mobility, social isolation, economic unbalance, physical and emotional discomfort are commonly associated to chronic pain scenarios^(17,19). A significant number of patients with chronic pain diagnosis show that pain should be a frequent focus of attention for the nurse, who needs to be attentive to adequately intervene.

Suffering circumstances experienced by these patients are related to the nursing diagnosis Body image

disorder that reflects as altered view of their own body, making these patients to avoid social contacts. Consequences of this isolation includes anxiety and depression⁽²⁰⁾.

In a study conducted with 60 patients where the level of depressive symptoms occurrence was assessed, 90% presented body image disorder, indicating the need to reassess effectiveness of care provided to wound patients. That is, emotional changes should be looked for in these patients, in hospitals as well as in ambulatories, so that it is possible to adequately intervene⁽²¹⁾.

Another relevant nursing diagnose in the process of tissue repair that was little identified, was Unbalanced nutrition: less than body needs. This diagnosis is related to the deficient nutrition contribution, when patients ingest less than the body needs. On the other hand, the diagnosis Unbalanced nutrition: more than body needs, was a priority in the sample.

Skin excess and obesity are associated to slow wound healing caused by compromised blood circulation and hypoventilation that reduce oxygen and nutrients perfusion on the tissue⁽²²⁾. Thus, nutritional assessment should be a continuous process to obtain and interpret data to determine better nutrition intervention possibilities for the individual. It is important to consider not only physio-pathological aspects, but also socioeconomic, educational and psycho-emotional factors of the patient with venous ulcer to plan effective actions that can propitiate a better quality of life⁽²³⁾.

The risk of impaired liquid volume diagnosis was identified in patients by skin dryness, as well as by reports of low liquid volume ingested in 24 hours. These findings corroborate with a research developed in the Family Health Strategy at Espírito Santo that observed liquid ingestion lower than the ideal quantity for homeostasis maintenance in 73% of elderly assessed. Hydric ingestion should be taught to these patients, as it favors nutrition absorption, hydration and skin regeneration⁽¹²⁾.

The nursing diagnosis Anxiety was identified in patients who reported worrying and anguish sensations

during execution of daily activities. This is a coherent finding related to clinical circumstances experienced by these patients, considering disease chronicity and delayed healing that can last for years⁽²⁰⁾.

In the studied sample, a strict correlation between diagnoses with higher incidence is observed. This means that when investing on resolution/improvement of one diagnosis, an improvement of results in general can be estimated.

However, the nursing team performs a primordial function when caring for people with venous ulcer with respect to register and adequate identification of nursing diagnoses, which will guide nursing care planning and execution.

CONCLUSION

When analyzing nursing diagnoses in chronic venous ulcer patients in ambulatory attention, 16 diagnoses were identified and distributed in eight NANDA-I domains. Prevalent diagnoses in all patients were: Impaired tissue integrity, Ineffective peripheral tissue perfusion, Infection risk, Impaired physical mobility and Inefficient health self-control.

Results from this study revealed the domains Safety/Protection, Activity/Rest and Health promotion as fundamental to guide nursing interventions, as well as to assess results from provided care allowing a safe use of a standard language.

One of the study limitations was the sample size, therefore, we suggest more research to be conducted with a higher number of participants, to test diagnoses accuracy that will guide clinical practice. On the same way, we recommend development of protocols regarding interventions and nursing results in chronic ulcers patients.

REFERENCES

1. Dantas DV, Torres GV, Nóbrega WG, Macedo EAB, Costa IKF, Melo GSM et al. Assistência a portadores de úlceras venosas baseada em protocolos: revisão de literatura em bases de dados eletrônicas. *Rev enferm UFPE* [internet]. 2010 [cited 2015 mar 20]; 4(esp):1944-950. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/viewFile/1481/pdf_254.
2. Wong WW, Gurtner GC. Tissue engineering for the management of chronic wounds: current concepts and future perspectives. *Exp Dermatol*. 2012 [cited 2015 mar 19]; 21(10): 729-34. Available from: <http://onlinelibrary.wiley.com/doi/10.1111/j.1600-0625.2012.01542.x/epdf>.
3. Scotton MF, Miot HA, Abbade LPF. Factors that influence healing of chronic venous leg ulcers: a retrospective cohort. *An Bras Dermatol*. 2014 [cited 2015 mar 19]; 89(3): 414-422. Available from: <http://dx.doi.org/10.1590/abd1806-4841.20142687>.
4. Kieski G, Turra K. Sistematização da assistência de enfermagem na terapia compressiva: uma possibilidade terapêutica. *Revista Eletrônica da Faculdade Evangélica do Paraná*. 2012 [cited 2015 mar 21]; 2(4):19-29. Available from: <http://www.fepar.edu.br/revistaeletronica/index.php/revfepar/article/view/64/76>.
5. North American Diagnosis Association – NANDA. Diagnósticos de enfermagem da NANDA: definições e classificações 2012-2014. Porto Alegre: Artmed; 2013.
6. Cavalcante AMRZ, Moreira A, Azevedo KB, Lima LR, Coimbra WKAM. Diagnóstico de enfermagem: integridade tissular prejudicada identificado em idosos na Estratégia de Saúde da Família. *Rev. Eletr. Enf. [Internet]*. 2010 [cited 2015 mar 25]; 12(4):727-35. Available from: <http://www.revistas.ufg.br/index.php/fen/article/view/8425>.
7. Malaquias SG, Bachion MM, Nakatani AYK. Risco de integridade da pele prejudicada em idosos hospitalizados. *Cogitare. Enferm. [Internet]*. 2008 [cited 2015 mar 20]; 13(3):428-36. Available from: <http://132.248.9.34/hevila/Cogitareenfermagem/2008/vol13/no3/14.pdf>.
8. Malaquias SG, Bachion MM, Martins MA, Nunes CAB, Torres GV, Pereira LV. Integridade tissular prejudicada, fatores relacionados e características definidoras em pessoas com úlceras vasculares. *Texto Contexto Enferm* [internet]. 2014 [cited 2015 mar 20]; 23(2): 434-42. Available from: <http://www.redalyc.org/pdf/714/71431352025.pdf>.
9. Lima MSFS, Carvalho ESS, Silva EA, Gomes WS, Passos SSS et al. Diagnósticos de enfermagem evidenciados em mulheres com feridas crônicas. *Rev baiana enferm. [Internet]*. 2012 [cited 2015 mar 20]; 26(3):585-92. Available from: <http://www.portalseer.ufba.br/index.php/enfermagem/article/viewArticle/6740>.
10. Ribeiro MAS, Lages JSS, Lopes MHBM. Diagnósticos de enfermagem relacionados a pele: definições operacionais. *Rev. Latino-Am. Enfermagem*. [internet]. 2012 [cited 2015 mar 19]; 20(5):1-10. Available from: http://www.scielo.br/pdf/rlae/v20n5/pt_07.pdf.
11. Azoubel R, Torres GV, Silva LWS, Gomes FV, Reis LA. Efeitos da terapia física descongestiva na cicatrização de úlceras venosas. *Rev. Esc. Enf. USP*. [internet]. 2010 [cited 2015 mar 21]; 44(4): 1085-92. Available from: <http://www.scielo.br/pdf/reeusp/v44n4/33.pdf>.
12. Gomes T, Cade NV, Rohr RV, Fejoli MM. Caracterização das lesões crônicas e os fatores associados em moradores de um território de saúde em Vitória, Espírito Santo. *Rev. Bras. Pesqui. Saúde* [internet]. 2011 [cited 2015 mar 21]; 13(1): 52-57. Available from: <http://periodicos.ufes.br/RBPS/article/viewFile/1330/991>.
13. Abreu AM, Oliveira BRB, Manarte JJ. Treatment of venous ulcers with an unna boot: a case study. *Online Braz J Nurs* [Internet]. 2013 [cited 2015 mar 22]; 12 (1): 198-208. Available from: <http://www.objnursing.uff.br/index.php/nursing/article/view/3845>.
14. Santos SLV, Martins MA, Vasconcelos LSNOL, Lima ABM, Malaquias SG, Maria Márcia Bachion MM. Bastonetes gram-negativos em úlceras venosas e implicações para o atendimento de enfermagem na atenção primária. *Rev. Eletr. Enf. [internet]*. 2014 [cited 2015 mar 21]; 16(2):370-7. Available from: http://www.fen.ufg.br/fen_revista/v16/n2/pdf/v16n2a13.pdf.
15. Greer N, Foman N, Dorrian J, Fitzgerald P, Macdonald R, Rutkski I, Wilt Timothy. Advanced wound care therapies for non-healing diabetic, venous, and arterial ulcers: a systematic review. Washington: department of veterans affairs [internet]. 2012 [cited 2015 mar 22]. Available from: <http://www.ncbi.nlm.nih.gov/pubmedhealth/pmh0054957>.
16. Malaquias SG, Bachion MM, Santana SMSC, Dallarmi CCB, Lino Junior RS, Ferreira PS. Pessoas com úlceras vasculogênicas em atendimento ambulatorial de enfermagem: estudo das variáveis clínicas e sociodemográficas. *Rev. Esc. Enf. USP* [internet]. 2012 [cited 2015 mar 22]; 46(2): 302-10. Available from: <http://www.scielo.br/pdf/reeusp/v46n2/a06v46n2.pdf>.
17. Macedo EAB, Oliveira AKA, Melo GSM, Nobrega WG, Costa IKF, Dantas DV, et al. Characterization sociodemographic of patients with venous ulcers treated at a university hospital. *Rev enferm UFPE* [internet]. 2010 [cited 2015 mar 23]; 4 (spe):1919-963. Available from: <http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/viewArticle/1475>.
18. Calasans MT, Amaral JB, Carvalho ESS. O manejo da dor em pessoas que vivem com feridas. In: Carvalho ESS, editor. *Como cuidar de pessoas com feridas: desafios para prática multiprofissional*. Salvador: Atualiza; 2012. p.293-316.
19. Cunha L, Mayrink WC. Influencia da dor crônica na qualidade de vida em idosos. *Rev. Dor* [internet]. 2011 [cited 2015 mar 23]; 12(2):120-4. Available from: <http://www.scielo.br/pdf/rdor/v12n2/v12n2a08>.
20. Waidman MAP, Rocha SC, Correa JL, Brischiliari A, Marcon SS. O cotidiano do indivíduo com ferida crônica e sua saúde mental. *Texto Contexto Enferm* [internet]. 2011 [cited 2015 mar 23]; 20(4): 691-9. Available from: <http://www.scielo.br/pdf/tce/v20n4/07.pdf>.

21. Salome GM, Blanes L, Ferreira LM. Avaliação de sintomas depressivos em pessoas com úlcera venosa. Rev. Bras. Cir. Plást. [internet]. 2012 [cited 2015 mar 20]; 27(1):124-9. Available from: <http://www.scielo.br/pdf/rbcp/v27n1/21.pdf>.
22. Perrone F, Paiva AA, Letícia Souza LMI, Faria CS, Paese MCS, Nascimento JEA et al. Estado nutricional e capacidade funcional na úlcera por pressão em pacientes hospitalizados. Rev. Nutr. [internet]. 2011[cited 2015 mar 21]; 24(3): 431-43. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1415-52732011000300006.
23. Posthauer ME, Doner B, Collins N. Nutrition: a critical component of wound healing. Adv Skin Wound Care [internet]. 2010 [cited 2015 mar 23]; 23(2):560-72. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/21084879>.

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