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WOUND CLINIC: PROFILE OF PATIENTS, FEATURES, AND EVOLUTION OF INJURIES IN A UNIVERSITY HOSPITAL

AMBULATÓRIO DE FERIDAS: PERFIL DOS USUÁRIOS, CARACTERÍSTICAS E EVOLUÇÃO DAS LESÕES EM HOSPITAL UNIVERSITÁRIO

CLÍNICA DE HERIDAS: PERFIL DE USUARIOS, CARACTERISTICAS Y EVOLUCIÓN DE LAS LESIONES EN HOSPITAL UNIVERSITARIO

Daisy Cristina Rodrigues¹, Luciana Magnani Fernandes², Anair Lazzari Nicola³, Lorena Moraes Goetem Gemelli⁴, Débora Cristina Ignácio Alves⁵, João Lucas Campos de Oliveira⁶

ABSTRACT

Objectives: to identify the profile of patients with wounds treated in a clinic, as well as to describe the evolution of the wounds. **Method:** a descriptive study with a quantitative approach, performed in wound clinic of a university hospital. To form the extraction of sociodemographic, clinical and characteristics and evolution of wounds were used from June 2013 to June 2014. The data were entered into spreadsheets Microsoft Office Excel software version 2010 submitted to descriptive statistical analysis and calculated the absolute and relative frequency of variables. **Results:** 51 patients participated in the study, of which most of them were ≥ 50 years old, with the presence of surgical and chronic injuries. Between the first and last service, there was an increase of serous exudate and granulation tissue; decreased purulent exudate and necrosis. **Conclusion:** it was found that most patients were elderly, had chronic injuries and positive evolution of the lesions. **Descriptors:** Wound Healing; Health Profile; Hospital Outpatient; Nursing Assistance.

RESUMO

Objetivos: identificar o perfil de pacientes com feridas tratadas em um ambulatório, bem como descrever a evolução destas. **Método:** estudo descritivo, de abordagem quantitativa, realizado em um ambulatório de feridas de um hospital universitário. Utilizou-se formulário para extração de variáveis sociodemográficas, clínicas e características, e evolução das feridas no período de junho de 2013 a junho de 2014. Os dados obtidos foram digitados em planilhas eletrônicas do *software Microsoft Office Excel* versão 2010, submetidos à análise estatística descritiva e calculada a frequência absoluta e relativa das variáveis, **Resultados:** participaram do estudo 51 pacientes, dos quais a maioria possuía idade ≥ 50 anos, com presença de lesões cirúrgicas e crônicas. Entre o primeiro e último atendimento, houve aumento de exsudato seroso e tecido de granulação; diminuição do exsudato purulento e da necrose. **Conclusão:** identificou-se que a maioria dos pacientes era idosa, possuía lesões crônicas e evolução positiva das lesões. **Descritores:** Cicatrização de Feridas; Perfil de Saúde; Ambulatório Hospitalar; Assistência de Enfermagem.

RESUMEN

Objetivos: identificar el perfil de pacientes con heridas tratadas en una clínica y describir la evolución de las heridas. **Método:** estudio descriptivo, de enfoque cuantitativo, realizado en la clínica de heridas de un hospital universitario. Se utilizó un formulario para extracción de variables socio-demográficas, clínicas y características y evolución de las heridas en el período de junio de 2013 a junio de 2014. Los datos obtenidos fueron digitados en planillas electrónicas del *software Microsoft Office Excel* versión 2010, sometidos al análisis estadístico descriptivo u calculada la frecuencia absoluta y relativa de las variables. **Resultados:** participaron del estudio, 51 pacientes, de los cuales la mayoría poseía edad ≥ 50 años, con presencia de lesiones quirúrgicas y crónicas. Entre el primer y último atendimento, hubo aumento de exudado seroso y tejido de granulación; disminución del exudado purulento y de la necrosis. **Conclusión:** Se identificó que la mayoría de los pacientes era anciano, poseía lesiones crónicas y evolución positiva de las lesiones. **Palabras clave:** Cicatrización de Heridas; Perfil de Salud; Clínica del Hospital; Asistencia de Enfermería.

¹Resident Nurse, Nursing Course and Specialization in Nursing Management in the Medical and Surgical Clinic - Residence Mode, State University of West Paraná/Unioeste. Cascavel (PR), Cascavel (PR), Brazil. E-mail: daisy_c.r@hotmail.com; ^{2,3,5}Nurses, Ph.D. Professors, Nursing Course and Specialization in Nursing Management in the Medical and Surgical Clinic - Residence Mode, State University of West Paraná/Unioeste. Cascavel (PR), Brazil. E-mails: lumagna@terra.com.br; anairln@yahoo.com.br; dcialves@gmail.com; ^{4,6}Nurses, Master degree Professors, Nursing Course and Specialization in Nursing Management in the Medical and Surgical Clinic - Residence Mode, State University of West Paraná/Unioeste. Cascavel (PR), Brazil. E-mails: lorenagemelli@hotmail.com; joao_lucascampos@hotmail.com

INTRODUCTION

Continuous social changes make the epidemiological profile of the communities also as a changing phenomenon, which adds complexity to the health work. Despite constant changes in the health needs of individuals and populations, some health conditions appear to be persistent in the lives of several people, as in the case of wounds, which can be defined as the disruption of the skin integrity.¹

For a better understanding of the wound, it is possible to classify its etiology, bacterial content, the presence of exudate, morphology, bed characteristics and healing time.¹⁻² In the healing time, the wound may be classified into acute and chronic.³ Acute is characterized by a process of sequential and orderly wound healing, resulting in a fully functional area, that is, when it has a healing process without complications.³⁻⁴

The Chronic wounds are characterized by long periods of the healing process.³ These injuries do not follow an orderly and sequential process, taking longer to cure, several times suffering influence of predisposing factors such as diabetes, hypertension, malnutrition, peripheral vascular disease, and immunodeficiency infection.⁴⁻⁵ An acute wound can become chronic at any time of the healing process, mainly due to the influence of the factors above.³⁻⁴ In this regard, the importance of ongoing, systematic evaluation, and scientifically the wound, backed, and its healing process should be considered.⁶

The healing is a complex process of tissue repair. It may be understood popularly as the way the injury runs until healed.⁷ Therefore, it is essential that professionals who provide care to injure are aware of the factors that interfere with the healing process, considering the systematic reviews and the individual conditions of each person affected by the injury.^{2,7-8}

Concerning the care of wounds, it is noteworthy that it is a dynamic and complex process in which the nurse is highlighted for the search of full assistance for the establishment of appropriate treatment; minimizing the effects of this type of injury in patients, leading to the empowerment of individuals to health situations or conditions.⁹ In this regard, the work of nurses on those who experience wound as health situation goes beyond the practice of clinical and biological care, as this professional has the potential to boost the levels of quality of life of subjects with injuries.¹⁰

With the importance of the nurse's role in caring for wounds, it should be noted that knowing the characteristics of patients who need care with these injuries is essential for this professional, since it plays an essential role in the planning and implementation of care, especially regarding the therapeutic management, care guidelines, and may also act to determine preventive measures of injuries.^{7,1-12} In this sense, knowledge of the socio-demographic and clinical profile of the population of patients with wounds allows understanding the complexity of care, generating important information, which can assist in the planning and development of guidelines and strategies for the treatment, prevention, and education, promote the advancement of quality in health services.¹³⁻¹⁴

Thus, it is believed that the studies to the knowledge of patients assisted in services for the treatment of wounds, as well as characteristics and form of evolution of the lesions, are important and necessary to support the work of nurses, because, as mentioned, this information subsidize the implementation and care planning.

Based on the preceding, the question is: What is the profile of patients seen at a clinic for wounded and the characteristics and evolution of their injuries? The following objectives were prepared to answer this question:

- To identify the user's profile with wounds treated in a clinic.
- To describe the evolution of the wounds.

METHOD

Descriptive study with a quantitative approach, performed in a wound clinic of a university hospital in the state of Paraná/PR, Brazil, characterized as a midsized hospital of high complexity care and operational capacity of 195 beds, all insured at the Unified Health System/SUS.

The studied wounds clinic was established in 2013, assisting patients referred from the university hospital and cities from the 10th Regional Health of Paraná, with different types of injuries. In this clinic, the patient with wounds is assisted and monitored by hospital nurses, nursing teachers linked to the institution, and nursing residents.

In the first consultation, there is a comprehensive evaluation of the supported patient by a protocol of care for the prevention and treatment of skin lesions and wounds, then choosing the most appropriate therapy for the type (s) of the lesions. Also, during the service, guidance is performed on

the necessary care, aiming to educate the patient about his health as well as the return schedule. From this assessment, patients are referred to other health professionals, as needed for each.

The study population was all patients with injuries treated at the clinic investigated, from June 2013 to June 2014. The inclusion criteria were having at least the record of two assistance in their records. Based on this, the sample consisted of 51 patients.

Data were collected in August and September 2014 directly from medical records and recorded on the form. The form was built for the extraction of variables: demographic data of the patient; wound characteristics relating to the time, location and type of the wound; type of tissue present in the lesion; exudate and edges of the lesion.

The data were entered into spreadsheets Microsoft Office Excel software version 2010. After that, the data were submitted to descriptive statistical analysis and the absolute and relative frequency of variables

were calculated. Data from the first and last service offered at the clinic were considered to analyze the evolution of the wounds.

It should be noted that the ethical aspects provided by the National Health Council in Resolution 466/2012 were fully respected. There were appreciation and acceptance of the project that promoted the study to the Ethics Committee of the State University of West Paraná, under protocol number 487554/2013. Also, there was a formal acceptance of the institution investigated to the use of secondary data, which reinforced the exclusion of the need to use the Consent Term.

RESULTS

There were 51 patients included in the study who had the record of six visits on average, with the variance between 2 and 24 consultations. Regarding the outcome of the monitoring, 25 (49.0%) patients discontinued the monitoring at the clinic, 19 (37.3%) were monitored, and seven (13.7%) were discharged.

Table 1. Distribution of the sample (N=51) according to the socio-demographic aspects and comorbidities. Cascavel, Paraná, Brazil, 2013-2014

Variables	n (%)
Gender	
Female	20 (39.0)
Male	31 (61.0)
Age	
>18	3 (5.9)
19 - 29	5 (9.8)
30 - 39	5 (9.8)
40 - 49	10 (19.6)
50 - 59	14 (27.4)
60 - 69	8 (15.7)
>70	6 (11.8)
Education	
Illiterate	6 (11.8)
Incomplete elementary school	12 (23.5)
Complete elementary school	5 (9.8)
Incomplete High School	7 (13.7)
Complete High School	9 (17.6)
Complete Higher Education	2 (3.9)
Not informed	10 (19.6)
Profession	
Housewife	5 (9.8)
Construction	4 (7.8)
Health	2 (3.9)
General services	5 (9.8)
Agriculture	6 (11.8)
Student	1 (2.0)
Trading	2 (3.9)
Retired	10 (19.6)
Driver	5 (9.8)
Not informed	8 (15.7)
Other	3 (5.9)
Comorbidities	
Diabetes Mellitus	3 (5.9)
Hypertension	10 (19.6)
Diabetes Mellitus and Hypertension	8 (15.7)
Diabetes Mellitus and Vascular Diseases	2 (3.9)
Without a base disease	7 (13.7)
Other	6 (11.8)
Not informed	15 (29.4)

Thus, Table 1 shows the results of evaluating the sample for the demographic data and comorbidities.

should be noted the emphasis on chronic wounds, located in the leg and/or thigh and surgical type.

Table 2 summarizes the results for the length of time, location, and type of injury. It

Table 2. Distribution of the sample (N=51), according to the wound characteristics. Cascavel, Paraná, Brazil, 2013-2014.

Variables	n (%)
Time	
Acute	8 (1.,7)
Cronic	43 (84.3)
Localization	
Anterior/posterior trunk	1 (2.0)
Arm/forearm	1 (2.0)
Right/left hand	1 (2.0)
Anterior/posterior abdomen	11(21.6)
Right-left buttock	5 (9.8)
Sacrum region	1 (2.0)
Perianal region	4 (7.8)
Leg/thigh	16 (31.4)
Right/Left foot	11(21.6)
Type of lesion	
Surgical	25(49.0)
Traumatic	13 (25.5)
Ulcerative	10 (19.6)
Abscess	3 (5.9)
Total	51 (100.0)

The predominant type of tissue in the first visit was the necrotic tissue. In the last service analyzed, the prevalent tissue were

necrosis and granulation tissue. These and other results are shown in Table 3.

Table 3. Distribution of the sample (n=51) according to the type of tissue in the first and last injury care in the clinic. Cascavel, Paraná, Brazil, 2013-2014.

Variables	First care	Last care
	n (%)	n (%)
Necrosis	29 (56.9)	12 (23.5)
Devitalized (fibrinous)	16 (31.4)	5 (9.8)
Necrosis and Devitalized	2 (3.9)	2 (3.9)
Necrosis and Granulation	3 (5.9)	13 (25.5)
Granulation	1 (2.0)	6 (11.8)
Granulation and Epithelialization	--	8 (15.7)
Epithelization	--	5 (9.8)
Total	51 (100.0)	51 (100.0)

It was possible to analyze the evolution of the wounds according to the type and amount of exudate shown in the first and

last care, especially increased serous, as shown in Table 4.

Table 4. Distribution of the sample (N = 51) according to the amount and type of exudate in the first and last service at the clinic. Cascavel, Paraná, Brazil, 2013-2014.

Variables	First care n (%)	Last care n (%)
Exudate		
Serous	17 (33.3)	31 (60.8)
Sanguineous	5 (9.8)	3 (5.9)
Serous-sanguineous	7 (13.7)	8 (15.7)
Serous-purulent	7 (13.7)	3 (5.9)
Purulent	15 (29.4)	3 (5.9)
Not informed	-	4 (7.8)
Quantity		
Little	18 (35.3)	30 (58.8)
Average	18 (35.3)	10 (19.6)
Big	12 (23.5)	4 (7.8)
Abundant	3 (5.9)	3 (5.9)
Not informed	-	4 (7.8)
Total	51 (100.0)	51 (100.0)

Table 5 shows the results obtained in the analysis of the evolution of the characteristics of the lesion edges,

highlighting the reduction of the macerated edges in the last care when compared with the first.

Table 5. Distribution of the sample (N = 51) according to the characteristics of the edges of lesions on the first and last service in the clinic. Cascavel, Paraná, Brazil, 2013-2014.

Variables	First care	Last care
	n (%)	n (%)
Uneven and hyperkeratosis	7 (13.7)	2 (3.9)
Uneven and contracted	3 (5.9)	6 (11.8)
Macerated	12 (23.5)	5 (9.8)
Edema and hyperemia	6 (11.8)	2 (3.9)
Contracted	3 (5.9)	6 (11.8)
Preserved	4 (7.8)	4 (7.8)
Hyperemia	2 (3.9)	14 (27.4)
Hyperkeratosis	2 (3.9)	2 (3.9)
Epithelialized	2 (3.9)	5 (9.8)
Uninformed	3 (5.9)	5 (9.8)
Total	51 (100.0)	51 (100.0)

DISCUSSION

It was identified prevalence of males, which did not differ from many other studies.^{11,14-16} Although this is an isolated result, it should be noted its relevance because the fact of having been found this prevalence, combined with the established in the literature, meaning that a guiding to the nurses to the promotion of actions aimed at comprehensive care of wounded man, individual part of a differentiated population group.

In the clinic researched, the prevalent age group was 40-59 years old (57%). The average age close to 60 years old as a prevalent in patients with skin lesion was a data found in other realities^{1,13}, which is close to the data described. Old age makes them more susceptible to injury people due to changes in the physiological system that affect the function and appearance of the skin.^{12,14} These changes are the reduction of epidermal thickness, reducing the elasticity of blood vessels and nerve fibers, among others.¹⁵ Thus, it is possible to observe that the elderly

have decreased the healing process due to the physiological changes of aging.^{3,13-14}

Based on these results and the literature, it is clear that the simple data verification as gender and age can mean important information to nurses seeking the quality of care in the treatment of wounds, because the old man tends to make choices about his health according to experiences lived throughout his life, showing signs of resistance to change and adherence to treatments.¹⁷ This is important in the context of the wounds, which often entails the constant need to use and dressing; and therefore, the educational work of nurses to an elderly man with wound should be intensified.

As for education, it was observed that most of the patients (23.5%) had not finished elementary school. Some studies for specific types of wounds, such as studies on ulcers in the lower limbs showed that low educational level is associated with low socio-economic level.^{1,14} However, it was not possible to perform this evaluation because the records analyzed did not contain data on economic situations. In this respect, although it was not

part of the present research objectives, it can contribute to the service to watch the completeness of the information recorded because the knowledge of the social level of patients seen in the clinic can be relevant when needing acquisition of therapeutic materials not available in the care network of the Unified Health System, after discharge.

Most (29.4%) of patients were hypertensive and diabetic, which corroborates other studies that also show a high incidence of injuries in this type of patients, mainly due to complications of these diseases.^{3,15} These comorbidities are associated with delayed healing, because they cause vascular complications leading to poor circulation, and hence a decrease in tissue oxygenation.¹⁴ Also, the patient with diabetes is also affected by interference and reduction in collagen synthesis and angiogenesis, a complication that directly affects wound healing, and contributes substantially to the chronicity of the lesions.¹⁸ Thus, the results described in the co-morbidities of patients are possibly related to the fact that the significant majority (84.3%) of the sample members had wound (s) of chronic type.

Before the results presented and discussed, it was noticed that the work of care for wounds on an outpatient basis, the nurse has patients that deserve attention focused on comprehensive care, because in addition to assistance needs linked to the wounds, patients with diabetes and/or hypertension will certainly require special care, which imposes the need for nurses to work holism guided by scientifically supported knowledge.

Also in comorbidities among patients treated at the wound clinic investigated, it is believed that it is necessary to pay attention to the fact that on 15 records, representing almost 30% of the sample, this information was not recorded. It is considered that concern, because the patient data of negligence in medical records may compromise the continuity of care, negatively affecting their quality.¹⁹ Thus, the result might justify the need for educational activity for clinic workers to reduce to a minimum the occurrence of the incompleteness of patient clinical information in their medical records.

Concerning the type of lesion, it was found (Table 2) that most of the patients have surgical lesions (49.0%), followed by traumatic (25.5%). This type of injury is most common possibly due to the profile of patients seen in the hospital, which is a reference for trauma care - a situation that usually results in the need for surgical

intervention - where most of the patients seen in the clinic are forwarded. Based on these results, it is considered that the service has a possible advantage to communicate with its main source of patients because of the location; and this might contribute to the planning of care in the clinic being more supported.

Regarding the tissue features in the wound, it is identified that this is a healing stage indicator and complications that may be present.¹ To evaluate the wound and the evolution, it is important to identify the characteristics of tissues, therefore revealing information regarding the healing process contributing to determining the most appropriate treatment for the lesion phase found.³⁻¹³

There are two types of tissue, viable and unviable; the first is formed in the healing process and aimed at the reconstitution of epithelial injured area in which the wound bed may display tissue granulation and epithelialization. The second tissue¹⁴ can present necrosis and liquefaction coagulation; and devitalized or fibrinous tissue.^{3,13-14} The study revealed that the last care occurred a reduction in the number of unviable tissue, and the increase in the number of viable tissue. Therefore, it is perceived that there was possibly a good evolution of the wounds, indicating the effectiveness of treatment offered in the clinic.

The increase in granulation tissue is an important indicator healing stage of the lesion features.³ Granulation tissue is composed primarily of collagen and blood vessels.^{3,15} When there is prevalence of this tissue in the bed of the wound, reference is made to a good prognosis of evolution, and the next stage is to epithelialization, which begins the closing of the injury.¹⁴⁻¹⁵ On that basis, it was found that the evolution of the wounds treated in the clinic investigated had a favorable outlook for improvement since there was a significant increase in granulation tissue.

Concerning the characteristics and quantity of exudate wounds, it was possible to observe the increase in serous exudate type in small quantities in the last service, a result that is similar in other studies.¹⁴⁻¹⁵ The presence of exudate in the wound bed is a natural reaction of the healing process, and serous exudate is usually related to clean lesions, characterized by being plasma and transparent.^{1-2,14}

It is also observed that there was a decrease in exudate purulent type on the last care, as it reinforces the good performance of

wounds since the purulent exudate is usually related to infectious processes, which, alone, constitute a problem for the healing and can also add new complications to the patient's condition.¹⁵

The edge of the wound is also a necessary item in the evaluation. The macerated edge points to the softening of the surrounding skin due to excessive drainage or fluid in contact intact skin, and the uneven edge margins of the lesion may indicate base tissue failure for migration of epithelial cells¹⁴. The fibrous edge has a yellow or white coloring tissue that adheres to the wound bed.^{3,14} The perilesional skin and the edge provide information for establishing care as well as to evaluate the results of treatment.^{2,14}

As the wound edge characteristics, it was found in the last examined service that the edges macerated decreased from 25.5% to 9.8%. Thus, the presence of macerated edges prevents the emergence of epithelialization tissue, retarding the wound healing process.¹⁴ This item is required in assessing the wound to evaluate damage and plan the appropriate treatment for each of them, while it is important to monitor the characteristics of the skin around the wound and the edge, for the reproduction of epithelial cells will start from the edge of the lesion.^{6,14}

Regarding the outcome of the monitoring, it was found that a considerable amount (49%) of patients who have left the service. However, observing the variables related to the evolution of the injury, it is perceived improvement in the characteristics of it, and how many people was assisted from the municipalities. Thus, there is the hypothesis that patients left the monitoring due to a good evolution of injury associated with limited mobility.

CONCLUSION

Through this study, it was observed that the patients seen in the wounds clinic investigated were prevalent in the male population aged greater than or equal to 50 years old, presenting more often surgical type injuries and classified as chronic. Moreover, regarding the evolution of the lesions, it was observed that there was a significant improvement in them, especially since there was a reduction of tissue necrosis, exudate purulent type and macerated edges, as well as an increase in granulation tissue, and exudates serous type in small quantities.

Based on the results, it is concluded that the profile of patients has been clearly defined, as the lesions; and this has the potential to support the (re) planning

assistance to those who "consume" the work produced in the wounds clinic. Also, although it is not possible to firmly conclude on this research indicated that the clinic had worked effectively to carry patients of wound care, given the good evolution of the lesions.

The absence of inferential statistics and research of a local/punctual period are possibly the most significant limitations of this research, which results in the inability to generalize the results to other realities. Nevertheless, it is believed that the study provides a valuable contribution to knowledge in wound care because possible the knowledge of the profile of patients seen in outpatient and characteristics evolution of lesions, which contributes to the care planning, as forecast and provision of human and material resources necessary for the proper care of this people, which is presented as a complex and peculiar demand for health services. In parallel, research might contribute to the advancement of nursing knowledge in caring for wounds, promoting the appreciation and autonomy of the professional nurse.

At the end of this study, it was perceived that there is a need for further research to be carried out, and therefore it is suggested that investigations with the highest level of evidence (for example, randomized controlled trials) in the care of the nursing care of the wounds are encouraged.

Finally, it is stressed the importance of the nurse's role in caring for wounds, which involves the provision and management of material resources, including technologies in health, implementing complex dressings, management, and staff education. Thus, it is expected that further studies are always developed the theme of this study, so care practice to wounds is increasingly based on scientific evidence.

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Corresponding Address

Daisy Cristina Rodrigues

Edifício Barão

Rua Barão do Cerro Azul, 834, Ap. 404

Bairro Centro

CEP 85801-080 – Cascavel (PR), Brazil