



PRESSURE INJURY HEALING: A MULTIPROFESSIONAL APPROACH
CICATRIZAÇÃO DE LESÃO POR PRESSÃO: ABORDAGEM MULTIPROFISSIONAL
CICATRIZACIÓN DE LESIÓN POR PRESIÓN: UM ENFOQUE MULTIPROFESIONAL

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ABSTRACT








Objective: to evaluate the healing process of chronic injuries in a patient treated at the Family Health Unit. **Method:** This is a qualitative, descriptive study of a clinical case study, conducted in a Family Health Unit, during 1 year and 4 months. The patient had home visits for the data collection through the application of an instrument. The results were presented through figures. **Results:** a significant improvement was observed in the evaluation of the healing process, considering the treatment performed with Hydrogel, essential fatty acids (AGE) and barrier cream. According to the taxonomy of the International Classification for Nursing Practice (CIPE), the diagnoses of nursing chronic pain, pressure injury, sadness, and compromised nutrition emerged. Subsequent, chronic pain, epithelial lesion, reduced sadness, and effective nutrition, as well as their respective interventions, were subsequently demonstrated. **Conclusion:** the stimulus to teamwork should be continuous, aiming at evaluation and health care not only through attitude but also through the joint responsibility and knowledge of the different leaders for unrestricted and humanized assistance. **Descriptors:** Pressure Injury; Multiprofessional Team; Nursing Diagnosis; Dressings; Family Health Strategy; Public Health.

RESUMO

Objetivo: avaliar o processo de cicatrização de feridas crônicas em paciente atendido em Unidade de Saúde da Família. **Método:** trata-se de estudo qualitativo, descritivo, do tipo estudo de caso clínico, realizado em uma Unidade de Saúde da Família, com duração de 1 ano e 4 meses. Realizaram-se visitas domiciliares para a coleta de dados mediante a aplicação de um instrumento. Apresentaram-se os resultados em forma de figuras. **Resultados:** observou-se, quanto à avaliação do processo de cicatrização, uma melhora importante, considerando o tratamento realizado com Hidrogel, ácidos graxos essenciais (AGE) e creme barreira. Emergiram-se, de acordo com a taxonomia da Classificação Internacional para a Prática de Enfermagem (CIPE), os diagnósticos de Enfermagem dor crônica, lesão por pressão, tristeza e nutrição comprometida. Evidenciaram-se, posteriormente, dor crônica diminuída, lesão epitelizada, tristeza reduzida e nutrição eficaz, assim como suas respectivas intervenções. **Conclusão:** conclui-se que o estímulo ao trabalho em equipe deve ser contínuo, visando à avaliação e ao cuidado à saúde por meio não só de atitude, mas por meio da junção de responsabilidades e saberes dos distintos dirigentes em prol de uma assistência irrestrita e humanizada. **Descritores:** Lesão por Pressão; Equipe Multiprofissional; Diagnóstico de Enfermagem; Curativos; Estratégia Saúde da Família; Saúde Pública.

RESUMEN

Objetivo: evaluar el proceso de cicatrización de heridas crónicas en un paciente atendido en una Unidad de Salud de la Familia. **Método:** se trata de un estudio cualitativo, descriptivo, del tipo estudio de caso clínico, realizado en una Unidad de Salud de la Familia, con duración de 1 año y 4 meses. Se realizaron visitas domiciliares para la recolección de datos mediante la aplicación de un instrumento. Se presentaron los resultados en forma de figuras. **Resultados:** en la evaluación del proceso de cicatrización, se observó una mejora importante, considerando el tratamiento realizado con Hidrogel, ácidos grasos esenciales (AGE) y crema barrera. De acuerdo con la taxonomía de la Clasificación Internacional para la Práctica de Enfermería (CIPE), se encontraron los diagnósticos de Enfermería de dolor crónica, lesión por presión, tristeza y nutrición comprometida. Se observaron posteriormente, dolor crónica disminuida, lesión epitelizada, tristeza reducida y nutrición eficaz, así como sus respectivas intervenciones. **Conclusión:** se concluye que el estímulo al trabajo en equipo debe ser continuo, para la evaluación y el cuidado a la salud por medio no solamente de actitud, pero por medio de la unión de responsabilidades y saberes de los distintos dirigentes en prol de una asistencia irrestricta y humanizada. **Descriptores:** Lesión por Presión; Equipo Multiprofesional; Diagnóstico de Enfermería; Vendajes; Estrategia de Salud Familiar; Salud Pública.

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INTRODUCTION

As it is known, the Family Health Program (FHP) was created in 1994, during the process of reorganization of the Basic Care for the model of primary care in the Ministry of Health, with the family as the focus of attention. Considering the expansion of the FHP and its team of professionals, some programs are developed as a strategy for the training of professionals in Primary Health Care. Therefore, the multiprofessional residency is aimed at enabling the professional to work as a team, trying to encompass all the needs of the person in health, humanize care and promote the integrality of care. For the expansion of the care provided in the FHP's and following the principle of integrality, the need for the home care action emerged.¹

In particular, some conditions require directed care, such as pressure injury (PI). PI causes a very significant impact on patients, families and the health system, because it is recurrent, incapacitating and with a severe repercussion on their quality of life, causing pain, suffering, increased length of stay and complications associated with basic diseases.² A multi-professional approach is necessary to carry out to take care of the human being in all biopsychosocial aspects integrally and not only of existing injuries.

PI is defined as localized damage to the skin and/or underlying soft tissue, usually over bone prominence, or may be related to medical equipment or other devices.³ Four stages are listed: Pressure Injury Stage 1 - full skin with non-bleachable erythema that shows intact skin with a localized area of non-bleachable erythema, which may look differently on dark pigmented skin; Pressure Injury Stage 2 - loss of partial thickness of the skin with dermis exposure; Pressure Injury Stage 3 - Total loss of skin thickness in which adipose (fat) tissue is visible on the ulcer; Pressure Injury Stage 4 - Total loss of skin thickness and tissue loss with direct exposure or palpation of tissues such as fascia, muscle, tendon, ligament, cartilage or bone in the sore and/or eschar ulcer, which may be visible.⁴

In this study, the International Classification for Nursing Practice (CIPE) stands out among the classification systems for Nursing diagnoses, which provides the possibility of constructing a vocabulary specialized in Nursing, consisting of focus, judgment, time, location, means, action and client.⁵

The objective of this study is to investigate the effectiveness of home treatment through multidisciplinary work performed with a patient of a FHU in the city of João Pessoa, as well as to disseminate the results of the interventions of a

Multiprofessional Health Residents Team Family and Community, since this study evaluates, more specifically, the process of healing of chronic injuries, determination of healing time, treatment coverage, identification of diagnoses/results and, finally, the interventions of the specialties involved for the patient with pressure injury. The CIPE taxonomy was applied specifically to Nursing.

OBJECTIVES

- To evaluate the healing process of chronic INJURIES in patients treated at Family Health Unit.
- To determine the healing time of the injuries.
- To highlight the coverage used in the treatment and identify diagnoses/results and nursing interventions to the patient with pressure injury, applying the CIPE taxonomy.

METHOD

This is a qualitative, descriptive study of a clinical case study, carried out in a Family Health Unit through home visits in the city of João Pessoa - PB, from July 2016 to November 2017, during one year and four months.

A patient with three pressure injuries was sampled. The affected area variable was analyzed, considering its increase or reduction, during the evaluation period, in percentage.

Interview procedures, physical examination, the use of the Pressure Ulcer Scale for Healing (PUSH),⁶ planigraphy and photographic registry of the injuries and the medical records were used for the research protocol. The CIPE taxonomy was used to perform Nursing diagnoses.

Home visits were carried out to collect data by applying an instrument with the following variables: identification data (age, gender, occupation, specialty, diagnosis); sociodemographic determinants or health conditioning; conditions inherent to the patient (smoking, alcoholism, nutritional conditions, mobility, history of current illness, previous treatments, medications in use) and evaluation of the injury (type, location, microbial content, exudate, borders, adjacent skin, pain, measurement).

The ethical and legal precepts that involve research with human beings were considered, according to Resolution 466/2012 of the National Health Council, and the participant's Free and Informed Consent Form was signed. The study was approved by the Research Ethics Committee of the Medical Sciences School of Paraíba FCMPB under protocol number 042/2011.

RESULTS

WSP, 30 years old, married, INSS beneficiary, with complete elementary school, male, bedridden, paraplegic (firearm accident), without diabetes and hypertension. He is from the Senador Humberto Lucena Hospital, submitted with a pressure injury located in the sacral region in Stage 4, undergoing surgical debridement in that hospital. After being discharged, he was followed up by the Family Health Unit, together with the Multiprofessional Residency team. The family vulnerability was verified after the first visit and the Social Assistance Reference Center (CRAS) was activated.

He had an axillary temperature (tax) of 37.5 °C; respiratory rate (RR) of 27 irpm; blood pressure (BP) of 130x60 mmHg; heart rate (HR) of 92 bpm; resected skin, with turgor and elasticity decreased and with edema; mucous membranes; pressure injury in stage IV sacral region; pain in right and left scapular region; dyspneic; heart rate in 2T; semiglobular abdomen painless to palpation; with hydro-noise; impaired bladder and bowel eliminations. Patient's sadness was reported on the physical state and family concern for being the only provider of the home.

The injury had a size of 100 cm², with distinct borders, yellowish-dampened exudate, discrete

odor, 80% granulation tissue, 10% fibrin, tendon exposure, edema, increased temperature and moderate pain, as mentioned by the patient.

The injury was cleaned with 0.9% saline solution using 20 ml syringe and 40x12 needles for bed cleaning, aiming to reach 8 to 15 psi (pounds/inches2). The perilesional area was wiped and dried with gauze and then the hydrogel cover was applied to the bed of the injury as well as a barrier cream at the edges of the injury, covered with dry gauze, wrapped in a compress sterile and fixed with micropore.

The nursing history of the patient was elaborated after the data collection. Diagnoses were then performed according to the International Classification of Practice for Nursing (CIPE) taxonomy, as well as results and interventions.

DISCUSSION

Figure 1 shows the diagnoses of the Nursing results and the interventions planned, considering that all care provided to the patient was performed by a multiprofessional team.

Nursing duagnosis	Results	Interventions
Chronic pain	Decreased chronic pain	1- Medication was given according to medical prescription; 2 - The use of non-pharmacological techniques was taught (relaxation, music therapy, fun, application of cold-hot compresses, massage application) before, after and, if possible, during a painful activity; 3 - He was sent to the Physiotherapy service; 4 - The patient was appeased about the reality of pain and helped to confront it; 5 - The effectiveness of pain control measures was evaluated; 6 - He was sent to medical examination; 7 - Auriculotherapy was applied.
Pressure Injury	Epithelial injury	1- The injury was evaluated at each dressing change; 2- The characteristics of the injury were described, including size, depth, classification of the stage (I-IV), location, granulation, devitalized tissue and epithelization; 3 - The skin around the injury was cleaned with mild soap and water; 4 - The skin was kept clean, dry and moisturized; 5 - The injury was maintained wet to aid healing; 6 - The patient/family was advised to take care of the injury.
Moderate sadness	Reduced sadness	1 - Psychological therapy was ensured with the adequate professional; 2 - The patient was kept safe; 3 - The patient was intently listened; 4 - A safe and calm approach was used; 5 - He was encouraged to watch overcoming videos.
Committed nutrition	Effective nutrition	1 - The patient was helped to be fed; 2 - An evaluation of the nutrition service was requested; 3 - Problems related to feeding were identified; 4 - The patient was guided on the importance of diet for the recovery of health status; 5 - Stimulating food intake; 6 - The daily intake of food was monitored.

Four diagnoses were found: chronic pain, pressure injury, sadness, and committed nutrition, which substantially affected its biopsychosocial state. Nursing care planning was elaborated from

the diagnoses identified and the expected results and the interventions were listed. One of the nursing diagnoses, chronic pain, was identified during the study; it should be emphasized that

pain is related to the physiological process and, when uncontrolled, it results in respiratory, hemodynamic and metabolic changes, predisposing to cardiovascular instability, increased energy and protein consumption, and difficulty in walking.⁶

As a strategy to control the pain and its intensity and as a resource, the scale of pain was evaluated by the health professionals, to increase this evaluation. Another usual way of minimizing such discomfort is to reduce the patient's anxiety simply by providing him with explanations of the procedures instituted and preparing him for the expected pain level.⁷

Also in the diagnosis of the committed pressure injury, bed restriction was one of the favorable factors for the development of pressure injuries located in the sacral region. The capacity of pressure relief in the bony prominences is reduced by the bed restriction, maintaining the factors of intensity and duration of pressure.⁸

The use of systematized strategies with the objective of preventing the aforementioned problem was used, such as the stratification of risk factors, the protection of the skin against shear forces and, finally, the change of decubitus, aiming to reduce the pressure in points more susceptible of routine and standardized way.⁹

One of the strategies adopted to systematize the patient's positioning in the bed is a commonly used method based on the functioning of a clock. In this method, every two hours, the decubitus is modified in the dorsal, right and left sides to relieve pressure in the tissues.⁹

For the diagnosis of committed nutrition, good nutrition should be established, which is fundamental for the prevention of pressure injuries. There is evidence suggestive of improvement in the healing process in patients with good nutritional status, and positive effects are verified when intervention is performed in this aspect during the treatment of pressure injuries.¹⁰

The nutritionist suggested to assist in the healing process and prevent the patient from losing muscle mass, a diet based on foods rich in protein and iron, such as meat and poultry, eggs, dairy products, dark leafy vegetables, legumes, among others, as well as the ingestion of antioxidant foods, vitamins A, B, C, E, K and omega 3, such as green, red, yellow and orange fruits and vegetables, cereals and whole grains, roots and tubers, oilseeds, extra-virgin olive oil and fish.¹¹ It was also reported that food sources of sugar and fat impair the healing of the injury, as well as digestion and absorption of nutrients since the patient was bedridden and the food must to suit their condition, having easy digestion. The importance of water consumption for hydration and aid in other body functions was also emphasized.¹²

The importance of the nutritionist is highlighted, considering that, in the assessment of nutritional risk and risk for PI, the individual should be referred to this professional, so nutritional support is prescribed, including evaluation; needs assessment; comparison between nutrient intake and estimated needs; adequate intervention based on the food route, monitoring and evaluation of results; reassessment of nutritional status at frequent intervals and while the individual is at risk.¹³

For the diagnosis of sadness, from the first contact with the patient, the existence of a pressure injury implies a delicate process marked by pain, physical and psychological discomforts, and emotional impact, for the patient and his loved ones.¹⁴ In one study, a patient with a pressure injury was evaluated in which two important categories were detected: firstly, physics, in which the pain, the level of exudate and the loss of independence were highlighted, and second, the psychological, which showed emotional problems, such as concern about healing, social relationships, body image and, also, social isolation.¹⁵ Thus, the psychology professional has great relevance, since he can offer psychotherapeutic support for the patient and his family.

Currently, there are innumerable curative options available in the market, and the financial resources of the patient and/or the health unit, the need for continuity of the use of the dressing, including with home visits, and the evaluation of benefits and costs are some of the aspects to be considered when choosing the type of dressing, which should be appropriate to the nature, location and size of the wound. The Hydrogel, the essential fatty acids (AGE) and the barrier cream are highlighted among the coverages used in the study.

The hydrogel was used as the primary dressing (a dressing used in direct contact with the wound), an adhesive that can be presented as a transparent amorphous gel or a plaque. Hydrogels and adhesives, in general, aim to protect the wound, promoting a humid environment and aiming the injury healing. There are some advantages of hydrogels: maintenance of the wet environment and protection of nerve endings, reducing patients' pain and causing less discomfort during changes.¹⁶

Essential fatty acids (AGEs) have linoleic acid derivatives, linoleic acid derivatives with lanolin and castor oil ricinoleic acid derivatives. These acids are indicated for all types of injuries, in which the triglycerides act in a positive way in the healing process, with bactericidal action, acting on the cell membrane, increasing its permeability, facilitating the entry of growth factors, promoting mitosis and cell proliferation, stimulating

neoangiogenesis and chemotaxis to leukocytes, bringing benefits at any stage of healing and aiding autolytic debridement, being bactericidal to *S. aureus* and being able to do the previous debridement to speed up the healing process, being of daily application. The possible limitations are hypersensitivity, the need for daily change and the application of secondary coverage.¹⁵

It is believed that the barrier cream works as a layer, a kind of film that moisturizes and cares for the skin; it is effective in case of burns/rashes, skin irritations or dryness because in addition to moisturizing, it prevents the contact of liquids or

residues directly with the skin. It works literally as a barrier and has a pH protector, which restores the natural level of the skin, preventing future skin injuries.

Through the sequence of images, regarding the evolution of the lesion, the role of the multiprofessional team was shown to be of fundamental importance for the regression and improvement of the injury with involution of the last stage until the complete disappearance, contemplating, in this way, a better physical, mental and social well-being for the patient.




Photographic registration	Type and tissue in the wound bed	Exudate and odor	Measurement	Procedure	Material used
 Fig.07.11.2016	Granulation, fibrin, tendon exposure.	Moderate exudate and mild odor.	56 cm ²	The lesion was cleaned with 0.9% saline solution. The perilesional area was cleaned and dried with gauze. the hydrogel was applied In the bed of the lesion.	Hydrogel and essential fatty acids.
 Fig.20.02.2017	Granulation tissue	Moderate exudate and mild odor.	15,75 cm ²	Hydrogel in the injury bed.	Hydrogel and barrier cream.
 Fig.14.11.2017	Epithelial Injury	Epithelial Injury	0 cm ²	Application of the barrier cream on the perilesional skin.	Barrier cream.

Figure 2. Distribution of the evolution of the injury according to the period of data collection. João Pessoa (PB), 2017.




Photographic registration	Type and tissue in the wound bed	Exudate and odor	Measurement	Procedure	Material used
 Fig.14.07.2016	Granulation, fibrin, tendon exposure.	Moderate exudate and mild odor.	100 cm ²	The lesion was cleaned with 0.9% saline solution. The perilesional area was cleaned and dried with gauze. In the bed of the lesion, the hydrogel was applied.	Hydrogel and essential fatty acids.
 07.11.2016	Granulation tissue	Little exudate and absent odor.	24,75 cm ²	Hydrogel in the lesion bed.	Hydrogel and barrier cream.
 24.02.2017	Granulation tissue	Exudate and odor absent.	4,84 cm ²	Hydrogel in the lesion bed.	Hydrogel and barrier cream.

Figure 3. Distribution of the evolution of the injury according to the period of data collection. João Pessoa (PB), Brazil, 2017.




Photographic registration	Type and tissue in the wound bed	Exudate and odor	Measurement	Procedure	Material used
 Fig.09.07.2017	Granulation, fibrin and necrosis of liquefaction.	Moderate exudate and mild odor.	33 cm ²	The injury was cleaned with 0.9% saline solution. The perilesional area was cleaned and dried with gauze. In the bed of the lesion, there was the application of the hydrogel and AGE.	Hydrogel and essential fatty acids
 Fig.26.07.2017	Granulation plus devitalized tissue.	Exudate and moderate putrid odor.	27,5 cm ²	Realização de desbridamento autolítico e mecânico. Aplicação de Hidrogel no leito da lesão.	Hydrogel and barrier cream.
 Fig.14.11.2017	Granulation	Absent	2 cm ²	Aplicação de creme barreira na pele perilesional.	Barrier cream.

Figure 4. Distribution of the evolution of the injury according to the period of data collection. João Pessoa (PB), Brazil, 2017.

CONCLUSION

The importance and performance of a multiprofessional team for the care of patients with injuries and for qualified assistance based on decision-making that improves the quality of life of these patients is highlighted. There was an important improvement in the healing process of PI treated with the application of Hydrogel and AGE, demonstrated by the result of the injury healing.

The use of the CIPE classification allowed more detailed evaluation of the evolution of the healing process of the injury, proving to be a good alternative to evaluate the effectiveness of the interventions for the multiprofessional team.

Some challenges may arise in the course of the work process, making satisfactory care difficult, such as the scarce resources and materials for the treatment of injuries. It is suggested that managers strengthen their actions, contributing to the well-being of the population, establishing social commitment and investing in health. The multiprofessional relationship must be seen as a partner in the resolution of health complications, as well as an essential point for the success of the work, with a humanized approach and considering the profile of each assisted patient.

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