

Systematization of nursing care to a patient with erysipellal injuries: an experience report

Sistematização da assistência de enfermagem à um paciente com lesões por erisipela: um relato de experiência

Sistematización de los cuidados de enfermería a un paciente con lesiones de erisipela: informe de una experiencia

RESUMO

OBJETIVO: Relatar a experiência no tratamento de lesão por erisipela por meio da Sistematização da Assistência de Enfermagem. **MÉTODO:** Trata-se de um relato de experiência sobre a assistência de enfermagem a pacientes com lesões causada por erisipela. **RESULTADOS:** Foi implementado o processo de enfermagem em um paciente com lesões bolhosas e descamativas em membros inferiores bilateralmente, clinicamente característico de lesões por erisipela, em que foi utilizado placas de carvão ativado com prata, notando-se evolução do processo cicatricial. Além disso, a partir dos diagnósticos estabelecidos, observou-se que os diagnósticos de dor aguda e ansiedade apresentaram piora do quadro em alguns momentos na internação hospitalar, alcançando o resultado esperado no momento da alta e que apenas o diagnóstico de mobilidade física prejudicada não alcançou seu resultado esperado. **CONCLUSÃO:** Verificou-se a necessidade de um sistema físico ou eletrônico que contemplasse todas as etapas do Processo de Enfermagem.

DESCRITORES: : Erisipela; Cuidados de Enfermagem; Ferimentos e lesões.

ABSTRACT

OBJECTIVE: To report the experience in the treatment of erysipelas lesion through the Systematization of Nursing Care. **METHODS:** This is an experience report on nursing care to patients with lesions caused by erysipelas. **RESULTS:** The nursing process was implemented in a patient with bullous and desquamative lesions in the lower limbs bilaterally, clinically characteristic of erysipelas lesions, in which activated charcoal plates with silver were used, noting the evolution of the cicatricial process. Moreover, from the established diagnoses, it was observed that the diagnoses of acute pain and anxiety worsened during hospitalization, reaching the expected result at the time of discharge and that only the diagnosis of impaired physical mobility did not reach its expected result. **CONCLUSION:** The need of a physical or electronic system that contemplated all stages of the Nursing Process was verified.

DESCRIPTORS: Erysipelas; Nursing Care; Wounds and injuries.

RESUMEN

OBJETIVO: Reportar la experiencia en el tratamiento de la lesión de erisipela a través de la Sistematización de los Cuidados de Enfermería. **MÉTODOS:** Se trata de un informe de experiencia sobre los cuidados de enfermería a pacientes con lesiones causadas por la erisipela. **RESULTADOS:** Se implementó el proceso de enfermería en una paciente con lesiones bullosas y descamativas en los miembros inferiores de forma bilateral, clínicamente características de lesiones de erisipela, en la que se utilizaron placas de carbón activado con plata, observando la evolución del proceso cicatricial. Además, de los diagnósticos establecidos, se observó que los diagnósticos de dolor agudo y ansiedad empeoraron durante la hospitalización, alcanzando el resultado esperado en el momento del alta y que sólo el diagnóstico de deterioro de la movilidad física no alcanzó su resultado esperado. **CONCLUSIÓN:** Se verificó la necesidad de un sistema físico o electrónico que contemplara todas las etapas del Proceso de Enfermería.

DESCRIPTORES: Erisipela; Atención de Enfermería; Heridas y Lesiones

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INTRODUCTION

The skin is characterized as the largest organ and its main functions are protection against infections, traumas and injuries, thermoregulation, in addition to the sensory function. It is made up of three layers, namely epidermis, dermis and hypodermis. Thus, wounds are the interruption of the continuity of the integrity of the epithelial tissue, which occur due to traumas of different etiologies.¹

Within the context of lesions that affect the skin, non-necrotizing acute bacterial dermo-hypodermatitis (NNABDH) include erysipelas and infectious cellulitis. NNABDH have an infectious etiology most often caused by streptococci and staphylococci.²

In 80% of cases, erysipelas affects the lower limbs, characterized by the appearance of edema, erythema, redness and sometimes blisters. Systemic antibiotic therapy is the main focus regarding the treatment of the disease. In cases of bullous or extensive lesions, hospitalization and the use of intravenous antibiotics are recommended.³

It is understood that the skin has resident and transient bacteria, which can colonize the skin. Microorganisms from the resident microbiota contribute to resistance against the colonization of pathogenic bacteria (streptococci and staphylococci) by hydrolyzing lipids and acting in the production of free fatty acids, which are toxic

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to many bacteria.⁴

Diagnosis can be clinical and blood cultures are recommended only for severe cases, where they detect the presence of bacteria in 3-9% of cases. Beta-hemolytic *Streptococcus* or *Streptococcus pyogenes* and *Streptococcus dysgalactiae* are the bacteria causing erysipelas in most cases.⁵

The incidence of erysipelas is estimated at 10 to 100 cases per 100,000 population, with a broad predominance of females and in an age group of 40 to 60 years, affecting more commonly individuals with chronic diseases and people with impaired circulation in the lower limbs.¹

The nursing team is of fundamental importance in the patient's recovery, as its performance is based on care and welcoming, becoming a working tool that interferes in the individual's relationships as a whole.¹ As nursing is a dynamic profession, its systematization allows for the continued reflection of its actions. In this sense, the Nursing Care Systematization (NCS) enables the planning, execution and evaluation of the care provided, providing assistance in the implementation of norms and routines, scientifically supporting the actions of the nursing professional.⁶ NCS is internationally recognized as a method that organizes and directs professional work, with the main objective of qualifying and, above all, systematizing patient, family and community care.⁷

In Brazil, the NCS is regulated by Reso-

lution No. 358/2009 of the Federal Council of Nursing (COFEN), which advocates that its implementation must be carried out in all establishments providing health services that offer nursing care. 8

Thus, the aim of this study is to report the experience in the treatment of erysipelas injury through the Systematization of Nursing Care in a high-complexity hospital.

METHODS

This is an experience report 9 related to the performance of 03 (three) nursing residents in the context of care for patients with lesions caused by erysipelas, under the supervision of a stomatherapist, preceptors of the Multiprofessional Residency in Health, Area of Medical and Surgical Concentration and nursing professionals from the Internal Medicine. In which it describes the systematization of nursing care in the treatment of patients affected by erysipelas-type lesions that occurred in April and May 2021 at the Medical Clinic Unit of the University Hospital of the Federal University of Maranhão (HU-UFMA).

The NANDA (North American Nursing Diagnosis Association), NIC (Nursing Interventions Classification) and NOC (Nursing Outcomes Classification) methodologies 10,11,12 were used as tools to carry out the Nursing Process (NP), an essential part of the Systematization of Nursing Care (NCS). NCS is a scientific methodology that guides the actions of nursing professionals with the objective of providing scientificity, decision-making and boosting

the administrative and managerial quality of nursing care. 6

The NP is organized into five interrelated, interdependent and recurrent stages: Nursing data collection, Nursing diagnosis, Nursing planning, Implementation, Nursing assessment. 13

RESULTS AND DISCUSSION

According to the stages of the NP, the patient's data were collected at first to carry out the nursing history. The nursing history or data collection is characterized as a deliberate, systematic and continuous process, carried out with the help of various techniques and methods whose purpose is to obtain information about the person, family or human community and everything that relates to the health-disease process. 13 The nursing history was collected in physical environment, through a form and attached to the patient's clinical record. Other historical data is also contained in an electronic system called SIMON.

This form divides patient information into 3 categories supported by Wanda de Aguiar Horta: 14 Psychobiological, psychospiritual and psychosocial, which interrelate and form part of an indivisible whole.

This is a patient with bullous and scaly lesions on the lower limbs bilaterally, clinically characteristic of lesions caused by erysipelas and with a previous history of Systemic Lupus Erythematosus (SLE). Upon admission, he was complaining of pain and intense anxiety. It was identified that the patient could not walk without assistance due to the injuries and was anxious because

of the threat to his health condition. The patient had a companion, support system, family support and had a satisfactory level of understanding about their health situation.

According to Neves et al. 15, one of the greatest difficulties faced by students and professionals during the collection of the Nursing History is the integrated approach to the human being. Psychobiological needs are more fulfilled at the expense of psychosocial and psychospiritual needs. Such evidence brings numerous debates about overcoming a biomedical model to be achieved.

The second stage of the NP began: elaboration of the Nursing Diagnoses. Nursing Diagnosis is defined as the process of interpreting and grouping the information collected in the first stage (Nursing History). It is characterized as a basis for the selection of actions or interventions with which the objective is to achieve the expected results. 13

According to NANDA 10, six Nursing Diagnoses were listed during the patient's admission, they are: Acute pain, characterized by verbal self-report of pain related to the biological harmful agent; Impaired tissue integrity, characterized by tissue damage related to the harmful biological agent; Risk of infection. Risk factors: alteration in tissue integrity and increased exposure to pathogens; Impaired physical mobility, characterized by pain-related changes in gait; Fall risk: risk factor: gait alteration. Anxiety, characterized by changes in life events related to the threat of the current condition.

Quadro 1: Planejamento de Enfermagem. Resultados (NOC) e Intervenções (NIC) para cada diagnóstico (NANDA) elaborado, com seus respectivos aprazamentos.

| NURSING PLANNING | | | |
|------------------|---|--|---|
| DIAGNOSTICS | EXPECTED RESULTS | INTERVENTIONS | SCHEDULE |
| Acute pain | Indicators: 1. Reported pain: from severe (1) to none (5); 2. Facial expression of pain: from severe (1) to none (5). | 1. Administer analgesics; 2. Assess pain as a vital sign; 3. Keep the environment calm and comfortable; 4. Assess pharmacological efficacy. | According to medical prescription; 6/6 hours; Continuous; After administration of analgesic medications. |

| | | | |
|---|--|---|--|
| Impaired Tissue Integrity | Indicators: 1.Skin integrity: from very compromised (2) to slightly compromised (4); 2.Skin temperature: from very compromised (2) to not compromised (5). | 1. Change the dressing; 2. Perform antisepsis of the lesion; 3. Assess the characteristics of the lesion. | Daily, after bathing; Daily, after bathing; During dressing change. |
| Impaired Physical Mobility Fall risk | Indicators: 1. Gait: from moderately compromised (3) to non-compromised (5). | 1.Assess gait; 2. Offer assistance in walking; 3.Teach about the use of canes or walkers; 4. Helping in the bath; 5. Keep the bed rails suspended; | Daily; Necessary case; Necessary case; Necessary case; Continuous |
| Risk of Infection | No infection | 1. Monitor signs of infection; 2. Swap peripheral venous access and other invasive devices; 3. Encourage body hygiene. | Morning, afternoon and night; According to the institution's protocol; Continuous. |
| Anxiety | Indicators 1.Discomfort: from substantial (2) to mild (4); 2.Nervousness: from substantial (2) to mild (4); 3. Verbalized apprehension: from serious (1) to mild (4). | 1.Explain all procedures in advance; 2. Offer real information about the patient's health and therapeutic situation; 3.Offer active listening to the patient; 4. Enable the patient to verbalize their feelings. | Continuous; Continuous When necessary Continuous |

Source: Study data, 2021.

After listing the Diagnoses, the next step was sought: Nursing Planning. This Planning is defined as the determination of the results that are expected to be achieved and the interventions that will be carried out based on the diagnoses raised for that individual, family or community. 13

There is a weakness found in the hospital in this study, as there is no system (physical or electronic) based on any methodology for the construction of the expected results within the Planning stage, causing the terminologies to be reduced in "Present, Maintained, Improved and Worsened" for each diagnosis made.

The NOC12 and NIC11 methodologies were chosen. The NOC classifies the

results in scores from "1" to "5", where "1" characterizes the greatest possible damage and "5" the absence of that diagnosis/problem. The NIC lists the nursing interventions needed for each diagnosis.

For certain diagnoses, a score of 5 was not established as an expected result, as the substantial improvement of the problem already guaranteed the patient criteria for hospital discharge. An example is the diagnosis of impaired tissue integrity that did not require a score of 5, where there is no lesion, so that the patient could be discharged from the hospital.

After carrying out the planning stage, it is necessary to put into practice the interventions elaborated in the previous stage

so that the expected results are achieved. Then, the Implementation or Nursing Interventions stage began.

The HU-UFMA has an electronic system (AGHU) that has the nursing prescription tool for each hospitalized patient based on the NIC 11 methodology.

Nursing Prescription is conceptualized as a daily schedule, scheduled, which coordinates the actions of the nursing team with patients. It is in fact the dynamization of the Planning stage. 13

According to Barreto et al 7, resistance to adhering to the care plan by nursing technicians, lack of time, work overload and the fact that some doctors prescribe care are factors that hinder the implementation of

the NCS.

Table 1 addresses the main nursing diagnoses, outcomes and interventions, as well as their respective deadlines for each selected diagnosis.

The Nursing Assessment stage consists of an ongoing process that must occur daily. The evaluation means observing whether the nursing interventions enabled the achievement of the expected results and whether there is a need for changes in the previous stages of the NP. 13 In hospital practice, the evaluation stage is configured as an evaluative method that will allow changes in the interventions performed for each expected result not achieved, totally or partially, in the planning stage.

The diagnosis of acute pain evolved with variations in its degree of impairment, as during the hospital stay, the patient under study underwent two debridement surgeries for the lesions, which resulted in the worsening of the pain.

Surgical debridement consists of the complete removal of necrotic tissue and even viable tissue, in an attempt to transform a chronic lesion into an acute one and accelerate its healing process. It must be performed by a surgeon and its main advantage is the speed of removal of devitalized tissue and among its disadvantages are the high cost, the anesthetic risk and the risk of infection. 16

After the lesion debridement surgeries, it was decided to use special coverings for the dressings. Then, activated charcoal with silver plates were used with programmed changes from 48 to 76 hours, where an evolution of the healing process was noted, with a predominance of granulation tissue and closer approximation of the edges.

Activated carbon has a high degree of absorption of odor, exudate and bacteria, exerting a cleaning effect. Silver provides a complementary bactericidal action to that of charcoal, stimulating granulation and increasing healing speed. 17

As the lesion progressed to healing, the diagnosis of impaired physical mobility and anxiety showed signs of reaching their respective expected results. The correct use of canes was taught to the patient, thus

Despite the complications faced during the hospitalization period, the nursing team provided care so that the lesion maintained a good healing pattern, minimizing the surgical risk of infection. In addition, we identified the need for a physical or electronic system that included all stages of the NP, to enable the systematization of records of the results to be achieved for the selected nursing diagnoses

granting them greater autonomy, as well as their inclusion in the process of improving the lesions, which significantly contributed to the improvement of nervousness and discomfort indicators.

To be discharged from the hospital, the client underwent plastic graft surgery. In the preoperative period, it was observed that the diagnosis of anxiety worsened in relation to the expected results, but in the postoperative period there was an immediate re-establishment after the patient's discharge was predicted by the team.

The objective of surgical treatment of injuries in the lower limbs is the maximum functional recovery of the affected limbs and return to work activities. Therefore, many studies recommend early grafting of complex wounds in order to avoid local and systemic infection, in addition to reducing hospital stay. 18

During the nursing assessment at discharge, it was observed that only the diagnosis of impaired physical mobility did not obtain the expected result, as the patient was discharged from the institution in the postoperative period of plastic surgery and have thus kept item "3" (moderately compromised) for the gait indicator (Table 1).

CONCLUSION

The NCS for patients with tissue injuries of any etiology gives nurses and their team the necessary scientific knowledge and support for a satisfactory evolution of the injuries. Thus, specific knowledge such as special coverage for dressings, aseptic techniques and scarring physiology is an essential part of the systematic care process.

Despite the complications faced during the hospitalization period, the nursing team provided care so that the lesion maintained a good healing pattern, minimizing the surgical risk of infection. In addition, we identified the need for a physical or electronic system that included all stages of the NP, to enable the systematization of records of the results to be achieved for the selected nursing diagnoses.

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