

Nursing Care of an Adolescent with Toxic Epidermal Necrolysis: A Case Report

Cuidados de Enfermagem a um Adolescente com Nectólise Epidérmica Tóxica: Relato de Caso

Cuidados de enfermería prestados a un adolescente con neclólisis epidérmica tóxica: reporte de caso

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REVIS

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RESUMO

Objetivo: Relatar a assistência de enfermagem diante do caso de um adolescente com diagnóstico de Nectólise Epidérmica Tóxica (NET) internado em uma Unidade de Terapia Intensiva de Queimados. **Método:** Trata-se de um relato de caso sobre as intervenções de enfermagem realizadas em um adolescente com diagnóstico de NET, internado por um mês em 2020 na Unidade de Terapia Intensiva de Queimados de Goiás. As informações foram coletadas do prontuário do paciente. **Resultados:** Apresentamos práticas clínicas para auxiliar no manejo de pacientes com NET. O caso apresentado teve um desfecho positivo. **Conclusão:** Os cuidados de enfermagem são essenciais para o prognóstico positivo do paciente. Nesse caso, a enfermagem atuava principalmente no cuidado de feridas, administração de medicamentos, laserterapia e vigilância para prevenção de infecções.

Descritores: Nectólise Epidérmica Tóxica; NET; Cuidados de enfermagem; Queimadura.

ABSTRACT

Objective: To report nursing care facing a case of an adolescent diagnosed with Toxic Epidermal Necrolysis (TEN) hospitalized in a Burns Intensive Care Unit. **Method:** This is a case report on the nursing interventions performed on a teenager diagnosed with TEN, who was hospitalized for a month in 2020 at the Burn Intensive Care Unit in the state of Goiás. The information was collected from the patient's medical record. **Results:** We present clinical practices to assist the management of patients with TEN. The case presented had a positive outcome. **Conclusion:** Nursing care is essential for the positive prognosis of the patient. In this case, nursing acted mainly in wound care, medication administration, laser therapy and surveillance to prevent infections.

Descriptors: Toxic Epidermal Necrolysis; TEN; Nurse Care; Burns.

RESUMEN

Objetivo: Informar los cuidados de enfermería en el caso de un adolescente diagnosticado de Nectólisis Epidérmica Tóxica (TNE) ingresado en una Unidad de Cuidados Intensivos por Quemados. **Método:** Se trata de un relato de caso sobre las intervenciones de enfermería prestadas a un adolescente diagnosticado de TNE, hospitalizado durante un mes en 2020 en la Unidad de Cuidados Intensivos Quemados de Goiás, información obtenida de la historia clínica del paciente. **Resultados:** Presentamos prácticas clínicas para ayudar en el manejo de pacientes con TNE. El caso presentado tuvo un resultado positivo. **Conclusión:** El cuidado de enfermería es fundamental para el pronóstico positivo del paciente. En este caso, la enfermería trabajó principalmente en el cuidado de heridas, administración de medicamentos, terapia con láser y vigilancia para prevenir infecciones.

Descritores: Nectólisis epidérmica tóxica; NET; Atención de enfermería; Quemaduras.

Introduction

Toxic Epidermal Necrolysis (TEN) is a rare and serious disorder, which leads to an acute mucocutaneous lesion, usually triggered by drugs, being associated to a high rate of morbidity and mortality. The disorder has multisystemic repercussions and a clinical picture based on changes in the skin and mucous membranes, which affects more than 30% of the total body surface. If the percentage is lower than 30%, the patient is diagnosed with Stevens-Johnson Syndrome (SJS).¹⁻³

As for the etiology of this condition, it can be due to infections, but it is believed that most cases - almost 80% - are induced by drugs. It can develop in one or two weeks, but it can also be quickly, within 48 hours. The pathogenesis is still not well understood, but research says it is a delayed hypersensitivity reaction to drugs in people with greater genetic predisposition.^{2,3}

Nurses should seek, in their professional practice, excellence in care and quality in their assistance⁴. Because it is disease with low-incidence, and because there are few studies in the field of nursing addressing this topic, the report of this case is relevant. The study aims to report the main nursing care facing a case of an adolescent diagnosed with TEN hospitalized in a Burns Intensive Care Unit.

Method

This is a case report about the nursing care provided to a teenager diagnosed with toxic epidermal necrolysis, who was hospitalized in a Burns Intensive Care Unit in a public hospital in the state of Goiânia - Brazil, currently a reference in treatment of burned patient.

The patient was admitted to the institution from February to March 2020. Data were collected in the month of June from the patient's medical record, present in the hospital's electronic medical record system.

The project was approved by the institution's ethics committee, for publication of the case, the exemption from the free and informed consent term was authorized, as secondary data was used and when entering the institution's service, the responsible for the patient authorized the use of images and history for research purposes.

Ethical precepts were respected, according to the recommendations of Resolution 466/12. This study brings minimal risks to the patient, as it guarantees the confidentiality of the data and since it is a case report, interventions will not occur, which reduces the possibility of causing physical and psychological damage to the patient.

Results

A fourteen years old male patient accompanied by his parents, from the city of Jataí (State of Goiás, Brazil), admitted to the Burns Intensive Care Unit on 02/15/2020 in a serious general condition. On admission, he was hemodynamically stable without use of vasoactive drugs, dehydrated, feverish, with normal color, acyanotic, anicteric. Neurological state: confused, agitated; with isochoric and photoreactive pupils. With uveitis and keratitis in both eyes

and bilateral eyelid swelling. He had a large amount of blood in the oral cavity, significant lip swelling, friable and bleeding mucosa. Regular heart rate, tachycardia, normotensive and prolonged capillary refill time. On lungs auscultation: presence of vesicular murmurs, diffused rhonchi, tachydyspneic using accessory muscles; Oxygen supplementation in a mask device without reservoir, with a flow rate of 15L/min, saturating 85%. Flat and flaccid abdomen, painless on palpation, with positive Nikolsky's sign and absence of swelling in the lower limbs. After the evaluation, it was instituted immediate interventions for hemodynamic control. TEN was the diagnosis, having as its etiological agent: silver sulfadiazine cream and metamizole used by the patient a few days ago. The sparse lesions (scaling lesions) affected anterior and posterior trunk, head, neck, oral and genital mucosa, upper and lower limbs, reaching about 67% of the burned body surface.



Figure 1: Lesions due to toxic epidermal necrosis, 2020.



Figure 2: Healed toxic epidermal necrosis lesions, 2020.

The total hospitalization period was 21 days, in this period the Singular Therapeutic Project (STP) was instituted, focusing on real or possible problems that the patient could present, with the objective of discussing interventions that would guarantee conditions for his clinical improvement and hospital discharge.

Thus, the main nursing diagnosis that directly impacted the possibility of hospital discharge was the *Impaired Skin Integrity* related to harmful chemical

factors; evidenced by changes in skin integrity. Thereby, nursing care for injuries consisted of mechanical debridement at the bedside, laser therapy, daily dressings on the lesions with Essential Fatty Acids (EFA), covering it with rayon gauze lubricated in petroleum jelly, sterile compress and bandages to occlude.

Risk of infection related to changes in skin integrity. In view of this diagnosis, the main precautions were: Strictly monitoring vital signs; monitoring local and systemic infection signs and symptoms; manipulation of invasive devices using aseptic technique; daily evaluation of the lesions watching manifestation of any phlogistic signs.

After 21 days of hospitalization, the patient was discharged from the hospital with an outpatient return visit to continue treatment and assess the lesions. After the first return visit, we could observe the epithelialization of the wounds, thus concluding the clinical treatment.

Discussion

TEN is a rare and serious disorder that leads to an acute mucocutaneous eruption, usually drug induced. Medications can trigger an immune response by binding directly to the Major Histocompatibility Complex (MHC) and T-cell receptors, stimulating a specific population of cytotoxic T-cells that have the function of destroying keratinocytes directly and indirectly. Keratinocytes are the major cell type of the skin and their main characteristic is the protein constitution based mainly on the synthesis of keratin. ^{2, 3,5}

The destruction of this group of cells triggers the healing process that affects the entire body, which is like the clinical picture of a major burn, being this the main clinical finding of this pathology. ^{2,3,5, 6}

Nurses' knowledge about physiology and anatomy, the healing process and the available and indicated coverings, taking into consideration its cost-benefit is essential to prescribe the most appropriated technology for the treatment^{7,8}. Thus, Essential Fatty Acid (EFA) was the main product used during treatment because it keeps the injury hydrated, stimulates angiogenesis and epithelialization, since other products could trigger a new toxic reaction on the patient's skin.^{9,10}

Laser therapy was another approach aiming the treatment of wounds. In skin lesions, low-power laser irradiation is the first choice. It acts through biomodulation of cells and tissues, which helps the healing process by stimulating epithelialization and angiogenesis, it also has analgesic action and reduces edema. ¹⁰

Due to skin's waterproofing barrier loss, TEN carriers have an important risk of infection. Secondary infections are the most found complications, which, together with sepsis, are the main causes of mortality in patients with TEN. ^{5, 6, 10}

Nurses must offer individualized care for these patients based on the identification of their affected needs, on the elaboration of the diagnosis, on the planning of interventions and their implementation and evaluation. For nursing to advance as a science as well as the advance of the provided care quality, it is necessary to produce knowledge that underlies nursing interventions into care process.^{5,10}

Conclusion

Nursing care for the adolescent in this case study aimed, above all, promoting and maintaining skin integrity, preventing the worsening of dermal changes already in place and preventing infectious foci. Therefore, nurses play a fundamental role in the process of wound healing and infection prevention. It is important to highlight the scarcity of publications in the nursing field about the best management of the patients with TEN. From that, we need more clinical studies and the development of protocols to improve and guarantee that the care provided is based on scientific evidence, ensuring safe and quality care.

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