

SIMULATION OF CARE FOR BURN VICTIM: EXPERIENCE REPORT

Aline Cardoso Batista

Nursing Course Student at ``Centro
Universitário Jorge Amado``

Priscila Conceição Costa Rodrigues

Nursing Course Student at ``Centro
Universitário Jorge Amado``

Claudenice Ferreira dos Santos

Professor of the Nursing Course at ``Centro
Universitário Jorge Amado``

Rosimeyre Araújo Cavalcante

Professor of the Nursing Course at ``Centro
Universitário Jorge Amado``

Waltamy Mota da Silva Junior

Professor of the Nursing Course at ``Centro
Universitário Jorge Amado``

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Abstract: Burns are injuries to body tissue caused by physical agents, chemical agents and biological agents capable of producing excessive heat that totally or partially damages the skin and its appendages, until reaching deeper layers such as muscles, tendons and bones, which can progress to death depending on the body area affected, the type of burn and its depth. This article is an experience report experienced in the laboratory through a realistic simulation with simulated patient care for the curricular component of the Urgency and Emergency discipline, carried out in 2019.1, with undergraduates from the 7th semester of the Nursing course on the shift night, under the guidance of the subject teachers. The same, it is a study whose main objective is to report the nursing assistance to the burn victim patient and in this experience the students created a clinical case in which the patient had 28% of the body surface burned, distributed in the anterior region, the same was treated according to the care protocol and several nursing actions were used, such as: removing the victim from contact with the causal agent, assessing vital signs, obtaining venous access, volume resuscitation, foley bladder catheterization, administering tetanus prophylaxis, control of hypothermia (cover the patient with a thermal blanket), monitor and apply dressings. Therefore, the group concludes that several behaviors can interfere with the regression or progression of severely burned patients, especially the involvement of late injuries due to hospital infections. In the face of these complications, some nursing actions are carried out with the purpose of improving the prognosis, such as first aid appropriately, drug interventions, dressings made according to specific technique and institutional protocol, planning care in a comprehensive, humane and individualized approach, aiming to prevent possible complications. However, the work was

very significant, providing greater knowledge of the topic addressed to all participants present.

Keywords: Injuries; Crystalloids; Debridement.

INTRODUCTION

Burns are injuries resulting from physical agents: temperature, electricity, radiation; chemical agents: chemicals; biological agents: animals (fire worm, jellyfish, jellyfish), vegetables (latex of certain plants, nettle), capable of producing excessive heat that damages body tissues and leads to cell death (CALIL, 2010).

The severely burned patient is more susceptible to infections, due to immunosuppression and loss of skin coverage. Furthermore, prolonged hospitalizations associated with invasive measures, such as mechanical ventilation, vascular and bladder catheterization, further expose these patients to hospital infections that require drug intervention and dressings performed appropriately. The nurse aims to plan care in a comprehensive approach, humane and individualized to prevent complications, welcoming the patient together with the family to obtain the expected result (Ministry of Health, 2017).

Burns are common injuries and the fourth cause of trauma-related deaths. According to the Brazilian Burn Society, in Brazil there are one million cases of burns each year, 200 thousand are treated in emergency services, and 40 thousand require hospitalization. It is estimated that of these, around 2,500 patients will die directly or indirectly due to their injuries (*Revista Brasileira de Queimaduras*, 2014).

In major burns, the shock caused by the burn increases vascular permeability with extravasation of plasma into the interstitial space, generating edema; Death can occur due to hypovolemic shock, pulmonary complications and sepsis (*Revista Latino-Americana de Enfermagem*, 1998).

In view of the above, this study aims to report nursing care for burn victims. Burns are injuries resulting from physical agents: temperature, electricity, radiation; chemical agents: chemicals; biological agents: animals (fire worm, jellyfish, jellyfish), vegetables (latex of certain plants, nettle), capable of producing excessive heat that damages body tissues and leads to cell death (CALIL, 2010).

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METHODOLOGY

This is an experience report experienced in the laboratory through the use of realistic simulation methodology with simulated patient care in the Urgency and Emergency curricular component carried out in 2019 with undergraduates attending the seventh semester of the nursing course, night shift. For this experience, the students prepared a clinical case in which the topic covered was Burns, a subject of such relevance for the learning of all members of the group and their classmates who were also present watching the simulation. Bearing in mind that nursing interventions in the treatment of severe burns are of vital importance and very significant both for the patient who needs precise and humanized care and for the nursing professional who exposes their skills and scientific knowledge in order to help more a victim.

DISCUSSIONS AND RESULTS

The clinical case presented was: S. B. F, 30 years old, female, mixed race, born in Salvador, admitted to the HGE with flame burns (wood and paper) resulting from a fire in the workplace with 28% of the body surface burned. She presents hyperemic lesions in the anterior region of the neck and hands. Anterior region of the chest, abdomen and arms with hyperemia, blistering and intense pain. She appears lucid, oriented, aphonic and dyspneic. The patient was hospitalized according to the care protocol: removal of the victim from contact with the causal agent, SSVV assessments, patient undergoing early orotracheal intubation, associated with mechanical ventilation, peripheral and large venous access obtained, volume replacement performed with crystalloid solutions (Ringer with lactate) in the next 24 hours according to the Parkland formula = $2 \text{ ml} \times \text{Weight (kg)} \times \% \text{SCQ} = 2 \text{ ml} \times 70 \text{ kg} \times 25\% \text{ SCQ} = 3,500$

ml, that is, 1,750 ml/h in the first 8 hours and 1,750 ml/h in the next 16 hours; an indwelling bladder catheterization was performed to control diuresis and administer tetanus prophylaxis. Monitoring of SSVV, patient sent to the surgical center, sedation was performed for debridement according to medical advice, subsequently, a dressing was applied with 1% Silver Sulfadiazine.

Care protocol: The emergency care protocol used for severely burned patients was the ATLS ABCDE (Ana Maria Calil, 2008).

Stop the burning process, remove all clothing (any clothing with chemical substances must be removed carefully to avoid contamination of other parts of the body and also of the team), jewelry, rings, piercings and prosthetics. Assessment of the airways for signs of obstruction, such as: facial burns, singed eyelashes and nasal vibrissae; carbon deposits and acute respiratory inflammation of the oropharynx; carbonate sputum; mental confusion or confinement at the scene of the fire; explosion story. Body areas contaminated with powdered chemical substances must be "swept" and then washed with large amounts of water. Aspirate upper airways, if necessary, administer 100% O₂ (humidified mask) and, if CO poisoning is suspected, maintain for 3 hours; keep head elevated (30°), Orotracheal intubation indicated in patient suggestive of inhalation injury. Preferably obtain peripheral and large venous access, even in a burned area; only if this is impossible, use central venous access in accordance with medical advice; indwelling urinary catheter to control diuresis for burns above 20% in adults. Perform volume replacement over the next 24 hours according to the Parkland formula = $2 \text{ ml} \times \% \text{SCQ} \times \text{Weight (kg)}$, crystalloid solutions (lactated ringer), 50% infused in the first 8 hours and 50% in the following 16 hours. Promote blood pressure stability and promote control of fluid and electrolyte balance. Carry

out pain treatment with analgesia: intravenous dipyrone and/or morphine according to medical advice; administration of tetanus prophylaxis; clean the wound with water and chlorhexidine, in the absence of this, water and neutral soap, apply a dressing with a topical antimicrobial (Silver Sulfadiazine 1%).

NURSING DIAGNOSES AND INTERVENTIONS

1. Ineffective peripheral tissue perfusion, related to trauma, evidenced by destroyed tissue. **Intervention:** Clean and debride the wound gently; keep occlusive dressings intact; evaluate and record the characteristics of the lesions, observe the evolution of the burned areas, depth, extension and presence of exudate and other signs of infection.
2. Impaired spontaneous ventilation, related to increased respiratory rate, evidenced by dyspnea. **Intervention:** Keep the head of the bed elevated at 45°; observe respiratory pattern and discomfort: respiratory effort, respiratory rate, dyspnea; monitor respiratory and pulse rate and oxygen saturation.
3. Decreased cardiac output, related to altered afterload, evidenced by increased systemic vascular resistance. **Intervention:** Monitoring of vital signs; water monitoring; respiratory monitoring; improved sleep and reduced anxiety.

4. Risk of infection, related to invasive procedures, loss of the protective layer secondary to burns, tissue destruction. **Intervention:** Monitor body temperature every 4 hours; evaluate laboratory results; observe and note signs and symptoms of infection; do not wet puncture wound dressings while bathing or dressing; instruct family members and visitors on infection prevention measures.

FINAL CONSIDERATIONS

In view of the above, we concluded that this work was very important, as in addition to providing significant knowledge for the entire team and fulfilling the objectives proposed to us by the discipline, providing immersion in the simulated situation, experiencing the stress that permeates the care of a patient in emergency situation, thus contributing to the technical and practical improvement of care processes based on the quality of care and patient safety.

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