CASE REPORT ARTICLE

THE DRESSING OF THE SEVERE BURNED PATIENT ADMITTED TO AN INTENSIVE CARE UNIT: EXPERIENCE REPORT

O CURATIVO DO GRANDE QUEIMADO EM UNIDADE DE TERAPIA INTENSIVA: RELATO DE EXPERIÊNCIA

EL VENDAJE DE QUEMADURA EN LA UNIDAD DE CUIDADOS INTENSIVOS: ESTUDIO DE CASO

Aline Daiane Colaço¹, Camila Santos Pires Lima², Fabiana Minati de Pinho³, Gabriela Daniel da Costa⁴, Taise Costa Ribeiro Klein⁵

ABSTRACT

Objective: to describe the nursing practices in conducting dressings of a severe burned patient admitted to an Intensive Care Unit. Method: it is an analytical and reflective report developed from the experiences of a group of nurses in conducting dressings of a severe burned patient. The study has followed the principles of the Resolution 196/96 of the CONEP. Results: we have developed nursing care to a patient with severe injuries caused by burns, by making use of topical antiseptics and saline solution for cleaning the affected areas, and 1% silver sulfadiazine as the main coverage during the accomplishment of dressings. Conclusion: we have described the nursing care provided to a severe burned patient during the accomplishment of dressings of severe injuries. Descriptors: Burns; Dressings; Nursing Care.

RESUMO

Objetivo: descrever as práticas de enfermagem na realização do curativo de um grande queimado internado em uma Unidade de Terapia Intensiva. Método: relato analítico e reflexivo desenvolvido a partir das experiências de um grupo de enfermeiras na realização de curativos em um grande queimado. O estudo seguiu os preceitos da Resolução 196/96 do CONEP. Resultados: desenvolveram-se cuidados de enfermagem a um paciente com lesões por queimaduras graves, utilizando-se de antissépticos tópicos e solução salina para limpeza das áreas afetadas, e, sulfadiazina de prata 1% como cobertura principal durante o curativo. Conclusão: descreveu-se a assistência de enfermagem desenvolvida junto a um paciente grande queimado durante a realização do curativo de lesões graves. Descritores: Queimaduras; Curativos; Cuidados de Enfermagem.

RESUMEN

Objetivo: describir las prácticas de enfermería en la realización de curación de un paciente que presentaba lesiones causadas por quemaduras graves, en una Unidad de Cuidados Intensivos. Método: relato analítico y reflexivo desarrollado a partir de experiencias de un grupo de enfermeras, en la realización de los vendajes en un paciente con quemaduras graves. Resultado: los cuidados de enfermería se dio con el uso de antissépticos tópicos, bien como solución salina en la limpieza de las áreas afectadas y la utilización de la Sulfadiazina de plata al 1% como cobertura principal durante la curación. Conclusión: se describió los cuidados de enfermería realizados en un paciente con lesiones causadas por quemaduras graves. Descriptores: Quemaduras; Vendajes; Cuidados de Enfermería.
INTRODUCTION

Burns are nothing more than traumatic wounds that are caused by thermal, chemical, electrical or radioactive agents. The most frequent causes of burns are the overheated fluids, being that the water is the main agent in roughly half of cases. The fuels, the alcohol is among them, are responsible for 20% of all burn types, being that they are the second most frequent cause of occurrences in Brazil. The gas-related burns (due to the large affected extension), burns caused by electrical current and burns by chemical agents (due to the aggressiveness from the causative agents) occur less frequently, but with greater intensity, by leading to increased severity of the clinical picture.

Burn-related injuries act on the lining tissues of the body, and they might partially or fully damage the skin and its annexes. The burns are distinguished by their depth, ranging from less severe injuries, classified as 1st degree, to serious injuries, classified as 3rd degree burns. Therefore, 1st degree injuries are restricted to the epidermis and are characterized by hyperemia, swelling, pain and local moisture. 2nd degree injuries, in turn, affect the epidermis and part of the dermis, being that the presence of phlyctenas (blisters) might be detected. Regarding the 3rd degree lesions, they affect the epidermis, dermis and underlying tissues (subcutaneous tissue, muscles and bones), and are characterized by the presence of whitish or marbling tissue and decreased tissue elasticity.

In Brazil, there are about one million cases of burns every year, and of these, 200.000 are treated in emergency services and 40.000 require hospital admission. Burns are among the leading external causes of death in Brazil, second only to other violent causes, which include road traffic crashes and murders.

The most recent data indicate that, in 2009, more than 80.000 people were admitted to public hospitals in Brazil by injuries arising from burns. In Santa Catarina State (SC), the epidemiological data on burns are not individually counted by the DATA-SUS System. Thus, they cannot illustrate the exact number of occurrences in this region.

CASE DESCRIPTION

Male patient, 33 years old, admitted to the emergency unit of a public hospital from the city of Florianópolis, burn victim by fire in his municipality of origin, being that the cause of the fire has not been explained. He had 2nd and 3rd degree burns, with 65% of body surface burned in the following regions: face, anterior cervical region, right wrist (non-circumferential) and right palm region, wrist and the left palm region, left flank, whole back, back side of the right and left thighs and left leg circumference.

A short while after the admission to the emergency, he was sent to the intensive care unit, in a isolation bed, where he arrived lucid, communicating with difficulties due to the swelling of the face, in spontaneous ventilation, with use of extra-nasal oxygen catheter, peripheral venous access and indwelling catheter. Upon arrival in the Intensive Care Unit (ICU), he was subjected to the procedures of endotracheal intubation and central venous access puncture. Sedoanalgiesia was performed, injuries cleaning with 0,9% tepid saline and 4% dergerming chlorhexidine, followed by dressing with collagenase in face (devitalized tissue); 1% silver sulfadiazine in pinna (necrosis type devitalized tissue), cervical region (slough type devitalized tissue), back (granulation tissue in the right scapular region and other slough type devitalized tissue areas), left flank (devitalized tissue of necrosis type), palm region/ right and left wrists (slough type devitalized tissue with small granulation areas), back side of the left and right thighs and left leg circumference (extensive lesions with slough type devitalized tissue and large amount of pus). The secondary coverage was performed with non-adherent gauze, swabs, waterproof sterile fields and bandages, thus keeping the dressing closed.

Some days after the admission, the patient was subjected to surgical procedures for debridement, halogen grafting and autografting. The patient stayed 56 days at the ICU, being that he still was subjected to the following procedures: nasogastric catheterization, arterial catheterization, tracheostomy and pulmonary artery catheterization (Swan-Ganz).

Subsequently, he was transferred to a surgical admission unit. The patient at stake has reached this sector in use of nasogastric catheter, non-invasive urinary device, peripheral venous access, tracheostomy and macro-nebulization at 5 liters/minute. Therefore, at the end of the ICU admission, he had the following characteristics in its burned areas: face and neck totally re-epithelized in use of essential fatty acids; back in re-epithelialization process, with islands of granulation tissue and the presence of exudate, by using activated carbon with silver and essential fatty acids; upper left...
limb with areas with presence of slough, granulation tissue and exudative or bleeding areas, which were receiving hydrogel and essential fatty acids; lower limbs (grafting receiver area) making use of essential fatty acids; lower limbs (grafting area [thigh region]) with porous membrane of cellulose and antibacterial medicinal drug with rifampicin spray.

For over 150 days after his admission to the hospital, the patient was transferred to the medical clinic at the same institution. The injuries were in favorable healing process, but still showing a de-epithelized area in the left side of the back and the left side of the trochanter, being that a dressing with porous membrane of cellulose was kept. Other body regions were epithelized with upstanding pink tissue, thereby maintaining local hydration with essential fatty acids, except face.

Regarding the systemic conditions, the individual is asthenic, with a very thin aspect and still was dysphonic. He was being ventilated in ambient air, without need of oxigenatory support. He showed tracheostoma and was kept under simple dressing. He was fed through a nasogastric catheter, due to its impossibility of accepting an oral diet related to the decreased esophageal motility and return of the diet by means of the oropharynx, in a previous attempt. He walked around on small pathways, but with much difficulty, because of the retractions caused by burns.

In the days before the hospital discharge, he showed a progressive improvement of its general clinical picture. He no longer reported presence of pain; was eupneic in ambient air, walked around without help, remained slim, fed normally itself by means of oral route, denied dysphagia and received complementary diet by means of gastrostomic route. He showed stable vital signs, cardiac and pulmonary auscultation within normal parameters. He held scars arising from the burns on its upper and lower limbs, as well as in its trunk, without relevant retractions and absence of infection signs. In addition, he had pressure ulcers in favorable healing process in the sacrococcygeal region.

The patient was hospitalized for 186 days. Currently, he remains in outpatient monitoring by the multiprofessional staff of the hospital.

DISCUSSION

In recent years, there has been advancement in the treatment of burns, resulting in higher survival rate of people with severe burns. The care of burned patients requires structure with tertiary level and with high complexity, adequate physical space, skilled professionals and support from diagnostic services and intensive care to offer resoluteness to the system and care quality, as well as provide safety to professionals.  

In the case of the patient under study, with 65% BSA and respectively classified with 3rd degree burns, he has received the indication for the provision of intensive care. Patients with a body surface area burned over 20% should be admitted to the ICU, preferably in a private bed, which allows the installation of protective isolation and contact precautions.

Among the most relevant nursing care towards the severe burned patient, it should be mentioned the interventions to the wound caused by the burn. Wound care includes cleaning, maintenance of local moisture, infection prevention, protection against trauma, pain control and maintenance of mobility and functionality of the affected parts.

Burns were always considered as contaminated wounds because they are often associated to dirtiness of the occurrence location of the injury. Therefore, the wound cleaning is a crucial step for an effective treatment protocol. Hence, the wound cleaning, according to findings of the latest studies, should be done by the use of 0.9% saline solution, running/filtered/chlorinated or even distilled water, being that this should be in an average temperature from 36º C to 39º C.

Regarding the use of topical antiseptics, there is little evidence as to the use thereof. These are indicated for reducing the bacterial load, but they have proven cytotoxicity, being that their indication is reserved for lesions in which there are no viable tissues or in which the infection risk is higher than the initial objective of promoting the tissue repairing.

There is consensus in the literature regarding the use of 1% silver sulfadiazine for the treatment of burns, with sights to debride necrotic tissues and combat local infections. It is one of the most widely used topical agents, given that is recommended in second and third degree burns, with exchanges made every 12 hours, because of the silver oxidation. The silver sulfadiazine 1% is also constantly approached in the literature as a possible delay agent of the healing process, since the frequent exchanges associated to its potential irritating effect on the skin might prolong the repairing and re-epithelialization times of a wound.

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http://www.rbcp.org.br/detalhe_artigo.asp?id=2871


REFERENCES


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Corresponding Address
Aline Daiane Colaço
Residência Integridade Multiprofissional em Saúde / Hospital Universitário Polydoro Ernani de São Thiago / Universidade Federal de Santa Catarina / Campus Universitário, s/n
Bairro Trindade
CEP: 88040-900 – Florianópolis (SC), Brazil