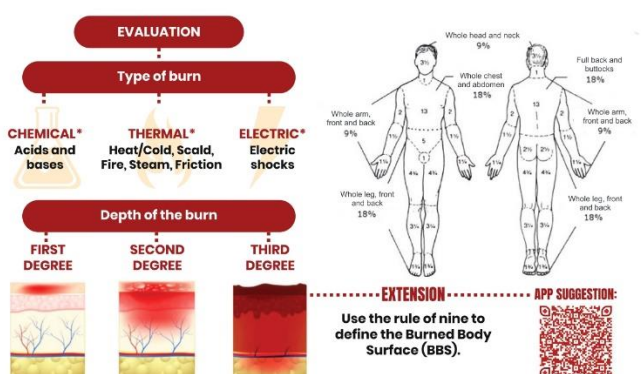


Supplementary Material to “EDUCATIONAL TECHNOLOGY FOR THE NURSING TEAM'S INITIAL CARE OF ADULT PATIENTS WITH SEVERE BURNS”



FLOWCHART FOR THE INITIAL CARE OF ADULT BURN PATIENTS

A MAJOR BURN IS DEFINED AS A PATIENT WITH:
SECOND DEGREE BURNS ON >20% OF THE BURNED BODY SURFACE AREA (BBSA), THIRD DEGREE BURNS ON >10% OF THE SCQ, OR AFFECTING THE PERINEUM (EITHER SECOND/THIRD DEGREE), OR THIRD DEGREE ON THE HAND, FOOT, FACE, NECK OR ARMPIT, BURN ASSOCIATED WITH ELECTRIC CURRENT, INHALATION INJURY OR POLYTRAUMA.



INTERVENTIONS

1. Primary Care

- If dyspnea/tachypnea (>25 irpm), offer oxygen (4-8 l/min);
- Prepare material for advanced airway;
- If hypoxia or inhalation injury is confirmed, a definitive airway is recommended;
- Obtain 2 caliber venous accesses if more than 20% of SCQ (18G, 16G or 14G);
- Perform delayed bladder catheterization to control diuresis;
- Cardiomonitor and perform an electrocardiogram (ECG).

*Chemical burns: remove excess product and then rinse with plenty of running water;

**Electrical burns: pay attention to perfusion, sensitivity of the affected limbs and choluria or oliguria (rhabdomyolysis).

2. Fluid Therapy

Parkland formula for adults:
[2ml RL x Kg x % BBS]
[4ml RL x Kg x % BBS]*
*cases of electrical burns

- Apply in the first 24 hours after the burn and administer 50% of the fluids in the first 8 hours and the other 50% in the following 16 hours, always counting from the time of the accident;
- Crystalloid: Ringer's lactate is recommended. If possible, heat the fluids to between 37°C and 40°C.

3. Preparing the environment

- Room heated to at least 28°C;
- Burn sheets or thermal blankets, if available;
- Use of personal protective equipment (PPE).

4. Secondary Care

- Control of hypothermia;
 - Use sterile dressing techniques;
 - Check tetanus vaccination;
 - Keep affected limbs elevated;
 - Psychological support is essential;
 - Attention to pain: use opioids if necessary, reassess pain every 30 minutes and before/after changing bandages;
- MORPHINE**
1 amp (10mg) diluted in 9ml SFO, 9% (1ml=1mg): administer 0.5mg to 1mg for every 10kg of weight.

5. Maintaining Mobility

- For patients hospitalized for 72 hours or more after a burn that has affected joints such as the hands or feet, assess the need for early physiotherapy exercises;
- Keep the limb in the anatomical position;
- Wear splints during the day to prevent movement for the first 24-48 hours.



Criteria for transfer to specialized unit*

- < 5 or > 50 years of age and >10% BBS;
- > 5 or < 50 years old and >20% BBS;
- Second or third degree burns to the perineum, hand, foot, face, neck or joint;
- Electric current burns or burns with inhalation, chemical or polytrauma injuries;
- Third degree burns, in any age group;
- Burns in patients with pre-existing conditions that could complicate treatment;
- Burns in patients who will require special treatment (social, emotional and/or rehabilitation).

* According to the American Burn Association.

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REFERENCES:

1. Plano MIB. Nursing Interventions for adult burn victims in the emergency room: Construction and validation of a procedure standard. *pesquisabiotekolog* [Internet]. 2010 [cited 2023 Dec 15]; 79 p. Available from: <https://pesquisabiotekolog.org/journal/resources/p2/tablor-1279368>
2. Balmaceda JH, Ramires CS, de A Jr J, Cortez JF, Cordeiro F, et al. Validating the Burn Center Referral Criteria: Results from the 2018 eSlight Consensus Study. *J Burn Care Res* [Internet]. 2020 [cited 2024 Jul 20]; v. 41, n. 5, p. 1052-62. Available from: <https://doi.org/10.1053/j.bjcr.2020.03.001>
3. Ministério da Saúde. Guia de enfermagem de queimados: orientações para o manejo de queimados. Brasília: Ministério da Saúde; 2019. Available from: <https://www.msa.gov.br/local/arquivos/1914.pdf>
4. Campy MD, Vozian AC, Lott D, White M. Nursing Care for the Initial Resuscitation of Burn Patients. *Crit Care Nurs Clin North Am* [Internet]. 2020 [cited 2024 Jul 20]; v. 38, n. 3, p. 275-89. Available from: <https://doi.org/10.1016/j.ccn.2020.04.004>
5. Lott M, Soto-Agrazadeh A, Dossani S, Khayyatgoudan M, Aze Karim H, Khalilad MA. Development of nursing care guidelines for burned hands. *Nursing Open* [Internet]. 2020. [cited 2024 Jul 20]; v. 7, n. 4, p. 1071-27. Available from: <https://doi.org/10.1093/nurad/000>