

Care of Out Patient Burns

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Introduction

Out patient care of burns is appropriate for patients with small partial thickness burns who also have a supportive home environment. The cosmetic outcome of most small second degree burns if healed in 2 weeks time is good. In general, children with less than 10% BSA (body surface area) partial thickness burns and adults with less than 15% BSA partial thickness burns can usually be safely treated as outpatients, unless unsuitable home conditions prevail. In order to quickly determine the BSA of an outpatient burn, use the "rule of palms." The palm of the patient (child or adult) will equal approximately 1% BSA. Always make sure that the history of the injury matches the clinical picture you see. This is particularly critical with children as you always want to rule out child neglect or abuse as a contributing factor to the injury; and also to make sure that in the case of flame burns, there is no possibility of smoke inhalation and airway impairment. The objectives of out patient burn care are:

- To achieve wound healing without loss of work or school
- To minimize any permanent impairment or scarring.

Criteria to determine eligibility for out patient care should include:

- Less than 10% BSA partial thickness burns in children and elderly and less than 15% BSA partial thickness burns in adults.
- Reasonable state of good health with minimal underlying medical problems.
- Adequate airway.
- Ability to drink adequate amounts of fluids.
- No circumferential burns.
- No additional trauma.
- No chemical burns.
- Minimal involvement of face, hands, genitalia and joints.
- No evidence of abuse or neglect.
- Patient and family demonstrate ability to carry out plan of care.

Laboratory Recommendations

- For burns less than 10% body surface area (BSA), obtain CBC (complete blood count), electrolytes, serum glucose, BUN (blood urea nitrogen) and creatinine.
- Always check a Carboxy-hemoglobin if inhalation injury is suspected or in burn occurred in an enclosed space to ensure airway adequacy.
- A skeletal survey is recommended when trauma is apparent or suspected.
- Take an electrocardiogram (EKG) if there is a history of high tension electrical injury or known history of heart disease.

Treatment

Emergency Care

- Stop the burning process. Remove all clothing, including diapers in the case of babies, and any plastic coverings that may retain heat and cause a deeper injury.
- Rinse the affected area with cool water for at least 15 minutes.

- If a chemical involved, check with poison control center for best neutralizing agent and repeat washing process until all chemical is removed.
- Tetanus prophylaxis is indicated only when immunizations not up to date (in the case of children) or for adults if last tetanus immunization was more than 10 years ago.

Non-Emergent Care

- Clean wound with soap and water.
- Leave blisters intact; only debride devitalized tissue after blister has burst. Debridement should only be done by the health care professional in the clinic and not left to the patient or family to do at home.
- For burns on trunk and extremities: Apply 1% silver sulfadiazine, mafenide acetate or povidone iodine cream for all partial thickness burns and secure with a clean bandage. Teach family or significant other “clean” technique. Instruct to change dressing once to twice daily, depending on your assessment of the wound and the families’ ability (technically and economically) to do it. Be sure to instruct them to wash wound and remove all residual cream before applying new cream. Bathtub and /or shower may be appropriate. Elevate injured area as needed and as possible.
- For facial burns, apply neomycin, bacitracin, polysporin or some similar agent. Instruct patient and family to protect affected area from sun exposure.
- For electrical cord injury to mouth, use neomycin ointment three times a day. Teach patient/ family to gently rinse area after eating. **Instruct patient/family to pinch affected area if bleeding occurs and go immediately to nearest Emergency Room.** This is a complication that may occur when the eschar separates and detaches from the surface, usually 14 to 21 days after injury.
- Set up schedule to see patient frequently in outpatient clinic to monitor wound and progress in healing.
- Provide pain relief for dressing changes with acetaminophen. Make sure patient/ family know to take medicine approximately ½ hour before dressing change and before return clinic appointment.
- Once burn wound is healed, teach patient/ family to use emollient cream to lubricate and protect skin as well as to decrease itching. Instruct to protect healed areas from sun exposure with clothing and sun block for at least one year after healing

Special considerations for Infection Control

- Teach clean technique for wound care and dressings and be sure to give written instructions for the family to refer to.
- Emphasize the importance of hand washing before and after caring for the patient and most importantly when performing wound care.
- Instruct the family to clean the bathroom, especially the bathtub or shower stall before and after they have been used with a strong disinfectant like household bleach.
- Teach the family signs and symptoms of infection to look for including: fever, increased redness and/or warmth around the wound, increased pain, increased swelling or tenderness and any increased odor or drainage from the wound site. Be sure they have the clinic telephone number to report any of these findings.

Pain Management

Management of pain and anxiety is very important. As previously mentioned, make sure the patient receives pain medicine ½ hour before dressing changes and wound care and also before return clinic appointments. Using the Brief Pain Inventory (Cleeland), the patient’s worst pain score should be less than 5, on a scale of zero to 10. Pain score of 5 or higher interferes with sleep, activity and mood. Accordingly, make sure the patient also receives pain medicine if needed before bedtime to make sure there is no interference with sleep. Be sure the patient and family knows that pain will decrease as the wound heals and that they should expect decreasing levels of pain. If pain increases, that is reason to call the clinic for earlier follow up. Also teach complementary alternative measures for minimization of pain such as distraction and music.

When to Refer/ Admit

- Burn is greater than 10% BSA
- Suspected or actual respiratory burn
- Electrical burn, high tension wire accident
- Full thickness (third degree burn) of an area larger than 3 inches in diameter
- Burn is to area of body where dressings are difficult to apply, i.e. face perineum.
- In the case of a child, suspected abuse or neglect
- Inadequate home situation to manage proper treatment of wound.

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