Trauma Center Practice Management Guideline

Iowa Methodist Medical Center — Des Moines

Adult Burn Care Management Guideline

ADULT **Practice Management Guideline**	**Effective: 06/2014**
Contact: Trauma Medical Director	**Last Reviewed: 04/2024**

PURPOSE: To define provider responsibilities in assessing, stabilizing and arranging safe transport for seriously burned patients.

SUPPORTIVE DATA: Patients with burn injuries meeting criteria for referral to a burn center will be stabilized and transferred to a specialized burn center.

ABC Assessment and Intervention

- **Provide 100% oxygen as needed**
- **Remove burning and restrictive items,** i.e. clothing, jewelry
- **Irrigate chemical burns with NS.**
- If trauma involved, **maintain C-spine precautions until clear.**
- **Assess for inhalation injury:** Respiratory distress, singed facial hair, carbonaceous material in mouth, face or neck burn.
- **Assess circulation and obtain vascular access.**
- **Estimate degree of burns** (partial and full thickness burns) using standardized chart below or patient palm which is equal to 1% BSA.
- **Any patient with burn over more than 20% of the body surface area requires fluid resuscitation for circulatory volume support.**
- **Establish IV access with a large bore catheter and begin initial fluid resuscitation at 2 mL/Kg/% BSA burn (BSA includes only full thickness burns)**
- **Fluid is titrated based on adequacy of urine output**
- **Avoid fluid boluses unless the patient is hypotensive**
- **If shock is present, administer IV fluids according to shock guidelines.**

→ If patient is in obvious distress or has positive signs of inhalation injury, **begin BVM ventilation followed by intubation. (RSI protocol.** Place NG after intubation.

If no pulse, follow ACLS protocol.

→ Insert Foley catheter if not contraindicated.

Rule of Nines for Adults	% BSA
Head and neck	9
Upper extremity (each)	9
Anterior trunk	18
Posterior trunk	18
Lower extremity (each)	18
Perineum/Genitalia	1%

Severity Determination

First Degree (Partial Thickness)
Superficial, red, sometimes painful
Second Degree (Partial Thickness)
Skin may be red, blistered, swollen. Very painful.
Third Degree (Full Thickness)
Whitish, charred or translucent, no pin prick sensation in burned area.

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Adult Burn Care Protocol

Management of Specific Burn Types

- **Thermal Burns**
  Place sterile sheets, sterile gauze or Saran Wrap over burns. Maintain normothermia. Do not apply ice wet bandages, ointment of medicated creams. Leave blisters intact.

- **Electrical Injuries**
  Place patient on cardiac monitoring and assess for internal damage. Wound care is the same as with thermal burns.

- **Chemical Injuries**
  Before entering the trauma bay or emergency department, remove all contaminated clothing and immediately flush with copious amounts of water at 95-100 degrees. Prior to flushing, remove all powder residues from the skin. All intact blisters should be broken and removed to allow for adequate flushing of the injured tissue. Do not cover the injured area with plastic wrap or an occlusive dressing. If possible, continue irrigation of chemical injuries throughout transport.

Criteria for Transfer to a Specialized Burn Center

- Partial-thickness burns greater than 10% total body surface area
- Burns that involve the face, hands, feet, genitalia, perineum or major joints
- Full-thickness burns in any age group
- Electrical burns, including lightning injury
- Chemical burns with threat of functional or cosmetic impairment
- Circumferential burns of the extremity or chest
- Burn injury in patients with pre-existing medical disorders that could complicate management, prolong recovery or affect mortality.
- Any burn-injury patient with concomitant trauma in which the burn injury poses the greatest risk of morbidity or mortality
- Any child with a burn injury
- Burn injury in patients who will required special social, emotional or rehabilitative intervention
- Inhalation injury

PAIN MANAGEMENT: Morphine Sulfate or Fentanyl administered IV

REFERENCES:

1. Resources for Optimal Care of the injured Patient 2014, Committee on Trauma, America College of Surgeons Guidelines for the Operation of Burn Centers
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3. HENRY, S. M. (2018). *ATLS Advanced Trauma Life Support 10th Edition student course manual, 10e*. AMERICAN COLLEGE OF SURGEONS.
4. Bettencourt AP, Romanowski KS, Joe V, Jeng J, Carter JE, Cartotto R, Craig CK, Fabia R, Vercruysse GA, Hickerson WL, Liu Y, Ryan CM, Schulz JT. Updating the Burn Center Referral Criteria: Results From the 2018 eDelphi Consensus Study. J Burn Care Res. 2020 Sep 23;41(5):1052-1062. doi: 10.1093/jbcr/iraa038. PMID: 32123911; PMCID: PMC7510842.