Initial Management Guidelines for the Adult Burn Patient

Burn Disaster Crisis Standards of Care

If transfer to University of Utah Health Care Burn Center is not feasible, consider Burn Center consultation (801)-581-2700.

Secondary Assessment

History:

- Consider the use of "Ample" to aid in obtaining information
  - A- Allergies
  - M - Medications
  - P – Previous illness, past medical history
  - L – Last meal or fluid intake
  - E – Events/environment related to the injury
- Do not use silver sulfadiazine on a patient with a sulfa allergy; instead use another topical or wound coverage product.

Intervention /Care

Burn Specific Physical Examination:

Airway and Breathing

- Supportive therapy and O2; wean as appropriate.
- Unless contraindicated by the patient's medical condition or associated trauma, the head of bed should be elevated to minimize facial and airway edema.
- Use reverse Trendelenburg for patients with C-spine precautions.
- Chest X-ray if intubated, inhalation injury suspected or underlying pulmonary condition.
- Chest X-ray will usually be clear on admit. If inhalation injury is present the X-ray will show infiltrates around the second day correlating with a deteriorating oxygen status.
- Frequent suctioning is necessary to prevent occlusion of the airway and endotracheal tube. Anyone with an inhalation injury is subject to increased respiratory secretions and may have a large amount of carbonaceous debris in the respiratory tract.

Estimate Burn Size and Depth:

- Determine the extent of the burn using the Rule of Nines, Rule of the Palm or Lund-Browder chart. **See Burn Estimate and Diagram.**

Initiate Fluid Resuscitation:

Initiate fluid resuscitation for a patient with a TBSA >20% (adult) or >10%TBSA (child).

- 4ml (LR) x body weight (kg) x TBSA % burn = Lactated Ringers solution (LR) fluid in first 24 hours post burn (calculate from time of burn).
- Give half the fluid (LR) in the first 8 hours then the next half (LR) over the next 16 hours. **See Fluid Infusion Rate**

Resuscitation Guidelines:

- Insert a foley. Priority should be given to adult burn patients with burn injuries greater than 20% and pediatric patients with burn injuries greater than 10% TBSA.
- Burns of the penis may require insertion of a foley catheter to maintain patency of the urethra.
- Titrate IV rate to maintain a urine output: 0.5ml/kg for adults (30-50ml/hr). **See Adult Fluid Resuscitation Order**

Eyes

- Remove contacts prior to eyelid swelling if facial involvement.
- Fluorescein should be used to identify corneal injury.
- If eye involvement consider consulting an ophthalmologist.

Circulation

- Elevate burned extremities on pillows or blankets to improve circulation and minimize edema.
- Monitor pulses with a Doppler, if necessary.
- Circumferential chest injuries may become life threatening; an escharotomy may be necessary.
- Verify that pulselessness is not due to profound hypotension.
- Scrotal swelling, though often significant, does not require specific treatment.

Monitor for the following signs and symptoms in full thickness, circumferential burn injuries which may indicate circulatory compromise:

- Pallor or cyanosis of distal unburned skin on limb.
- Capillary refill > 5 seconds.
- Unrelenting deep tissue pain.
- Progressive loss of sensation or motor function.
- Inability to ventilate in patients with deep circumferential burns of the chest.

Body Temperature

- Keep patient normo-thermic, especially during wound care.
- Keep patient covered. When supplies of blankets are depleted, patients can be wrapped in plastic wrap or aluminum foil for insulation and warmth.
- Warm the room.
- Warm IV fluid if possible, especially if patient is very hypothermic.

Labs

- Labs on admission and as dictated by medical condition:
    - Arterial Blood Gases if inhalation injury is suspected
    - Serum Chemistries/Electrolytes
    - Complete Blood Count (CBC)
    - Glucose Levels, especially in children and diabetics
    - EKG for electrical injury or cardiac history
    - Type and Screen if additional trauma is suspected
- Tetanus prophylaxis unless given in last five years.

Comfort:

- Frequent pain/sedation assessment; minimum every four hours.
- Assess patient pain score before and after pain/sedation medication given.
- Emotional support and education is essential.
- IV analgesia is the preferred route during the initial post injury period.
- Administer opioids in frequent small to moderate bolus doses.

See Pain Medication Guidelines