

# ORANGE COUNTY EMERGENCY MEDICAL SERVICES BASE HOSPITAL TREATMENT GUIDELINES BURN (THERMAL, ELECTRICAL, CHEMICAL) -PEDIATRIC

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Date: 04/01/13

#### **BASE GUIDELINES**

- 1. Determine ALS Standing Order treatments/procedures rendered prior to base hospital contact. Use ALS standing order as guidelines for treatments/procedures not initiated prior to base hospital contact.
- 2. For continued pain and systolic BP > 80:
  - ▶ give or repeat Fentanyl 2 mg/kg IV/IM/IN OR Morphine sulfate 0.1 mg/kg IV/IM, may repeat once (maximum dose Fentanyl 100 mcg; Morphine 5 mg) avoid administration in areas of burned skin.

# Suspected carbon monoxide poisoning:

▶ Pulse oximetry O₂ saturation will be inaccurate due to inability of pulse oximeter to differentiate between carbon monoxide and oxygen molecule.

# **Chemical burns:**

- Brush away any remaining dry chemical.
- Irrigate burn wound and surrounding skin with copious and continuous water or saline flush to dilute and remove as much residual chemical as possible.
  - NOTE: Some chemicals are activated by water / fluids and might worsen the burn or create hazardous fumes; e.g., sodium, phosphorus, acetyl bromide, aluminum carbide, silicon tetrachloride.

#### **Electrical Burns:**

Electrical burns may often appear insignificant while causing marked muscle and soft tissue damage. Cardiac irritability may occur with electrical burns, any high voltage, greater than 110 volt, alternating current pediatric burn victim should be transported with ALS escort and cardiac rhythm monitoring as tolerated by the child.

## **ALS STANDING ORDER**

- 1. For any burn injury occurring in an enclosed space or with smoke generated at the site:
  - ► High flow oxygen by mask as tolerated.
- 2. Apply cooling measures if burn still "hot".
- 3. For wheezing or suspected smoke inhalation:
  - ▶ Albuterol 6 mL (5 mg) continuous nebulization as tolerated.
- 7. For pain when BP greater than 80 systolic (avoid administration in burn areas of skin):
  - ➤ Morphine sulfate: 0.1 mg / kg IV (alternate route of IM may be used if formulation approved for IM use), may repeat once for continued pain (maximum 5 mg).

OR

- ► Fentanyl 2 mcg/kg IN/IV/IM, may repeat once after 3 minutes for continued pain (maximum dose 100 mcg)
- 4. For blood pressure ≤ 80 or signs of shock:
  - Establish IV access
  - ▶ Infuse 20 mL/kg Normal Saline bolus, may repeat twice to maintain perfusion.
- 5. Contact Base Hospital for Burn Unit destination if any of the following major burn criteria are met:

## Mechanism of Injury:

- Suspected inhalation injury (patients burned in an enclosed space, patients with facial burns, hoarseness, dyspnea, soot in mouth, carbonaceous sputum, singed nasal hairs).
- High voltage/electric burns (including lightning injury).
- Chemical burns (including acids and bases).

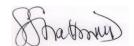
# Physiological alteration:

- Burns that involve the face, hands, feet, genitalia, perineum, or major joints.
- · Circumferential burns.
- Patients with a pre-existing medical condition that may complicate management or prolong recovery (e.g. diabetes, renal failure, cardiac or pulmonary disease).

## Total Burn Surface Area (TBSA):

Second or third degree burns >10% total body surface area (TBSA) in any age group.

Approved:



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