REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT – Basic

SMO: Burns

Overview: Burns can be of varying severity as well as having several causes., including thermal, chemical, and electrical. This protocol is intended to help the EMS responder assess and treat the wide spectrum of burns they may encounter.

INFORMATION NEEDED

__ Type and source of burn (thermal, chemical, electrical, or steam).
__ Injuries associated with the burn event.
__ Mechanism of injury.
__ Current medications

OBJECTIVE FINDINGS

__ Evidence of inhalation injury or toxic exposure (e.g. carbonaceous sputum, hoarseness, or singed nasal hairs.
__ Extent of burns (depth – full or partial thickness, and Total Body Surface Area {TBSA }affected). Use rule of nines or the surface area covered by one of the patients hands equal one percent of their TBSA (see Burn Chart in Appendix).
__ Entrance and /or exit wounds if electrical or lightening strike
__ Associated trauma from explosion, electrical shock, or fall
__ Type of chemical for surface chemical burn. Include length of exposure and what was done to clean victim off prior to arrival.

TREATMENT

__ Prepare for rapid transport
__ Assess patient, scene safety
__ Routine medical care

Thermal

__ Make sure fire is out. Stop the burning process
__ Remove jewelry and non-adhered clothing, do not break blisters
__ Cover affected body surface with dry sheet
__ Prevent hypothermia
__ Control airway. Use appropriate oxygen and airway adjuncts as needed
__ Control external bleeding with direct pressure
__ Perform total trauma assessment
__ Cover other open wounds with sterile dressings
__ Reassess airway frequently
__ Transport as soon as possible, consider ALS intercept

Chemical

__ Decontamination and HazMat procedures.
__ Stop the burning process, Remove jewelry, contacts and clothing.
__ Brush off powder, if present
__ Irrigate with copious amounts of water for at least 20 minutes, continue irrigation en route
__ Prevent hypothermia
__ Control airway. Use appropriate oxygen and airway adjuncts as needed.
__ Control external bleeding with direct pressure if wounds present
__ Perform total trauma assessment
__ Cover other open wounds with sterile dressings.
__ Reassess airway frequently
__ Transport as soon as possible, consider ALS intercept

Electrical

__ Make sure scene is safe and electricity is off. Make sure fire is out. Stop the burning process
__ Remove jewelry and non-adhered clothing, do not break blisters
__ Moist dressing on any exposed, injured areas.
__ Prevent hypothermia
__ Control airway. Use appropriate oxygen and airway adjuncts as needed.
__ Control external bleeding with direct pressure
__ Perform total trauma assessment
__ Cover other open wounds with sterile dressings.
__ Consider C-spine and spinal precautions
__ Prepare to use AED as needed
__ Reassess airway frequently
__ Transport as soon as possible, consider ALS intercept

Documentation of adherence to protocol:

__ Mechanism of injury
__ Oxygen and airway interventions
__ Trauma exam documented
__ Estimation of % of BSA affected by burn (see Burn Chart in Appendix)

PRECAUTIONS AND COMMENTS

- Recheck airway and breathing and circulation frequently.
- Inhalation injuries may cause delayed but severe airway compromise.
- Do not apply ice or water directly to skin surfaces as additional injury will result.
- Lightning injuries may cause prolonged respiratory arrest.
- Assume presence of associated multi-system trauma if patient presents with signs and symptoms of hypoperfusion.
- Extremes of age (<12 or >55 years) may need trauma center.
- Spinal precautions may be warranted for electric shock and severe muscle spasms may cause neuro-spinal injuries
- **Definition of major burns:**
    - Full thickness: ≥ 10% of TBSA
    - Partial thickness: ≥ 20% of TBSA.
    - Burns of airway, face, eyes, hands, feet or genital area.
    - Chemical inhalation or electrical burns.

REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT – Paramedic

SMO: Burns

Overview: Burns can be of varying severity as well as having several causes., including thermal, chemical, and electrical. This protocol is intended to help the EMS responder assess and treat the wide spectrum of burns they may encounter.

INFORMATION NEEDED

__ Type and source of burn (thermal, chemical, electrical, or steam).
__ Injuries associated with the burn event.
__ Mechanism of injury.
__ Current medications

OBJECTIVE FINDINGS

__ Evidence of inhalation injury or toxic exposure (e.g. carbonaceous sputum, hoarseness, or singed nasal hairs.
__ Extent of burns (depth – full or partial thickness, and Total Body Surface Area {TBSA }affected). Use rule of nines or the surface area covered by one of the patients hands equal one percent of their TBSA (see Burn Chart in Appendix).
__ Entrance and /or exit wounds if electrical or lightening strike
__ Associated trauma from explosion, electrical shock, or fall
__ Type of chemical for surface chemical burn. Include length of exposure and what was done to clean victim off prior to arrival.

TREATMENT

__ Prepare for rapid transport
__ Assess patient, scene safety
__ Routine medical care

Thermal

__ Make sure fire is out. Stop the burning process
__ Remove jewelry and non-adhered clothing, do not break blisters
__ Cover affected body surface with dry sheet
__ Prevent hypothermia
__ Control airway. Use appropriate oxygen and airway adjuncts as needed. Early intubation for patients with evidence of inhalation should strongly be considered.
__ Control external bleeding with direct pressure
__ Perform total trauma assessment
__ Cover other open wounds with sterile dressings
__ Reassess airway frequently
__ IV access. If partial or total thickness burns >10% TBSA, 500ml fluid challenge of Normal Saline. Repeat if indicated.
__ Monitor lung sounds for reflex pulmonary edema
__ If pain medication needed and SBP > 100 mmHg, **Morphine Sulfate 2 mg IVP** up to a maximum of 10 mg. Contact Medical Control for subsequent doses.
__ Transport as soon as possible, consider paramedic intercept

Chemical

__ Decontamination and HazMat procedures.
__ Stop the burning process, Remove jewelry, contacts and clothing.
__ Brush off powder, if present
__ Irrigate with copious amounts of water for at least 20 minutes, continue irrigation en route
__ Prevent hypothermia
__ Control airway. Use appropriate oxygen and airway adjuncts as needed.
__ Control external bleeding with direct pressure if wounds present
__ Perform total trauma assessment
__ Cover other open wounds with sterile dressings.
__ Reassess airway frequently
__ Transport as soon as possible, consider ALS intercept

Electrical

__ Make sure scene is safe and electricity is off. Make sure fire is out. Stop the burning process
__ Remove jewelry and non-adhered clothing, do not break blisters
__ Moist dressing on any exposed, injured areas.
__ Prevent hypothermia
__ Control airway. Use appropriate oxygen and airway adjuncts as needed.
__ Control external bleeding with direct pressure
__ Perform total trauma assessment
__ Cover other open wounds with sterile dressings.
__ Consider C-spine and spinal precautions
__ Prepare to use defibrillator as needed
__ Reassess airway frequently
__ IV access. If partial or total thickness burns >10% TBSA, 500ml fluid challenge of Normal Saline. Repeat if indicated.
__ Monitor lung sounds for reflex pulmonary edema
__ If pain medication needed and SBP > 100 mmHg, **Morphine Sulfate 2 mg IVP** up to a

maximum of 10 mg. Contact Medical Control for subsequent doses.
__ Transport as soon as possible, consider paramedic intercept

Documentation of adherence to protocol:
__ Mechanism of injury
__ Oxygen and airway interventions
__ Trauma exam documented
__ Estimation of % of BSA affected by burn (see Burn Chart in Appendix).
__ IV, Intubation, medication interventions. Document re-assessment of patient post intervention.

Medical Control Contact Criteria
__ Contact Medical control for subsequent doses of Morphine.

PRECAUTIONS AND COMMENTS
- Recheck airway and breathing and circulation frequently.
- Inhalation injuries may cause delayed but severe airway compromise.
- Do not apply ice or water directly to skin surfaces as additional injury will result.
- Lightning injuries may cause prolonged respiratory arrest.
- Assume presence of associated multi-system trauma if patient presents with signs and symptoms of hypoperfusion.
- Extremes of age (<12 or >55 years) may need trauma center.
- Spinal precautions may be warranted for electric shock and severe muscle spasms may cause neuro- spinal injuries
- **Definition of major burns:**
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  - Partial thickness: $\geq$ 20% of TBSA.
  - Burns of airway, face, eyes, hands, feet or genital area.
  - Chemical inhalation or electrical burns.