



- i. Anxiety
- j. Fixed/dilated pupils possible (autonomic dysfunction)
- 4. Skin
 - a. Ferning or fern-like superficial skin burn ("Lichtenberg figures")
 - b. Vascular instability may result in cool, mottled extremities
 - c. Frequent first and/or second-degree burns
 - d. Third degree burns less common
- 5. Patient may be in full cardiopulmonary arrest or have only respiratory arrest, as injury is a result of DC current
- 6. May have stroke-like findings as a result of neurologic insult
- 7. May have secondary traumatic injury as a result of overpressurization, blast or missile injury
- 8. Fixed/dilated pupils may be a sign of neurologic insult, rather than a sign of death/impending death. Should not be used as a solitary, independent sign of death for the purpose of discontinuing resuscitation in this patient population

Treatment and Interventions

- 1. Assure patent airway — if in respiratory arrest only, manage airway as appropriate
- 2. If in cardiopulmonary arrest, treat per [Cardiac Arrest Guideline](#)
- 3. Consider IV initiation — avoid initiation through burned skin
- 4. Monitor EKG. Be alert for potential arrhythmias. Consider 12-lead EKG, when available
- 5. Consider early pain management for burns or associated traumatic injury [See [Pain Management Guideline](#)]

Patient Safety Considerations

- 1. Recognize that repeat strike is a risk. Patient and rescuer safety is paramount
- 2. Victims do not carry or discharge a current, so the patient is safe to touch and treat

Notes/Educational Pearls

Key Considerations

- 1. Lightning strike cardiopulmonary arrest patients have a high rate of successful resuscitation, if initiated early, in contrast to general cardiac arrest statistics
- 2. There may be multiple victims
- 3. If multiple victims, cardiac arrest patients whose injury was witnessed or thought to be recent should be treated first and aggressively (reverse from traditional triage practices)
 - a. Patients suffering cardiac arrest from lightning strike initially suffer a combined cardiac and respiratory arrest
 - b. Return of spontaneous circulation may precede resolution of respiratory arrest
 - c. Patients may be successfully resuscitated if provided proper cardiac and respiratory support, highlighting the value of "reverse triage"
- 4. It may not be immediately apparent that the patient is a lightning strike victim
- 5. Injury pattern and secondary physical exam findings may be key in identifying patient as a victim of lightning strike
- 6. Lightning strike is a result of very high voltage, very short duration DC current exposure