6. Electrical injuries may be associated with significant pain, treat per Pain Management Guideline
7. Electrical injury patients should be taken to a burn center whenever possible since these injuries can involve considerable tissue damage
8. When there is significant associated trauma, this takes priority, if local trauma resources and burn resources are not in the same facility

Patient Safety Considerations

1. Verify no additional threat to patient
2. Shut off electrical power
3. Move patient to shelter if electrical storm activity still in area

Notes/Educational Pearls

Key Considerations

1. Electrical current causes injury through three main mechanisms:
   a. Direct tissue damage, altering cell membrane resting potential, and eliciting tetany in skeletal and/or cardiac muscles
   b. Conversion of electrical energy into thermal energy, causing massive tissue destruction and coagulative necrosis
   c. Mechanical injury with direct trauma resulting from falls or violent muscle contraction
2. Anticipate atrial and/or ventricular dysrhythmias as well as cardiac arrest
3. The mortality related to electrical injuries is impacted by several factors:
   a. Route current takes through the body- current traversing the heart has higher mortality
   b. Type of current (AC vs. DC)
      i. AC is more likely to cause cardiac dysrhythmias while DC is more likely to cause deep tissue burns however either type of current can cause any injury
      ii. DC typically causes one muscle contraction while AC can cause repeated contractions
      iii. Both types of current can cause involuntary muscle contractions that do not allow the victim to let go of the electrical source
      iv. AC is more likely to cause ventricular fibrillation while DC is more likely to cause asystole
   c. The amount of current impacts mortality more than the voltage