TRAUMATIC CARDIAC ARREST

Effective: February 12, 2019
Replaces: New
Review: February 12, 2023

1. BLS Treatment

1.1. Treat patient under **(700-A07)**
1.2. **Apply Spinal Motion Restriction (SMR) as indicated (700-M11)**
1.3. Ensure rapid transport to closest receiving trauma center unless patient shows signs of obvious death.
1.4. Address any areas of significant blood loss prior to arrest with hemorrhage control measures, regardless if the wound or laceration is actively bleeding.
1.4.1. Apply tourniquet(s) proximal to any large wound, laceration or amputation of the extremities, regardless of any active bleeding or hemorrhage. **(700-M17)**

2. ALS Treatment

2.1. If non traumatic cardiac arrest is suspected as the cause of the traumatic event, treat the patient under **(700-A07)**
2.2. Place patient on cardiac monitor
2.2.1. If the traumatic arrest patient is asystolic on initial contact, do not attempt resuscitation.
2.3. High quality uninterrupted CPR **(700-S01)**
2.3.1. Mechanical CPR devices are prohibited on traumatic arrests **(700-M13)**
2.4. **Endotracheal Tube (ETT) with Bougie**, at least one attempt **(700-M01)**
2.4.1. If ETT attempt(s) fail:
2.4.1.1. **Supraglottic airway device**
2.4.2. If both ETT and Supraglottic airway attempts fail:
2.4.2.1. **Oropharyngeal airway (OPA)**
2.5. **EtCO2** continuous numeric and waveform monitoring on every airway adjunct
2.6. **BVM,** ventilate once every six seconds to a total of **10 respirations a minute.**
2.7. **Initiate Transport to closest receiving trauma center**, all remaining care to be completed enroute to trauma center (Policy 602).
2.8. **Vascular Access (IV) or (IO), (large bore, bilateral access preferred if available),** wide open (WO)
2.9. If Return of Spontaneous Circulation (ROSC) occurs after any intervention, **titrate fluids** to maintain a systolic blood pressure of ninety (90), obtain **12 Lead ECG** (if it doesn't delay transport) and continue transport to trauma center.

3. Ventricular Fibrillation and Pulseless Ventricular Tachycardia

3.1. **Note: Epinephrine is not indicated in traumatic cardiac arrest.**
3.2. **Defibrillation at manufacturer's suggested values (example: 100, 150, 200 joules)**
3.2.1. Starting with lowest energy setting
3.2.2. Each subsequent counter shock increasing in energy
3.3. **Amiodarone 300mg IV / IO** if rhythm has not changed after a total of 3 defibrillations
3.4. If after 5 minutes rhythm remains refractory:
3.4.1. **Amiodarone 150mg IV / IO**, for a max cumulative dose of 450mg

4. Pulseless Electrical Activity and Witnessed Asystole

4.1. **Note: Epinephrine is not indicated in traumatic cardiac arrest.**

4.2. Identify and treat any reversible causes:

4.2.1. **Hypovolemia:** Reassess any hemorrhage control interventions to ensure they are adequately addressing blood loss and reapply if necessary. Consider a rapid **500ml fluid infusion.**

4.2.2. **Hypoxia:** Ensure that the patient is adequately ventilated

4.2.2.1. Ensure proper chest rise and fall

4.2.2.2. Reassess any sucking chest wounds or flail segment interventions

4.2.2.3. Reassess endotracheal tube position for dislodgment, occlusion or mainstem bronchus location

4.2.3. **Hypothermia:** Consider rewarming measures **(700-A09)**

4.2.3.1. Patients that are hypothermic can be unresponsive to pharmaceutical therapy and electrical therapy

4.2.4. **Tension Pneumothorax:** If tension pneumothorax is suspected or the patient has a traumatic injury to the chest, perform bilateral pleural decompression if not already completed. **(700-M02)**

4.3. Treat any rhythm changes according to correct treatment protocol

5. Cardiac Arrest Treatment Flow Chart