

# 4 Cardiac Arrest – Asystole / PEA

Asystole

PEA



Non-shockable pulseless cardiac arrest

## START

- 1 **Call for help and a code cart**
  - ▶ **Ask:** “Who will be the crisis manager?”
  - ▶ **Say:** “The top priority is high-quality CPR”
- 2 **Put backboard under patient, supine position**
- 3 **Turn FiO<sub>2</sub> to 100%, turn off volatile anesthetics**
- 4 **Start CPR and assessment cycle...**
  - ▶ **Perform CPR**
    - “Hard and fast” about 100 compressions/min
    - Ensure full chest recoil with minimal interruptions
    - 8 breaths/minute, do not overventilate
  - ▶ **Give epinephrine**
    - Repeat epinephrine every 3–5 minutes
    - Can give vasopressin to replace 1<sup>st</sup> or 2<sup>nd</sup> dose of epinephrine
  - ▶ **Assess every 2 minutes**
    - Change CPR compression provider
    - Check ETCO<sub>2</sub>
      - If: < 10 mm Hg, evaluate CPR technique
      - If: Sudden increase to > 40 mm Hg, may indicate return of spontaneous circulation
    - Check rhythm; if rhythm organized check pulse
      - If: Asystole/PEA continues:
        - Resume CPR and assessment cycle (restart Step 4)
        - Read aloud Hs & Ts (see list in right column)
      - If: VF/VT
        - Resume CPR
        - go to ▷ CHKLST 5

## DRUG DOSES and treatments

Epinephrine: 1 mg IV, repeat every 3–5 mins.  
 Vasopressin: 40 U IV can replace 1<sup>st</sup> or 2<sup>nd</sup> dose of epinephrine

## TOXIN treatment

Local anesthetic:
 

- Intralipid 1.5 mL/kg IV bolus
- Repeat 1–2 times for persistent asystole
- Start infusion 0.25–0.5 mL/kg/min for 30–60 minutes for refractory hypotension

Beta-blocker: Glucagon 2–4 mg IV push

Calcium channel blocker: Calcium chloride 1 g IV

## HYPERKALEMIA treatment

1. Calcium gluconate • 30 mg/kg IV  
 - or -  
 Calcium chloride • 10 mg/kg IV
2. Insulin • 10 units regular IV with  
 1–2 amps D50W as needed
3. Sodium bicarbonate if pH < 7.2 • 1–2 mEq/kg slow IV push

## Hs & Ts

- |                           |                                   |   |
|---------------------------|-----------------------------------|---|
| • Hydrogen ion (acidosis) | • Hypoxia                         | • Toxin (local anesthetic, beta blocker, calcium channel blocker) |
| • Hyperkalemia            | • Tamponade (cardiac)             |   |
| • Hypothermia             | • Tension pneumothorax            |   |
| • Hypovolemia             | • Thrombosis (coronary/pulmonary) |   |

## During CPR

Airway: Bag-mask sufficient (if ventilation adequate)  
 Circulation:
 

- Confirm adequate IV or IO access
- Consider IV fluids wide open

 Assign roles: Chest compressions, Airway, Vascular access, Documentation, Code cart, Time keeping