



MIAMI TOWNSHIP FIRE & EMS CLERMONT COUNTY, OHIO *PEDIATRIC PROTOCOLS*



ASYSTOLE / PULSELESS ELECTRICAL ACTIVITY (PEA)

Historical Findings

1. Age less than or equal to 15 years.
2. Patient is unconscious.

Physical Findings

1. Patient is apneic
2. Patient has no pulse.

EKG Findings

1. There is an organized cardiac rhythm with QRS complexes indicating PEA
2. Patient shows asystole on the monitor in two or more leads.

Protocol

1. Ensure airway and begin ventilation with bag-valve-mask with 100% oxygen.
2. Begin CPR and consider intubation
3. Check cardiac rhythm and immediately resume CPR.
4. Establish an IO or other vascular access with normal saline at keep open rate.
5. Epinephrine 1:10,000 at 0.1 mL/kg IO/IV. If vascular access is not available, then give epinephrine 1:1000 at 0.1 mL/kg via ET (maximum dose 5 mL)
6. Begin transport. **Identify and treat causes** (*see notes B and C: Start 20 mL/kg bolus of normal saline for hypovolemia & bilateral chest needle decompression for tension pneumothorax*)).
7. Reassess airway and breathing frequently, as hypoxia is a top cause of PEA.
8. Contact medical control.
9. Administer normal saline 20 ml/kg IV or IO.



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10. If PEA persists after 3 to 5 minutes, repeat epinephrine 1:10,000 at 0.1 mL/kg (maximum dose 5 mL) IV, IO, or 1:1000 at 0.1 mL/kg per ET.

Medical control may consider the following:

1. Additional 20 mL/kg fluid boluses.
2. Needle decompression of the chest.

Notes:

- A. Airway management with adequate bag-valve-mask (BVM) ventilation is a priority, and intubation should be considered if ventilation and oxygenation with BVM is difficult to maintain.
- B. Since a main cause of PEA is hypoxia, the effectiveness of BVM ventilation and oxygenation should be reevaluated constantly.
- C. The reversible causes of PEA include hypovolemia, cardiac tamponade, tension pneumothorax, hypoxemia, acidosis, and pulmonary embolism