

PC06 Pediatric Ventricular Fibrillation & Pulseless Ventricular Tachycardia

Objectives:

- Early recognition and appropriate intervention for pediatric patients in VF or pulseless VT

General Information:

- During CPR
 - a) Push hard, push fast (100/min)
 - b) Ensure full chest recoil
 - c) Minimize interruptions in compressions
 - d) One person CPR: 30 compressions: 2 breaths, two minutes = 5 cycles
 - e) Two person CPR: 15 compressions: 2 breaths, two minutes = 10 cycles
 - f) Avoid hyperventilation
 - g) After an advanced airway is in place, rescuers no longer deliver “cycles” of CPR. Give continuous compressions without pauses for breaths (8-10 breaths per minute)
 - h) Check rhythm every two minutes
 - i) A two-thumb encircling technique is preferred for infants
- Epinephrine
 - a) IV/IO 0.01 mg/kg (0.1 mL/kg 1:10,000) every 3-5 minutes
 - b) ETT 0.1 mg/kg (0.1 mL/kg 1:1000 added to 2-5 ml NS max of 10 mL of fluid)
- Endotracheal administration of medications should be used ONLY when IV/IO access is not available
- A BLS airway is an adequate airway. A brief attempt at an advanced airway by an experienced provider is appropriate
- AED use
 - a) Pediatric AEDs are preferred for children 1-8 years old; currently there is insufficient evidence to recommend for or against the use of an AED for children < 1 year old
 - b) If a child is in cardiac arrest and a device with pediatric capabilities is not available, an adult AED should be used
 - c) Adult AEDs should be used on children 8 years old or older
 - d) Defibrillation pads should not touch. Use pediatric-sized pads if available for children 1-8 years old; use a front-back placement if needed
 - e) Contraindications:
 - i) Rigor mortis
 - ii) Dependent lividity
 - iii) Injuries incompatible with life
 - iv) “No code”/ DNR
- If unsuccessful IV/IO access Lidocaine may be given via endotracheal tube
- Medical Control may order magnesium sulfate for torsades de pointes
 - a) Dose: 25-50 mg/kg in 10 mL NS, IV push



Warnings/Alerts:

- CPR may still be required in the presence of an organized cardiac rhythm
- Do not administer amiodarone endotracheally
- It is the responsibility of the provider delivering the shock to ensure that no one is touching the patient prior to the shock delivery
- Failure to stop a moving vehicle during AED analysis may lead to inappropriate defibrillation
- The following conditions need to be addressed prior to defibrillation:
 - a) Patients in standing water
 - b) Patients with transdermal medication
 - c) Avoid placing pads over implanted defibrillator/pacemaker

OMD Notes: With a patient in cardiac arrest, providers need to contact medical control as early as possible

References: AHA Pediatric Advanced Life Support Provider Manual, 2006, p. 168-178

Performance Indicators: Onset of arrest time Initial rhythm Bystander/FR CPR/AED

Patient Packaging Time of Initial Defibrillation Confirmation of Airway Consistency of CPR

Patient Disposition

