8.03 PEDIATRIC DYSRHYTHMIA: BRADYCARDIA-PUBLIC COMMENT JANUARY 2024

BLS – FAQ Link

DRAFT VERSION

Assess **Vital Signs,** ABC's and responsiveness, BLS airway, Oxygen therapy to include high flow oxygen and positive pressure ventilation as needed

Responsive after oxygenation

Yes

No

Start CPR if HR <60/min despite oxygenation and positive pressure ventilation if still unresponsive and bradycardic.

Responsive

Yes

No

ALS

Continue CPR 15:2
Advanced airway management as indicated
IV/IO
Correct Reversible Causes,
See Pediatric Cardiac Arrest protocol 8.07 if pulses are not present
Use length based measurement tape for up to 36kg

Support ABCs
Continue oxygen therapy as needed
12-lead EKG
Frequent reassessment
Identify and treat underlying causes

Responsive

Yes

No

Continue CPR 15:2
Continue Oxygenation
Administer appropriate medication/electrical therapy
See Pediatric Cardiac Arrest protocol if pulses are not present

Epinepherine
0.01 mg/kg IVP/IO. (0.1mg/1mL) Maximum single dose 1mg.
🔁 May repeat q3-5min

If increased vagal tone (examples: lightheadedness, fainting) or primary AV block, consider Atropine

Atropine
0.02 mg/kg IVP/IO. Minimum dose 0.1mg
Maximum single dose 0.5mg
🔁 May repeat once.

Transcutaneous Pacing protocol 7.18 if refectory to medications

Consider Normal Saline Bolus
Neonate: 10 mL/kg IV/IO. May repeat up to 30mL/kg
Pediatric: 20mL/kg IV/IO bolus. May repeat up to 60/mL/kg

Reversible Causes:
Hypoxia*
Hypothermia*
Toxins/medications*
Hydrogen ion (acidosis)
Hypovolemia
Hypokalemia
Hyperkalemia
Hypoglycemia
Tamponade (cardiac)
Tension pneumothorax
Thrombosis (pulmonary)
Thrombosis (cardiac)
***Possible causes**

Effective: xx/xx/xx
Supersedes: 03/01/15

8.03 PEDIATRIC DYSRHYTHMIA: BRADYCARDIA

Public Comment January 2024

BLS Treatment

- ~~Start CPR if HR <60 bpm AND evidence of hypoperfusion (hypotension, altered mental status)~~
- ~~Position of comfort.~~
- ~~NPO~~
- Assess circulation, airway, breathing, and responsiveness.
- If patient is unresponsive, oxygen therapy to include high flow oxygen and positive pressure ventilation as needed
- If patient remains unresponsive despite oxygenation and positive pressure ventilation, begin CPR at 15:2
- If patient is responsive after oxygenation~~,~~ but still symptomatic ~~consider~~ Oxygen with appropriate airway adjuncts ~~and BVM as indicated,~~ support ABCs, observe and frequent reassessments.
- Treat underlying reversible causes.
- ~~Provide **Spinal Motion Restriction** as indicated or position of comfort as indicated.~~
- ~~Appropriately splint suspected fractures/instability as indicated.~~
- ~~Bandage wounds/control bleeding as indicated~~.

ALS Treatment

Current American Heart Association Guidelines concerning Emergency Cardiac Care assessments and interventions shall always take precedence over local protocols when there is a conflict concerning techniques of resuscitation.

- Advanced airway if indicated.
- IV **Normal Saline** TKO, preferably at antecubital fossa.
- If unstable, IO if unable to establish an IV ~~after 1 min of IV attempts~~.
- **Epinephrine** 0.01mg/kg IVP/IO (0.1mg/mL) maximum single dose 1mg **OR**
- **Atropine** if suspected increased vagal tone or primary AV block 0.02 mg/kg IVP/IO. Minimum dose 0.1mg, maximum single dose 0.5mg
- **Consider Transcutaneous pacing** (Link to 7.18) if refractory to medications
- **If agitated during TCP and not hypotensive, may administer Midazolam**
- Consider Normal Saline bolus if hypotensive. Neonate: 10mL/kg IV/IO. May repeat up to 30mL/kg. Pediatric: 20mL/kg IV/IO. May repeat up to 60mL/kg
- See **Pediatric Cardiac Arrest protocol 8.0**7 if pulses are not present

Comments

SYMPTOMATIC BRADYCARDIA DEFINITION: Pulse rate **<** 60 BPM and any of the following:

- Unresponsive
- Hypotension.
- Signs of shock/hypoperfusion.
- Acutely altered mental status, syncope or near syncope.

REVERSIBLE CAUSES : Hypoxia, Hypothermia, Toxins/medications* Hydrogen ion, Hypovolemia, Hypokalemia, Hyperkalemia, Hypoglycemia, Tamponade (cardiac) Tension pneumothorax, Thrombosis (pulmonary), Thrombosis (cardiac)
***Possible Causes**