



Cardiac: Bradycardia with Pulse

Assessment

Pediatric Pearls:

- Use pediatric dosing of medications or electrical therapy for a pediatric patient < 37 kg and as defined by the PEDIA Tape.
- Focus on rapid and early BLS airway and ventilation tools. Intubation may not be the best option for these patients.
- Pediatric pads should be used in children < 10 Kg or PEDIA tape color purple.

Signs & Symptoms:

- HR < 60 min with hypotension
- Acute altered LOC
- CHF
- Seizure, syncope or shock secondary to bradycardia.
- Altered LOC
- Shock / Hypotension
- Syncope

Differential:

- Respiratory distress
- Respiratory obstruction
- Beta blocker / Digoxin
- Calcium Channel Blocker
- Organophosphate
- Hypovolemia
- Hypothermia
- Hypoxia
- Infection / Sepsis
- Medication or Toxin
- Trauma
- Arrhythmia / Acute MI

Clinical Management Options

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|---|---|---|---|---|---|---|
| P | P | P | P | P | P | <ul style="list-style-type: none"> • Oxygen PRN titrated to SpO₂ 92%-96% • Basic airway management • If pediatric and HR < 60 with poor perfusion despite oxygenation & ventilation, begin Pit Crew CPR |
| L | L | L | L | L | L | <ul style="list-style-type: none"> • 4 lead and 12 lead ECG placement and acquisition • Apply waveform EtCO₂ |
| 1 | 2 | 3 | 4 | 5 | 6 | <ul style="list-style-type: none"> • Vascular access • Isotonic Crystalloid PRN titrated to SBP ≥ 100 mmHg or MAP ≥ 65 • Glucagon in setting of Beta Blocker OD or Calcium Channel Blocker OD |
| | | | | | | <ul style="list-style-type: none"> • Monitor and interpret ECG • If Pediatric: Epinephrine |
| | | | | | | <ul style="list-style-type: none"> • Atropine • Sedation: Midazolam or Ketamine • Transcutaneous Cardiac Pacing • If Adult: Norepinephrine (Levophed) infusion • If Adult: Epinephrine infusion titrated to MAP ≥ 65 • If Pediatric: Epinephrine infusion titrated to patient presentation • Advance airway management as needed |

Consult Online Medical Control As Needed

Pearls:

- Refer to drug formulary charts for all medication dosing for both adults and pediatric patients.
- The use of lidocaine or amiodarone in heart block can worsen bradycardia and lead to asystole and death.
- Treatment of bradycardia is based on the presence of symptoms. If asymptomatic, monitor only.
- The use of atropine for bradycardia in the presence of an MI may worsen ischemia.
- Consider treatable causes for bradycardia (Beta blocker OD, Calcium channel blocker OD, etc.) – treat appropriately.
- Assure patient is adequately oxygenated.
- If wide complex bradycardia, consider hyperkalemia.
- Glucagon = Emesis
- Use volume control device (IV Burette) for medication and fluid infusions as needed.