Pediatric Bradycardia

For any bradycardic rhythm <60bpm

History
• Past medical history
• Heart transplant
• Medications
  • Beta blockers
  • Calcium channel blockers
  • Clonidine
  • Digoxin
  • Pacemaker

Signs and Symptoms
• Heart rate < 60 with associated hypotension, acute
  altered mental status, chest pain, acute CHF, seizures, syncope or shock secondary to bradycardia
• Age dependent hypotension
• Thoracic pain
• Respiratory distress
• Hypotension or shock
• Altered mental status
• Syncope

Differential
• Airway obstruction/respiratory disease
• Acute myocardial infarction
• Pacemaker failure
• Hypothermia
• Sinus bradycardia
• Athletes
• Head injury (elevated ICP) or stroke
• Spinal cord lesion
• Sick sinus syndrome
• AV blocks (e.g., 1°, 2° or 3°)
• Overdose

Pearls
• The majority of pediatric bradycardia is due to airway problems.
• Hypoglycemia, severe dehydration and narcotic effects may produce bradycardia.
• Most maternal medications pass through breast milk to the infant. Obtain medication use and history of nursing mother.

HR < 60 and symptomatic:
Hypoperfusion, hypotension, respiratory difficulty or altered mental status

Yes

No

Support ABCs
Give Oxygen
Observe

High flow oxygen via non-rebreather mask or ventilate with BVM

If HR remains < 60 with instability after O₂ and ventilation, begin chest compressions (15:2 ratio)
1.5 inches for infants; 2 inches for children

Cardiac monitor
Establish IV/IO

If HR remains < 60 with instability after CPR
Epinephrine (1:10,000)
Use Broselow Tape; refer to dosing guide

Consider, 12-Lead ECG

For increased vagal tone or primary AV block
Consider, Atropine
Use Broselow Tape; refer to dosing guide

Consider, Normal Saline bolus
Use Broselow Tape; refer to dosing guide
May repeat x2

EtCO₂ monitoring (if available)

Notify receiving facility.
Consider Base Hospital for medical direction