

# **Bradycardia**



### History

- SAMPLE
- Medications
- Beta-Blockers
- Calcium channel blockers
- Clonidine
- Digoxin
- Pacemaker

### Signs and Symptoms

- HR < 60/min with hypotension,</li>
- acute altered mental status,
- chest pain, acute CHF, seizures, syncope, or shock secondary to bradycardia
- Chest pain / Respiratory distress
- Hypotension or Shock
- Altered mental status / Syncope

#### **Differential**

- Acute myocardial infarction
- Hypoxia
- Pacemaker failure
- Hypothermia
- Sinus bradycardia
- Athletes
- Head injury (elevated ICP) or Stroke
- Spinal cord lesion
- Sick sinus syndrome
- AV blocks (1°, 2°, or 3°)
- Overdose



## Universal Patient Care Protocol Routine Standard of Care



### Assess Rhythm

**IV Protocol** 

Continue to
Monitor and reassess

12 Lead ECG

HR < 60/min with hypotension, acute altered mental status, chest pain, acute CHF, seizures, syncope, or shock secondary to bradycardia





### **12 Lead ECG** (If not peri-arrest)

If in setting of myocardial infarction



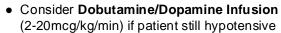
Atropine - do not give atropine if there is a IV/IO (0.5-1mg) wide complex rhythm



20ml/kg Fluid Bolus (If no pulmonary edema)



Consider External Cutaneous Pacing early in the unstable patient (especially in 2° or 3° Heart Block)





- Consider Glucagon IM (1mg) if patient still bradycardic and on beta blockers
- Consider Calcium Chloride IV/IO (1g) if patient still bradycardic and on calcium channel blockers

### **Pearls**

- Recommended Exam: Mental Status, Neck, Heart, Lungs, Neuro
- The use of Lidocaine, Beta Blockers, and Calcium Channel Blockers in heart block can worsen Bradycardia and lead to asystole and death.
- Pharmacological treatment of Bradycardia is based upon the presence or absence of symptoms. **If symptomatic treat**, **if asymptomatic, monitor only.**
- In wide complex slow rhythm consider hyperkalemia
- Remember: The use of Atropine for PVCs in the presence of a MI may worsen heart damage.
- Consider treatable causes for Bradycardia (Beta Blocker OD, Calcium Channel Blocker OD, etc.)
- Be sure to aggressively oxygenate the patient and support respiratory effort.