2.07 DYSRHYTHMIA: SYMPTOMATIC BRADYCARDIA EMSAC APRIL 2024

BLS – FAQ Link

Position of comfort, (supine/semi-fowlers preferred in absence of difficulty breathing), call for ALS resources if BLS ~~dispatched~~ resource

ALS

DRAFT

Cardiac monitor and identify rhythm

Persistent heart rate < 50/min

Hypotension?
Acute altered mental status?
Signs of shock?
Ischemic chest discomfort?
Acute heart failure?

NO → Monitor and observe

YES → 12 lead
Do not delay therapy for 12 lead

For suspected vagally mediated bradycardia

Atropine
1mg IV/ IO

May repeat q 5minutes if bradycardia is not resolved. Max dose 3mg

If heart rate <50bpm, and hypotension persist
Normal Saline fluid bolus

If atropine ineffective or bradycardia suspected to be non vagally mediated

Transcutaneous Pacing (TCP) as needed for continued unstable bradycardia

Strongly consider sedation with TCP-May use in presence of hypotension for TCP

Midazolam
Sedation/agitation: 5 mg IMx1 or 5 mg slow push IV/IO.
Maximum dose 5 mg IV/IO

OR

Epinephrine Infusion

Infuse at 1-3 drops per second IV/IO
Using 10 drop macro drip set

Apply "stand by" pacing pads

Follow protocol **2.17 Hyperkalemia** if bradycardia is suspected to be from hyperkalemia (e.g. peaked T waves and widening QRS, sine waves)

Follow protocol **2.10 Poisoning and Overdose** for causes (e.g calcium channe or beta blocker toxicity)

Comments

- See **Destination Policy 5000** for transportation decisions
- Midazolam is not contraindicated in the presence of hypotension when used for TCP
- Atropine for suspected vagally mediated bradycardia
- TCP for bradycardia unresponsive to medication

2.07 DYSRHYTHMIA: SYMPTOMATIC BRADYCARDIA-
EMSAC April 2024

BLS Treatment
• Position of comfort. Supine/semi-fowlers preferred in absence of difficulty breathing. • Call for ALS resources if BLS ~~dispatched~~ resource • ~~NPO~~ • ~~Oxygen 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.
 	
~~IV/IO with Normal Saline TKO.~~
• Cardiac monitor, and identify rhythm
• 12-lead EKG. If symptomatic, do not delay therapy in order to obtain 12 lead.
• ~~Apply "stand by" pad placement for TCP therapy based on patient presentation~~
• ~~**Normal Saline**~~ Start IV~~/~~ or IO ~~TKO~~
• **Atropine** 1mg IVP/IO
• If the heart rate ~~>~~ <50 BPM, but hypotension persists: **Normal Saline** fluid bolus.
• ~~**Atropine.**~~ If **Atropine** is ineffective, or if rhythm is suspected to be not vagally mediated ~~**or**~~ ~~administer~~ **Epinephrine infusion:** Infuse 1-3 drops per second IV/IO and apply "stand by" pacing pads
    • ~~or~~Or ~~begin~~
    • **Transcutaneous Pacing** (TCP) as needed for continued unstable bradycardia.
• ~~**If agitated during**~~ Strongly consider sedation with TCP ~~**and SBP > 90**~~**,** may administer **Midazolam**~~.~~: 5 mg IM or 5mg slow IVP
• ~~**If the heart rate > 50 BPM, but hypotension persists: o Normal Saline fluid bolus.**~~
~~**o If Normal Saline bolus ineffective, administer Epinephrine infusion. Titrate to maintain SBP > 90.**~~

Comments
• Symptomatic bradycardia defined as a heart rate <50/min, with any one or more of the following:

- Hypotension
  - Acute altered mental status
  - Ischemic chest discomfort
  - Acute heart failure
- Follow Protocol 2.17 Hyperkalemia if bradycardia is suspected to be from hyperkalemia (e.g. bradycardia, peaked T waves, prolonged QRS (>.12 sec) sine wave)
- Follow protocol **2.10 Poisoning and Overdose** for calcium channel or beta blocker toxicity. ~~causes (e.g cardiac medications)~~
- Atropine for suspected vagally mediated bradycardia
- TCP for bradycardia unresponsive to medication
- See **Destination Policy 5000** for transport decisions
- ~~TCP is preferred in high degree heart blocks~~
- Midazolam is not contraindicated in the presence of hypotension when used for TCP
- ~~Follow protocol **2.10 Poisoning and Overdose** for causes (e.g cardiac medications)~~

DRAFT