Bradycardia

This protocol is for paramedic use only

This is a protocol for patients with serious symptomatic bradycardia, defined as patients with heart rate less than 60 bpm and hypotension, or shock. Titrate treatments to a heart rate above 60 bpm. If the patient remains hypotensive, refer to the **Shock Treatment Protocol**.

1. Follow the **General Pre-Hospital Care-Treatment Protocol**.
2. Administer **atropine** 1 mg IV/IO rapid push repeating every 3-5 minutes to a total dose of 3 mg IV/IO, until a heart rate of greater than 60/minute is reached.
3. Transcutaneous pacing (TCP) when available may be initiated prior to establishment of IV access and/or before **atropine** begins to take effect. Pacing is the treatment of choice for high degree A-V block (second-degree Type II, or third-degree), apply pacer pads. Follow the **Electrical Therapy- Procedure Protocol.**
4. Per MCA selection, provide sedation per **Patient Procedural Sedation-Procedure Protocol**
5. For patients with persistent symptomatic bradycardia, administer **epinephrine** by push dose (dilute boluses)
    a. Prepare (10 mcg/mL) by adding 1mL of 1mg/10mL **epinephrine** in 9mL **NS**, then:
        i. Administer 10-20 mcg (1-2 mL **epinephrine** 10 mcg/mL) IV/IO
        ii. Repeat every 3 to 5 minutes
        iii. Titrate SBP greater than 90 mmHg

Notes:

1. Consider possible etiologies:
    A. Hyper/hypokalemia, other metabolic disorders
    B. Hypothermia
    C. Hypovolemia (including vomiting/diarrhea)
    D. Hypoxia
    E. Hydrogen ion excess (acidosis)
    F. Toxins/ overdose (e.g., beta-blocker or calcium channel-blocker)
    G. Tamponade
    H. Tension pneumothorax
    I. Thrombosis (pulmonary or coronary)
2. Transcutaneous pacemaker electrode pads may be applied to these patients without initiating pacing so that the pacemaker is ready if patient condition deteriorates.
3. For symptomatic high-degree (second-degree Type II, or third-degree) AV block, begin pacing without delay.
4. Heart transplant patients may not respond to **atropine**

<u>Medication Protocols</u>
Atropine
Epinephrine

Protocol Source/References: Highlights of the 2020 AHA Guidelines Update for CPR and ECC