


Section: **Adult Medical**
Subject: **CARDIAC DYSRHYTHMIAS – BRADYCARDIA/BLOCK**
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Michael Lozano, Jr., M.D., HCFR Medical Director

1. Basic ALS Treatment
2. Treat either pharmacologically or with transcutaneous pacing *only* if the patient is showing serious signs and symptoms. (see QA points below)
3. Bradycardia and symptomatic:
 - a. **Atropine**
 - i. 0.5 mg rapid IVP q 3 – 5 minutes (total max dose of 3.0 mg)
 - b. **Transcutaneous Pacing**
 - c. **Dopamine** infusion
 - i. Start at 5 mcg/kg/min IV/IO
 - ii. Increase by 5 mcg/kg/min q 5 minutes PRN titrated to return of peripheral pulses.
 - iii. Maximum dose of 20 mcg/kg/min
 - d. **Epinephrine** infusion
 - i. Start at 2 mcg/min IV/IO
 - ii. Increase by 2 mcg/min q 5 minutes PRN titrated to return of peripheral pulses.
 - iii. Maximum dose of 10 mcg/min
4. Adjuncts to transcutaneous pacing if the systolic blood pressure is > 100 mmHg:
 - a. **Midazolam** 1.25 mg IV q 5 minutes PRN anxiety
 - b. **Fentanyl** 50 mcg IV q 5 minutes PRN pain (total dose of 350 mcg)
5. QA Points:
 - a. Serious signs and symptoms must be related to the slow rate and *shall* include:
 - i. Symptoms: chest pain, shortness of breath, or decreased level of consciousness.
 - ii. Signs: low BP, shock, pulmonary congestion, CHF, or acute MI.
 - b. Atropine is not effective for infranodal block (i.e. type II AV block and third degree block with wide QRS complexes). In these patients it may cause a paradoxical slowing, so be prepared to initiate transcutaneous pacing.
 - c. Denervated transplanted hearts will not respond to atropine.
 - i. Proceed at once to transcutaneous pacing, catecholamine infusion, or both.
 - d. Never treat ventricular escape beats with **lidocaine** or **amiodarone**.
 - e. For transcutaneous pacing:
 - i. Confirm mechanical capture and patient tolerance. .
 - ii. Use sedation and analgesia to ensure patient tolerance of the procedure
 - iii. Do not delay TCP while awaiting IV access or for atropine to take effect if the patient is symptomatic.