

**REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT – Basic**

SMO: Adult Symptomatic Bradycardia

Overview: Adult Bradycardia is defined as a patient having a pulse rate of < 60. Well trained athletes may have low pulse rates as well as patients on certain medications. As long as the patient is tolerating the slow heart rate well, treatment of the slow rhythm is not necessary. This protocol is intended to define “symptomatic bradycardia” and its treatment.

INFORMATION NEEDED

- ___ Presenting symptoms: time of onset, gradual or sudden
- ___ Associated signs / symptoms: discomfort (pain, location, quality, radiation, severity, previous occurrences), palpitations, dizziness, syncope, dyspnea, nausea, vomiting, fever, cough
- ___ Medical history: dysrhythmias, cardiac disease, stress, drug abuse, diabetes mellitus, renal failure, pacemaker

The definition of a “symptomatic bradycardia” is a patient with a pulse rate <60 bpm and any one or more of the following “serious signs or symptoms”:

OBJECTIVE FINDINGS

- ___ SBP less than 90 and signs of hypoperfusion
- ___ Altered Mental Status, syncope or near syncope due to a decrease in cerebral perfusion
- ___ Signs/symptoms of CHF (dyspnea, crackles, pitting edema)
- ___ Ischemic chest pain unrelieved by NTG

TREATMENT

- ___ Assess ABC's, secure airway, administer oxygen at 100% via NRB mask
- ___ Assess vital signs and perform secondary survey
- ___ RMC
- ___ ILS or ALS Intercept

Documentation of adherence to protocol:

- ___ Vital Signs taken and monitored appropriately
- ___ ILS or ALS intercept

**REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT – Paramedic**

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TREATMENT

- ___ Assess ABC’s, secure airway, administer oxygen at 100% via NRB mask
- ___ Assess vital signs and perform secondary survey
- ___ RMC
- ___ Attach monitor
- ___ IV of NS
- ___ **Atropine 0.5 mg IVP**, may repeat q 3-5 min. to a max dose of 3 mg (See PRECAUTIONS AND COMMENTS)
- ___ **Transcutaneous pacing (TCP)**
- ___ Consider use of **Valium (diazepam) 5 mg** OR **Versed (midazolam) 2 mg** IVP for sedation prior to TCP if patient conscious and Systolic BP >100.
- ___ **Morphine sulfate 2 mg** IVP for pain control if needed (see PAIN MANAGEMENT protocol)
- ___ If the heart rate normalizes but hypotension persists:
 - Repeat fluid challenge 500cc
 - **Dopamine** titrated to SBP>90 mm Hg. Start at 10mcg/kg/minute and titrate up in increments of 5mcg/kg/minute until SBP >90 or maximum of 20 mcg/kg/minute reached.

Documentation for Adherence to Protocol:

- Vital signs obtained
- Correct doses of medications administered if indicated
- Transcutaneous pacing (TCP) results in HR>60

PRECAUTIONS AND COMMENTS

- If utilizing TCP, verify mechanical capture and patient tolerance. Utilize sedation and pain management as needed, but use with caution in the hypotensive patient.
- If the patient is symptomatic and one of the following conditions exists, go directly to transcutaneous pacing (TCP):
 - an IV cannot be established and the patient has serious signs or symptoms associated with the bradycardia,
 - if type II 2nd degree AV block or 3rd degree heart block is noted, or if the patient is status-post heart transplant (as atropine will not work in these patients)