DYSRHYTHMIAS
SYMPTOMATIC BRADYCARDIA

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Information needed:

See Dysrhythmia: Overview Protocol

- The definition of "symptomatic bradycardia" is a medical patient with a pulse rate of <50 bpm and any one or more of the following
  - SBP less than 90
  - Altered mental status
  - Pulmonary edema
  - Ischemic chest pain unrelieved by nitroglycerin or with associated hypotension

Treatment:

- Routine medical care
- If the patient is asymptomatic, no treatment of the bradycardia may be warranted
- 12 Lead EKG
- Assess vital signs and perform secondary survey
- If the patient is asymptomatic, but the heart rate is less than 50 bpm, establish a saline lock or an IV of NS TKO
- If the patient is symptomatic, establish an IV/IO of NS and administer atropine 0.5 mg IV/IO, may repeat q 3-5 minutes to a maximum dose of 3 mg
- For symptomatic patients combined with one or more of the following conditions, if available, go directly to transcutaneous pacing (TCP)
  - An IV cannot be established
  - Atropine is ineffective
  - If type II 2nd degree AV block or 3rd degree block is noted
  - The patient is status–post heart transplant
- Transcutaneous Pacing (TCP)
  - For anxiety, consider midazolam (Versed®):
    - 1-2 mg IV/IO may repeat every 5 minutes, up to a maximum dose of 10 mg
    - 1-5 mg IN may repeat in 10 minutes, up to a maximum dose of 10 mg
    - Monitor and observe respirations.
- For pain control during transcutaneous pacing, see Interim Adult Pain Assessment and Management protocol (June 2018)
- If the heart rate normalizes (>80 BPM) but hypotension persists:

    - Administer fluid challenge 250-1,000 ml NS in incremental doses in the presence of clear lung sounds; titrate to a SBP of >90 mg
    - If patient remains hypotensive (SBP<90), administer dopamine 5 mcg/kg/min IV. If inadequate response, may increase every 5 minutes in 5 mcg/kg/min increments to maintain SBP > 90mmHg. Maximum dose is 20 mcg/kg/min. Consider base physician contact.
- If no capture, then dopamine 10 mcg/kg/min

Precautions and Comments:

- If utilizing TCP, verify mechanical capture (via palpable femoral pulses) and patient tolerance.
- Utilize midazolam and pain management as needed for anxiety and pain control, but use caution in the hypotensive patient
- Patients with chest pain of ischemic origin may not respond to a trial dose of atropine. If transcutaneous pacing is available, it is not necessary to give a full trial of a total of 3 mg of atropine before attempting TCP