Subject: Treatment Guidelines – ALS
Dysrhythmias - Bradycardia with a Pulse

Associated Policies: 5304, 5307, 5408, 6030, 6546

I. Priorities
   A. ABC's. Maintain airway and assist breathing when indicated.
   B. Assess for appropriateness for clinical condition. Is the rhythm causing problem?
   C. Identify dysrhythmia and degree of distress. Heart rate typically < 50 beats a minute if a brady dysrhythmia. Note: Pediatric bradycardia can be a pre-terminal rhythm in infants and children secondary to hypoxia. Aggressive airway management and oxygen delivery can possibly avert cardiac arrest. Assessment for contributing causes (H's and T's)should be carried out.
   D. Oxygen per Oxygen Administration Policy # 6030.
   E. Re-assess rhythm and vital signs frequently.

Sinus Bradycardia, First Degree Heart Block and Second Degree Heart Block - Type 1/Wenckebach
:
Pediatric note: Refer to a pediatric length based tape to verify appropriate drug concentrations and dosages, and equipment sizes. A.. Determine if rhythm is stable or unstable.
Note: Type I/Wenckebach heart block is almost always a benign condition for which no specific treatment is needed. However, in the rare symptomatic condition, Atropine may transiently improve the rate.

1. Stable Criteria: No signs or symptoms of hypotension, acute altered mental status, signs of shock, or heart failure. Bradycardia in the presence of chest pain with a stable blood pressure refer to Chest Pain Policy # 6511.
2. Unstable Criteria: Hypotension, Acutely altered mental status, signs of shock, Ischemic chest discomfort, or Acute heart failure. .

B. Stable Rhythm:
   1. Pulse Oximetry and Oxygen per policy.
   2. Cardiac Monitor. 12 Lead when available.
   3. IV access
   4. Observe closely and reassess vitals.

C. Unstable Rhythm:
   1. Pulse Oximetry and Oxygen per policy.
   2. IV/IO access, fluid bolus for hypotensive states but monitor closely for signs of fluid overload. (Blood draw for labs when time allows)
   3. Atropine IV/IO - 0.5mg bolus. Repeat every 3-5 minutes. Maximum cumulative dose of 3mg.
   4. If Atropine is ineffective;
      a. Transcutaneous Pacing per Policy # 6546.

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b. Dopamine Infusion per Policy # 5408.
b. Epinephrine Infusion per Policy # 5307.

VI.

A

V. Second Degree Heart Block - Mobitz Type II and 3rd Degree Block (Complete Heart Beat):
New onset Mobitz Type II and Complete Heart Block are commonly associated with myocardial infarction, it would be ideal to keep the HR slow (50-60) to increase diastolic filling time. Do not treat severe unstable bradycardic heart rates with Atropine in the presence of signs of Acute MI unless pacing is unavailable or delayed.
Pediatric note: Refer to a pediatric length based tape to verify appropriate drug concentrations and dosages, and equipment sizes

B. Stable Rhythm:
1. Pulse Oximetry and Oxygen per policy.
2. Cardiac Monitor. 12 Lead when available.
3. IV access
4. Observe closely and reassess vitals.

C. Unstable Rhythm:
1. Transcutaneous Cardiac Pacing per Policy # 6546.
2. Pulse Oximetry and Oxygen per policy.
3.. IV access, fluid bolus for hypotensive states but monitor closely for signs of fluid overload. (Blood draw for labs when time allows)
4. Mild sedation of the unstable patient should be delayed until after Trancutaneous pacing has been achieved. Medicate per Benzodiazepine Policy # 5332. .
5. Dopamine Infusion per Policy # 5408.
6. Epinephrine Infusion per Policy # 5307.

IV. Special Information:

Approved: _____ Date: 8/23/18

Approved as to Form: _____ Date: 8-23-18

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Associated Policies:

A. The decision point for ACLS intervention in the bradycardia algorithm is determination of adequate perfusion (Stable or Unstable).
B. When indicated, preparation for transcutanous pacing should be taking place as atropine is given should atropine fail to resolve the unstable state.
C. For the patient with symptomatic bradycardia with serious signs of poor perfusion or when atropine is not indicated, transcutaneous pacing is the treatment of choice and should be started immediately, prior to any medication administration or IV access.
D. Transcutanous pacing is contra-indicated in the hypothermic patient since the heart is unable to respond to the electrical impulses.

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