Kittitas County Prehospital EMS Protocols

SUBJECT: CARDIAC ARRHYTHMIAS

A. If stable, administer O_2 @ 4-6 lpm per nasal cannula.

B. If unstable, administer O_2 @ 12-15 lpm per non-rebreather mask.

C. Establish cardiac monitor/defibrillator.

D. Establish peripheral IV access with **Isotonic Crystaloid** @ TKO.

Ventricular Tachycardia (Stable)

A. In the conscious, stable patient:

1. Administer **Amiodarone,** 150 mg IV infusion over 10 minutes.

2. Start **Amiodarone** drip if converted at 1 mg/min.

Ventricular Tachycardia (Unstable)

A. If patient is unstable (i.e., chest pain, dyspnea, systolic BP < 80 mm Hg, decreased LOC, or signs of pulmonary congestion):

1. Initiate synchronized cardioversion @ 100 j.

2. If no response, initiate synchronized cardioversion at 200 j, with subsequent shocks at 300 j and then 360 j.

3. Prior to shocks, if patient is conscious and no significant delay would result, consider sedation/pain management (keep in the presence of hypotension, pulmonary edema, or unconsciousness).

B. After conversion, or if recurrent after initial attempts at conversion,

1. Administer **Amidarone** 150 mg IV infusion over 10 minutes.

2. Start **Amiodarone** drip at 1 mg/min.

Wide Complex Tachycardias (of uncertain type in a conscious, stable patient)

A. Establish 12 lead ECG.

B. Consider **Adenosine** 6 mg/rapid IV push only if regular and monomorphic, to be followed by an immediate 5 ml **NaCl** flush.

C. Administer **Amiodarone** 150 mg IV infusion over 10 minutes.

D. Start **Amiodarone** drip at 1mg/min.

Supraventricular Tachycardia / Atrial Fibrillation or Atrial Flutter

A. If systolic BP < 80 mm Hg, or a decreased LOC:

1. Initiate synchronized cardioversion @ 100 j.

2. If no response, initiate synchronized cardioversion at 200 j, with subsequent shocks at 300 j and then 360 j.

3. Prior to shocks, if patient is conscious and no significant delay would result, consider sedation/pain management (keep in the presence of hypotension, pulmonary edema, or unconsciousness).

B. If patient is normotensive but symptomatic (e.g., dyspnea, chest pain, or decreased LOC):

1. Place in Trendelenburg position and have patient perform Valsalva Maneuver (take deep breath and hold).

2. If SVT is irregular or confirmed as atrial fibrillation or atrial flutter, *do not* administer **Adenosine.**

3. Administer **Adenosine**, 6.0 mg rapid IV push, to be followed by an immediate 5 ml **NaCl** flush.

4. If no conversion after 2 minutes, administer **Adenosine** 12 mg rapid IV push, to be followed by an immediate 5 ml **NaCl** flush.

5. Consider obtaining 12 lead ECG.

6. If no conversion with **Adenosine**, consider **Amiodarone** 150 mg IV infusion over 10 minutes.

7. Start **Amiodarone** drip at 1 mg/min.

C. If Atrial fibrillation or atrial flutter is confirmed:

1. Consider **Amiodarone** 150 mg IV over 10 minutes.

2. Start **Amiodarone** drip at 1 mg/min.

3. May consider **Diltiazem** (optional to carry) 0.25 mg/kg SLOW IV push over 2 minutes.

Bradyarrhythmias/AV Blocks

A. If ECG shows 2nd degree AV block, 3rd degree AV block, junctional rhythm, or bradycardia with a heart rate < 60/minute, and patient symptomatic (e.g., systolic BP < 80 mm Hg, ischemic chest pain):

   1. Administer **Atropine** 0.5-1.0 mg IV bolus, up to a total of 3 mg.

   2. Consider external cardiac pacing.

B. If unresponsive to **Atropine** and pacing, and patient remains hypotensive, consider mixing **Dopamine,** 400 mg in 250 ml D_5W for a concentration of 1600 mcg/ml. Administer IV piggyback @ 2-10 mcg/kg/minute, titrating up to 20 ug/kg/minute; or until BP $\geq$ 90 mm Hg systolic.

C. Consider **Epinephrine Infusion**, mix 1 mg per 100 ml of **Isotonic Crystaloid** for a concentration of 10 mcg/ml. Administer IV piggyback @ 2-10 mcg/min; until BP $\geq$ 90 mm Hg systolic.