

Subject: Scope of Practice/Procedure – ALS
Amiodarone - Cardarone

Associated Policies:

I. Class

- A. Antiarrhythmic agent

II. Indications:

- A. Ventricular Fibrillation or pulseless Ventricular Tachycardia unresponsive to defibrillation delivery, CPR and vasopressor.
- B. Sustained stable Ventricular Tachycardia or sustained unstable Ventricular Tachycardia not responding to cardioversion.
- C. Unstable Supraventricular Tachyarrhythmia (SVT/PSVT) unresponsive to Adenosine and cardioversion attempts.

III. Therapeutic Effect

Amiodarone is a complex drug with effects on sodium, potassium, and calcium channels as well as α - and β -adrenergic blocking properties.

- A. Increases the action potential duration (repolarization inhibition).
- B. Noncompetitively blocks beta-adrenergic receptors.
- C. No real inotropic effects.
- D. Prolonged therapy increases the refractory period in the atria, ventricles, and AV node.

IV. Contraindications

- A. Absolute: None for the Cardiac Arrest patient
- B. Absolute: For those NOT in Cardiac Arrest
 - 1. Sinus Bradycardia
 - 2. Atrioventricular blocks
 - 3. Second- or third-degree heart blocks
 - 4. Neonates
 - 5. Digitalis Toxicity
- C. Relative
 - 1. Use caution in pregnancy
 - 2. Patients with depressed lung function.
 - 3. Patients already receiving beta and calcium channel blockers and anti-arrhythmic medication

V. Adverse Effects:

- A. Multiple complex drug interactions. Use caution in the conscious patient.
- B. Hypotension

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- C. Respiratory failure
- D. Bradycardia heart block
- E. Pain at administration site

VI. Administration and Dosage

A. Adult:

1. Ventricular Fibrillation/Pulseless Ventricular Tachycardia:
 - a. First dose: 300mg IV/IO push.
 - b. Second dose of 150mg IV/IO in 3 to 5 minutes, if needed.
2. Life-Threatening Arrhythmias:
 - a. Unstable Ventricular Tachycardia with pulses unresponsive to cardioversion:
 - i. Loading dose of 150 mg IV infusion over 10 minutes (15 mg/minute).
 - ii. Maintenance dose: 1mg/minute slow IV over 6 hours.
 - b. Unstable Supraventricular Tachyarrhythmia (SVT/PSVT) unresponsive to Adenosine and cardioversion attempts.
 - i. Loading dose of 150 mg IV infusion over 10 minutes (15 mg/minute).
 - ii. Maintenance dose: 1mg/minute slow IV over 6 hours.
 - c. Sustained Ventricular Tachycardia in the stable patient:
 - i. Loading dose of 150 mg IV infusion over 10 minutes (15 mg/minute).
 - ii. Maintenance dose: 1mg/minute slow IV over 6 hours.

B. Pediatric:

1. Ventricular Fibrillation/ Pulseless Ventricular Tachycardia
 - a. 5mg/kg IV/IO bolus,
 - b. Can repeat the 5mg/ kg IV/IO in 3-5 minutes.
Not to exceed 300mg for a single dose.
2. Unstable Supraventricular Tachyarrhythmia (SVT/PSVT) unresponsive to Adenosine and cardioversion attempts.
 - a. Loading dose of 5mg/kg IV/IO over 20 minutes (Maximum single dose 300mg)
3. Sustained Ventricular Tachycardia in the stable patient:
 - a. Loading dose of 5mg/kg IV/IO over 20 minutes. (Maximum single dose 300mg)

IIV. Warnings

- A. Hypotension is the most common adverse effect usually due to the rate of infusion. Hypotension should be treated initially with slowing the infusion. Additional standard care may include vasopressors, positive inotropic agents, and volume expanders.

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- B. Bradycardia and AV blocks can occur, and it is not dose related but due to rate of infusion. Bradycardia should be treated by slowing the infusion rate or discontinuing amiodarone. Be prepared to externally pace if bradycardia persists.