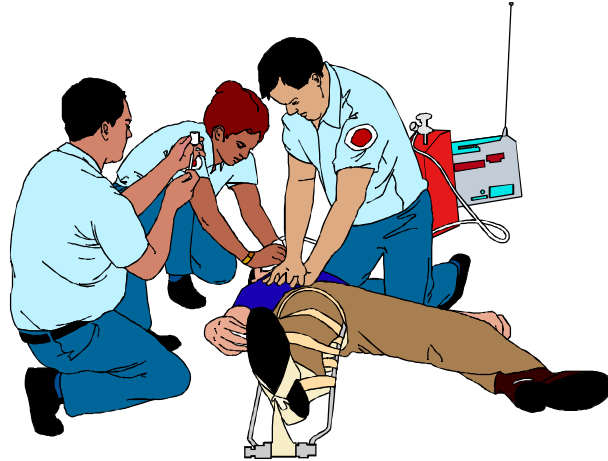




# Prehospital Care Monograph



## *Amiodarone (Cordarone)*

**Training Division  
City of Pittsburgh  
Bureau of Emergency Medical Services  
And  
Medical Direction Committee**



**Center for Emergency Medicine  
Of Western Pennsylvania**

*This monograph is dedicated to the professional men and women of the City of Pittsburgh's Bureau of Emergency Medical Services*

This monograph was created by the City of Pittsburgh Bureau of Emergency Medical Service's Training Division with the assistance of the Medical Direction Committee

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**Overview:**

The use of amiodarone as a “new” treatment for cardiac arrest patients has recently made its way into the mainstream media. Recent clinical trials conducted by the University of Washington’s Medical Center found a nearly 30 percent increase in the number of patients resuscitated (at the scene of their collapse) to a stable heart rhythm, compared to those who received other standard treatments for cardiac arrest. However, it is important to note that the drug offered no improvement in survival to discharge.

Based upon the successful use of amiodarone in the pre-hospital environment and the dwindling supply of Bretylium, the American College of Cardiology, the American Heart Association and various EMS agencies across the country are looking at ways to incorporate this medication into their cardiac arrest protocols.

Like other EMS agencies, Pittsburgh EMS is looking into ways to incorporate this medication into its existing treatment protocols. This monograph is designed to familiarize our Bureau’s paramedics with the medication.

**Actions:**

Amiodarone HCl (Cordarone) is a member of a new class of antiarrhythmic medications with predominantly class III effects. It influences all electrophysiologically important parts of the heart by:

- prolonging the myocardial cell-action potential duration
- prolonging the refractory period.

Amiodarone blocks the myocardial sodium channels at rapid pacing frequencies as well as the potassium channels. The result of which is a reduction in the automaticity of the S-A node as well as a reduction of contractility and conduction velocity in the A-V node, Ventricles, Bundle of His and Purkinje system

Additionally, it is also known to promote the dilation of coronary and peripheral blood vessels thereby decreasing cardiac workload and consequently myocardial oxygen consumption.

**Indications:**

In the United States, the use of amiodarone is approved for the initial and / or prophylactic treatment of life threatening ventricular arrhythmias (i.e., ventricular fibrillation or hemodynamically unstable ventricular tachycardia) that are refractory to other available antiarrhythmics or when alternative agents cannot be tolerated.

## **Pittsburgh EMS:**

The EMS physicians currently carry this medication in their drug bag. This decision was based upon the:

- limited amount of research supporting the use of amiodarone in the pre-hospital setting
- cost of the medication (\$150.00/dose)
- drug is currently not state approved drug list (the drug will be added very soon)
- current lack of American Heart Association support of the drug as first line treatment for VF/VT

This decision may change based upon the future recommendations of the American Heart Association.

## **Contraindications:**

There are no contraindications to administering Amiodarone HCl to cardiac arrest patients presenting with ventricular fibrillation or ventricular tachycardia.

The use of Amiodarone HCl is however contraindicated for patients suffering from cardiogenic shock, marked sinus bradycardia, and second or third degree A-V blocks in the absence of a functioning pacemaker. In addition, hypersensitivity to the drug is a contraindication.

## **Adverse reactions:**

Hypotension is the most commonly seen adverse effect reaction and may be related to the infusion rate.

*Note: Hypotension resulting from the use of amiodarone should be treated by slowing the infusion rate and/or the use of volume expansion, and positive inotropic agents, vasopressor drugs).*

Other adverse reactions include:

Cardiovascular	Congestive heart failure, cardiac arrhythmias, cardiogenic shock, SA node dysfunction, bradycardia.
CNS	Abnormal taste and smell, abnormal salivation, peripheral neuropathy, extrapyramidal symptoms, headache, fatigue, malaise
Dermatologic	Flushing, photosensitivity, solar dermatitis,
Gastrointestinal	Constipation, nausea, vomiting
Hepatic	Abnormal liver-function tests
Neurological	Fatigue, malaise, tremors, abnormal involuntary movements, lack of coordination, parenthesis
Ophthalmological	Visual disturbances
Other	Edema, coagulation abnormalities
Respiratory	Pulmonary toxicity, pulmonary inflammation or fibrosis

**Overdose:**

Effects commonly associated with inadvertent overdosing of amiodarone include hypotension, cardiogenic shock, bradycardia, A-V blocks and hepatotoxicity.

**Overdose Treatment:**

- Patients suffering from hypotension and/or cardiogenic shock should be treated by slowing the infusion rate or with standard therapy (positive inotropic drug agents, vasopressor drugs, or volume expansion).
- Treatment for bradycardia and A-V blocks may require temporary pacing.

**How supplied:**

150mg / 3ml ampules

**Dose Administration:**

In cardiac arrest patients:

- 300mg rapid peripheral infusion.

In non-arrest patients with refractory ventricular arrhythmias:

150mg IV slowly over 10 minutes

**Special Considerations:**

Amiodarone should be slowly drawn up to prevent potential bubbling of the medication.