### AMIODARONE

**Class III antiarhythmic**

1. Prolongs the QT interval
2. Slows heart rate and atrioventricular nodal conduction (via calcium channel and beta-receptor blockade)
3. Prolongs refractoriness (via potassium and sodium channel blockade)
   - Slows intracardiac conduction (via sodium channel blockade)

**INDICATIONS**
- Severe cases of tachyarrhythmias
- Pulseless VT/VF cardiac arrest

**DOSAGE & ADMINISTRATION**

Incompatible with saline and should be administered solely in **glucose 5% solution**.

Amiodarone should be prepared in glass or rigid PVC containers. **0.2 micron filter should be used**

Administer whenever possible through a CVAD

**INITIAL**

- 5mg/kg diluted in 100mls of 5% dextrose infused over 20 minutes -2 hours
- Preferably via a central venous catheter (use an in-line filter) Or a PICC line or large bore peripheral catheter 18g inserted via cubital fossa

**INTRAVENTOUS (IV) INFUSION**

- 600mg – 1200mg diluted in 250mls of 5% dextrose -**non-PVC bag**
- Infused over a 24 hour period
- Using the **non PVC giving set**

**INTERMITTENT**

- 100-300mg daily or twice daily in 100mls of 5% dextrose over 30-60 minutes
- Transfer to oral therapy as soon as practicable, recommend less than or equal to 2 day overlap of oral and IV therapy

**CARDIAC ARREST: PULSLESS VT/VF**

- 300mg in 20mls of 5% dextrose over 2-3 minutes, IV or intraosseous IO given after the third (3rd) shock.

- Repeat dose of 150 mg rapid infusion may be considered
### CRGH ICU Drug Guideline: AMIODARONE

**Concord Repatriation General Hospital**

**Intensive Care Unit Drug Guidelines**

**MONITORING**

- ECG and BP monitoring, and defibrillation facilities **must** be available
- Monitor for lengthening QT interval, bradycardia and hypotension
- Monitor ECG, serum K, TFTs, LFTs
- Daily ECG
- Peripheral infusions monitor for signs of phlebitis
- Chest X-ray to be performed if patient develops unexplained dyspnoea

**ADVERSE REACTIONS**

- Bradyarrhythmias, hypotension, prolonged QT, atypical ventricular tachycardias
- Nausea, hot flushes, abnormal thyroid function tests, abnormal liver function tests, pulmonary toxicity
- Thrombophlebitis with peripheral administration

**CONTRAINDICATIONS**

- Hypersensitivity to the drug or any of its components (iodine)
- Marked sinus bradycardia
- Second or third degree heart block unless a functioning pacemaker is available
- Cardiogenic shock
- Hypotension, severe respiratory failure
- History of thyroid dysfunction
- Sick sinus syndrome
- Pregnancy and lactation
- Heart failure myocardopathy

**PRECAUTIONS**

- ECG and serum potassium measurement should be performed before treatment is initiated
- Caution should be exercised in cases of hypotension, severe respiratory failure or severe heart failure
- Fast administration can cause cardiac collapse. Beta blockers and Ca channel blockers may potentiate hypotension, bradycardia and increase the risk of AV block or sinus arrest when given with Amiodarone
  - Amiodarone can increase serum digoxin and phenytoin levels if given concurrently
  - May increase the effects of anticoagulants leading to serious haemorrhage

**COMPATABILITY**

Administer **ONLY** with 5% Dextrose

**TRADE NAMES**

Cordarone X

**REFERENCES:**

Liverpool Hospital Drug Guideline: Amiodarone (CordaroneX); MIMS; Micromedex; The Australian Injectable Drugs Handbook; Australian Medicines Handbook

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**REVISION DUE:**

August 2017
## FRUSEMIDE

### ACTIONS
- Potent loop diuretic with rapid onset of action
- Inhibits Na⁺ and Cl⁻ reabsorption, primarily in the ascending loop of Henle
- Causes some peripheral vasodilation
- When given intravenously diuresis is usually produced within 5 minutes and lasts 2 to 3 hours

### INDICATIONS
- Pulmonary, peripheral and cerebral oedema
- Congestive cardiac failure and hypertension
- Renal disease
- Hepatic cirrhosis

### DOSAGE & ADMINISTRATION

#### INTRAVENOUS INFUSION
- **250 - 500mg**
- Neat OR diluted with 25mls of 0.9% Normal Saline for a total volume of 50mls
- Infuse at a rate less than or equal to 4mg/minute
- Maximum daily dose 1g/day - Ototoxicity may result, with high doses
- **Must be infused via a syringe driver** (volumetric pump if using premixed bags)

#### INTRAVENOUS INJECTION
- Doses up to and including 80 mg may be injected slowly over 2-5 minutes
- Observe for a prompt diuresis.

#### SUBCUTANEOUS INJECTION – not recommended
- Suitable in palliative care patients as an intermittent injection or as a subcutaneous injection

#### MONITORING
- Monitoring of serum electrolytes, fluids, glucose and renal function
- Observe for a prompt diuresis post administration.

### ADVERSE REACTIONS
- Hypotension
- Hypovolaemia
- Electrolyte losses especially potassium and magnesium
- Arrhythmias due to potassium loss and Thrombophlebitis
- Ototoxicity with rapid infusion Metabolic alkalosis

### CONTRAINDICATION
- Hypovolaemia
- Systolic blood pressure < 100mmHg
- Hypokalaemia
- Hypersensitivity
- Anuria
- Dehydration
- Gout

### PRECAUTIONS
- Electrolyte disturbances such as hypokalaemia, hyponatraemia must be corrected prior to administering frusemide
- Fluid balance needs to be closely observed as diuresis may cause dehydration, and blood volume reduction
- Ototoxicity may occur with rapid administration of high doses of frusemide
- Solutions with a yellow colour should not be used

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**IMPORTANT:** This information is intended for use in the ICU only. For more detailed information please refer to MIMS, Micromedex, and The Australian Injectable Drug Handbook. **Do not use** this table as the sole source of information for patient care.
**Concord Repatriation General Hospital**
**Intensive Care Unit Drug Guidelines**

**FRUSEMIDE**
- Treatment with nephrotoxic drugs
- Undiluted solution – protect from light. Crystal deposits from storage at low temperature may be dissolved with gentle warming.

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