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SJGHC Medicine Guideline 18 Amiodarone (Intravenous)

Our Vision - We are recognised for care that provides healing, hope and a greater sense of dignity, especially to those most in need.

Our Mission - To continue the healing mission of Jesus.

RELATED DOCUMENTS *(Site Specific)*

Nil

ASSOCIATED MEDICINE GUIDELINES

Nil

ASSOCIATED POLICY DOCUMENTS

MS0001 Medication Safety - Allergy, Alert and Adverse Drug Reaction and Reporting Policy

MS0004 Medication Administration Policy

MS0006 Medication Administration Scope of Practice Policy

MS0011 High Risk Medication Management Policy

AD0002 Escalation of Care Policy

FOR FURTHER INFORMATION REFER TO:

MIMS Online

AUSTRALIAN INJECTABLE DRUGS HANDBOOK (where available)

AUSTRALIAN MEDICINES HANDBOOK (where available)

PURPOSE

To provide advice to promote the safe administration of intravenous amiodarone in adult patients.

SCOPE

This medicine guideline applies at:

1. St John of God Health Care Hospitals
   Administration restricted to:
   1. Critical Care Areas
   2. Acute Emergency Situations

Medications must be administered in accordance with MS0006 Medication Administration Scope of Practice.

ACTIONS

Amiodarone is a class III antiarrhythmic agent that prolongs the action potential duration and refractory period of the atrial, nodal and ventricular tissues. It increases coronary blood flow, decreases cardiac oxygen requirements, reduces automaticity and prolongs PR and QT intervals.

Indications:

- Ventricular arrhythmias
- Atrial fibrillation
- Atrial flutter
- Wolff-Parkinson-White syndrome

PRESENTATION

Amiodarone 150 mg/3 mL ampoule

CAUTION

- Bradycardia, Sick Sinus Syndrome, AV block, conduction disease, hypotension
- Electrolyte imbalances (e.g. hypokalaemia, hyperkalaemia, hypomagnesaemia) as these increase the risk of arrhythmias
- A QT interval greater than 500 milliseconds increases risk of arrhythmias
- Syncope
- Pregnancy / Lactation
- Respiratory failure
- Thyroid dysfunction

- Iodine allergy
- Concomitant Torsade's de Pointes inducers
- Hepatic disease

DOSAGE

Routine Therapy (Intravenous Infusion)			
	Dose	**Diluent**	**Duration**
Loading	5 mg/kg (e.g. 300 mg for 60 kg patient)	100 mL glucose 5% via central line 250 mL glucose 5% via peripheral line*	20 to 120 minutes
Maintenance	15 to 20 mg/kg, maximum 1200mg (e.g. 900 mg for 60 kg patient).	500 mL glucose 5% (non-PVC container)	24 hours (21 mL/hr)
Cardiac Arrest (Intravenous Injection)			
Bolus	150 to 300 mg	10 to 20 mL glucose 5%	1 to 2 minutes

*Loading dose may be diluted to 100 mL and given via a peripheral line for fluid restricted patients only if the cardiologist confirms the patient cannot tolerate 250 mL.

Central line administration: Maintenance dose may be diluted in 50mL glucose 5% if given centrally. Follow local site practice.

ADMINISTRATION

HIGH RISK MEDICINE - An independent double check must occur in accordance with MS0011 High Risk Medication Management.

For administration of a high concentration infusion (greater than 2 mg/mL) or when repeated or continuous intravenous administration is anticipated consider administration via a central venous access device (CVAD).

Do not use concentrations less than 600 microgram/mL.

To minimise risk of thrombophlebitis when administering via a peripheral intravenous cannula (PIVC):

- Limit to a single dose via a large and 'stable' vein using a large bore PIVC.
- Dilute in glucose 5% to a maximum concentration of 2 mg/mL.
- Use an in line filter (0.22 micron).
- Avoid areas of flexion (e.g. cubital fossa veins) and ensure peripheral intravenous cannula is stabilised. Ideally use a large, soft and resilient vein in forearm.
- Use the most appropriate cannula size for the vein. Use of a peripheral intravenous cannula that is too large in diameter for the vein increases the risk of phlebitis.

Amiodarone is absorbed onto PVC infusion bags and intravenous tubing, and leaches plasticiser (DEHP) from PVC. Non-DEHP infusion sets are preferred and if treatment is to continue for more than 24 hours prepare infusion in a glass bottle, rigid PVC container (e.g. Braun Ecolofac®) or non-PVC infusion bag (e.g. Aviva® or Viaflo® by Baxter). Alternatively, preparation of the maintenance dose may be split into two 250 mL bags to avoid the requirement for a non-PVC container.

Infusion must be prepared immediately prior to use.

Draw up amiodarone slowly to reduce the amount of air bubbles in solution.

Administer via an infusion pump.

Due to poor compatibility with other solutions and medications amiodarone must be administered via a dedicated line.

OBSERVATIONS

Baseline observations: haemodynamic monitoring and serum potassium.

During administration:

- Continuous cardiac monitoring
- Peripheral intravenous site:
    - Check the visual infusion phlebitis (VIP) score for the peripheral intravenous site every hour while the infusion is running and up to 24 hours after ceasing the infusion.
    - Site reactions include pain, erythema, urticaria, oedema, necrosis, extravasation, infiltration, inflammation, induration and thrombophlebitis.
- Haemodynamic monitoring:
    - 0 to 15 minutes - every 5 minutes
    - 15 minutes to end of loading dose - every 15 minutes
    - Maintenance infusion - hourly for 2 hours, then 2 hourly if stable.

Routine monitoring:

- thyroid function, liver function, magnesium and potassium levels.

COMPATIBILITIES

Compatible: glucose 5%

Incompatible: sodium chloride solutions

IMPORTANT DRUG INTERACTIONS

ALERT: Amiodarone interacts with many medicines: consult pharmacist or references for more information.

- **Warfarin**
    - Use with caution. Amiodarone potentiates anticoagulant therapy and increases the risk of bleeding.
- **Digoxin**
    - Plasma digoxin levels can increase by up to 70% with amiodarone therapy, hence patients close observation required for patients on digoxin for toxicity.
- **Other**
- Medications that prolong QT interval, e.g. sotalol, haloperidol, clarithromycin, fluconazole, moxifloxacin, citalopram, domperidone
- Medications that cause hypokalaemia, e.g. stimulating laxative agents, diuretics.
- Mediations that lower heart rate, e.g. beta blockers, some calcium channel blockers (verapamil, diltiazem) and dexmedetomidine.

IMPORTANT ADVERSE EFFECTS

Thrombophlebitis

The risk of thrombophlebitis increases with higher concentrations or continuous peripheral intravenous administration. See ADMINISTRATION section.

Other adverse effects

- Hypotension, QT prolongation, T wave abnormalities, bradycardia
- Circulatory collapse - overdose or rapid administration situations
- Hot flushes, sweating, nausea, anorexia, unpleasant taste, headache, dizziness, fatigue, sleep disturbances (e.g. vivid dreams or nightmares)
- Abnormal liver function tests (LFTs) and thyroid function
- Skin sensitivity to light

ADDITIONAL INFORMATION

Oral amiodarone may be administered while the patient is receiving intravenous infusion.

AUTHORITY

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Approval Signatures

Step Description	Approver	Date
Policy Governance Approver	Joanna Gurak: Coordinator Clinical Policy & Documentation	May 2024
Clinical Governance Approver	Luis Prado: Chief Medical Officer	Apr 2024
Medicine Guideline Owners	Sylvia White: Clinical Pharmacist	Jan 2024

Applicability

Accord, Ballarat Hospital, Bendigo Hospital, Berwick Hospital, Bunbury Hospital, Frankston Hospital, Geelong Hospital, Geraldton Hospital, Group Services, Hauora Trust, Hawkesbury District Health Service, Healthcare at Home, Langmore Centre, Marillac, Midland Public and Private Hospitals, Mt Lawley Hospital, Murdoch Hospital, SJG Foundation, SJG NSW Mental Health, Social Outreach (Australia and Timor-Leste), St John of God Administration, Subiaco Hospital, Warrnambool Hospital