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**Drug Therapy Protocols: Amiodarone**

<table>
<thead>
<tr>
<th>Policy code</th>
<th>DTP_AMI_0120</th>
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<tbody>
<tr>
<td>Date</td>
<td>January, 2020</td>
</tr>
<tr>
<td>Purpose</td>
<td>To ensure a consistent procedural approach to amiodarone administration.</td>
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<tr>
<td>Scope</td>
<td>Applies to Queensland Ambulance Service (QAS) clinical staff.</td>
</tr>
<tr>
<td>Health care setting</td>
<td>Pre-hospital assessment and treatment.</td>
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<tr>
<td>Population</td>
<td>Applies to all ages unless stated otherwise.</td>
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<tr>
<td>Source of funding</td>
<td>Internal – 100%</td>
</tr>
<tr>
<td>Author</td>
<td>Clinical Quality &amp; Patient Safety Unit, QAS</td>
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<tr>
<td>Review date</td>
<td>January, 2023</td>
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Amiodarone

Drug class
Anti-arrhythmic

Pharmacology
Amiodarone prolongs the duration of the action potential and therefore the refractory period of atrial, nodal and ventricular tissues. It also reduces conduction across all cardiac tissue – including myocardial and conducting system cells. Amiodarone demonstrates electrophysiological properties across all Vaughan-Williams Class groups, which enables a broad spectrum of activity.\(^1-^3\)

Metabolism
The majority of amiodarone is excreted via the liver and GI tract by biliary excretion; there may be some hepatic recirculation.

Indications
- **Cardiac arrest** (refractory VF OR pulseless VT)\(^4\)
- **Sustained conscious VT** (haemodynamically stable)

Contraindications
- **Cardiac arrest** (refractory VF OR pulseless VT): Nil
- **Sustained conscious VT** (haemodynamically stable):
  - Allergy and/or Adverse Drug Reaction
  - severe conduction disorders (unless pacemaker or AICD in situ)
  - current amiodarone therapy
  - concurrent anti-arrhythmic therapy that prolongs the QT interval
  - pregnancy and/or lactation

Precautions
- **Cardiac arrest** (refractory VF OR pulseless VT):
  - concurrent anti-arrhythmic therapy that prolongs the QT interval\(^5\)
  - thyroid disease
- **Sustained conscious VT** (haemodynamically stable):
  - hypotension
  - thyroid disease\(^2,^6\)
Amiodarone

**Side effects**
- Hypotension\[1,2\]
- Bradycardia
- Nausea and/or vomiting
- Peripheral paraesthesia

**Routes of administration**
- Intravenous injection (IV)
- Intraosseous injection (IO)
- Intravenous infusion (IV INF)

**Schedule**
- S4 (Restricted drugs)

**Presentation**
- Ampoule, 150 mg/3 mL amiodarone

**Onset (IV)** | **Duration (IV)** | **Half-life**
---|---|---
5 minutes | 30 minutes | 14–110 days (with chronic dosing)

**Special notes**
- Clinicians must only administer medications for the listed indications and dosing range. Any consideration for treatment outside the listed scope of practice requires mandatory approval through the QAS Clinical Consultation and Advice Line.
- If the patient is on oral amiodarone, the following cardiac arrest administration protocols continue to be authorised.
- If lidocaine (lignocaine) has been administered to a patient with conscious VT that progresses into cardiac arrest, the following administration protocols continue to be authorised.
- If the patient is in Torsade de Pointes due to suspected prolonged QT interval from excess amiodarone administration, magnesium sulphate administration is to be considered.
- After completion of a risk/benefit analysis, the QAS authorises the administration of sodium chloride 0.9% (flush or running IV line) following amiodarone administration in cardiac arrest, despite manufacturer’s recommendations.

**Adult dosages**

**Cardiac arrest** (refractory VF OR pulseless VT)
- IV/IO
  - 300 mg
  - Slow push over 2 minutes.
  - Repeated once at 150 mg after 5 minutes.
  - **Total maximum dose – 450 mg.**

**Sustained conscious VT** (haemodynamically stable)
- IV INF
  - Loading dose – 300 mg over 30 minutes.
  - **Infusion preparation:** Mix 300 mg amiodarone (6 mL) with 44 mL of glucose 5% in a 50 mL syringe to achieve a final concentration of 300 mg/50 mL. Ensure syringe is appropriately labelled. Administer infusion via the Perfusor® Space Medication Library (Amiodarone load-Adult).
**Adult dosages (cont.)**

### Sustained conscious VT (haemodynamically stable)

<table>
<thead>
<tr>
<th>CCP</th>
<th>IV INF</th>
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CCP ESoP aeromedical – RSQ Clinical Coordinator consultation and approval required in all situations. Continue amiodarone infusions already commenced at hospital, using the same concentration and administration rate already established. This may involve withdrawing previously mixed and labelled solutions prepared from the referring hospital. Should the RSQ Clinical Coordinator request an amiodarone infusion be commenced, the following procedure is to be undertaken.

**Loading dose – 300 mg over 30 minutes**

Infusion preparation: Mix 300 mg amiodarone (6 mL) with 44 mL of glucose 5% in a 50 mL syringe to achieve a final concentration of 300 mg /50 mL. Ensure syringe is appropriately labelled.

**Maintenance dose – 900 mg over 24 hours**

**Syringe preparation:** Mix 450 mg amiodarone (9 mL) with 41 mL of glucose 5% in a 50 mL syringe to achieve a final concentration of 450 mg /50 mL. Ensure syringe is appropriately labelled.

### Paediatric dosages

#### Cardiac arrest (refractory VF or pulseless VT)

<table>
<thead>
<tr>
<th>CP</th>
<th>IV/IO</th>
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5 mg/kg

Slow push over 2 minutes.

Single dose only.

**Syringe preparation:** Mix 150 mg (3 mL) of amiodarone with 12 mL of glucose 5% (totalling 15 mL) in a 20 mL syringe to achieve a final concentration of 10 mg/mL.