Date: April, 2018

Purpose: To ensure a consistent procedural approach to Lidocaine 1% (lignocaine 1%) administration.

Scope: Applies to all QAS clinical staff.

Author: Clinical Quality & Patient Safety Unit, QAS

Review date: April, 2021

Information security: This document has been security classified using the Queensland Government Information Security Classification Framework (QGISCF) as UNCLASSIFIED and will be managed according to the requirements of the QGISF.

URL: https://ambulance.qld.gov.au/clinical.html

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit http://creativecommons.org/licenses/by-nc-nd/4.0/.
Drug class
Local anaesthetic

Pharmacology
Lidocaine (lignocaine 1%) stabilises the neuronal membrane and prevents the transmission of nerve impulses, thereby effecting a local anaesthetic action.[1–4]

Metabolism
80% metabolised by the liver and the remainder is excreted by the kidneys.[1]

Indications
- Pain associated with IO drug and fluid administration following EZ-IO® needle insertion
- Local anaesthesia
  - radial artery line placement
  - Skin closure – suturing
  - fish hook removal
  - thoracostomy

Contraindications
- Allergy and/or Adverse Drug Reaction

Precautions
- Inadvertent intravascular injection

Side effects
- Convulsions
- Hypotension
- Nausea
- Tinnitus

Presentation
- Ampoule, 50 mg/5 mL lignocaine 1%

Onset (IV) | Duration (IV) | Half-life
--- | --- | ---
5–10 minutes | 1–2.5 hours | Not applicable
Special notes

- Local anaesthesia injections should always be administered slowly with frequent aspirations to avoid inadvertent intravascular injection.
- All cannulae and IV lines must be flushed thoroughly with sodium chloride 0.9% following each medication administration.

Schedule

- S4 (Restricted drugs).

Routes of administration

- Intraosseous injection (IO)
- Subcutaneous injection (SUBCUT)

Adult dosages

Pain associated with IO drug and fluid administration following EZ-IO® needle insertion

<table>
<thead>
<tr>
<th>Route</th>
<th>Dosage</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>IO</td>
<td>60 mg. (Administer 40 mg over 2 minutes, allow lidocaine to dwell in IO space for 1 minute, administer a rapid 10 mL sodium chloride 0.9% flush and then administer and additional 20 mg of lidocaine over 1 minute). Total max dose 60 mg.</td>
<td></td>
</tr>
</tbody>
</table>

Local anaesthesia (for the purpose of radial artery line placement, skin closure – suturing, fishhook removal AND/OR thoracostomy)

<table>
<thead>
<tr>
<th>Route</th>
<th>Dosage</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBCUT</td>
<td>Up to 3 mg/kg Total max infiltration 200 mg.</td>
<td></td>
</tr>
</tbody>
</table>

Paediatric dosages

Pain associated with IO drug and fluid administration following EZ-IO® needle insertion

<table>
<thead>
<tr>
<th>Route</th>
<th>Dosage</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>IO</td>
<td>0.75 mg/kg. (Administer 0.5 mg/kg (max 40 mg) over 2 minutes, allow lidocaine to dwell in IO space for 1 minute, administer a rapid 5 mL sodium chloride 0.9% flush and then administer an additional half initial dose of lidocaine (max 20 mg) over 1 minute. Total max dose 60 mg.</td>
<td></td>
</tr>
</tbody>
</table>

Local anaesthesia (for the purpose of radial artery line placement, skin closure – suturing, fishhook removal AND/OR thoracostomy)

<table>
<thead>
<tr>
<th>Route</th>
<th>Dosage</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBCUT</td>
<td>Up to 3 mg/kg Total max infiltration 200 mg.</td>
<td></td>
</tr>
</tbody>
</table>