5.4 LIGNOCAINE INFUSION

1. BACKGROUND
Lignocaine is a local anaesthetic which acts by blocking sodium channels on nerves, thus reducing nociceptive (pain) transmission. At low systemic doses lignocaine blocks nociceptive neurons without interfering with normal sensory, motor or cardiac function. Low serum levels of lignocaine are required to produce an analgesic effect. Lignocaine is used for therapeutic treatment of neuropathic pain.

2. PROCEDURE

INDICATIONS
- Severe acute and chronic neuropathic pain
- Rescue analgesia for acute neuropathic pain
- ‘Circuit breaker’ (switch off) technique for neuropathic pain syndromes
- Adjuvant analgesia during and following surgery
- Burns pain management
- Severe headache or migraine
- Cardiac rhythm disorders
- Cancer pain

CONTRAINDICATIONS
- Unavailability of continuous ECG and patient monitoring
- Some cardiac arrhythmias e.g. Atrial fibrillation, first and second degree heart blocks,
- Local anaesthesia by another route i.e. lignocaine patch, epidural or regional infusion
- Cardiovascular instability (shock)
- Renal or liver impairment
- Seizure disorder
- Pregnancy

PRE INFUSION ASSESSMENT
- 12 lead ECG if there is no record of one in the last 12 months
- Full details of the patient’s current medications
- Patients need to be asked for a cardiac history and if they have any known cardiac conditions
- A set of baseline observations to be recorded; pulse, blood pressure, oxygen saturation and pain scores
- Check allergies and contraindications
- Resuscitation equipment must readily accessible with immediate access to Intralipid, the defibrillator and diazepam

INFUSION PROCEDURE

Lignocaine 5mg/kg in sodium chloride 0.9% 250mL
Commence the infusion at 125mL per hour (over 2 hours)

- Continuous ECG monitoring
- 10 minutely B/P recording and documentation
- Continuous pulse oximetry and oxygen saturation
- Any complaints of palpitations, sweating, dizziness, severe nausea, peri-orbital numbness or tinnitus stop the infusion and inform the medical staff
- Once the infusion is completed the patient is to stay for a minimum of one hour and have their BP, Pulse and oxygen saturations recorded every 15 minutes

**ADVERSE EFFECTS**
May occur and are usually mild, transient and may include:
- Numbness around lips or face, metallic taste
- Tinnitus
- Drowsiness
- Confusion
- Visual and auditory disturbances
- Headache
- Muscle twitches
- Nausea and vomiting
- ECG: ectopic beats, bradycardia
- Hypotension

If these occur **stop the infusion** and inform the medical staff

| Seizures and cardiac arrest may occur with severe toxicity → call Code Blue Medical emergency. Commence CPR |

<table>
<thead>
<tr>
<th>Administration of Intralipid in case of cardiac arrest or seizure</th>
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<tbody>
<tr>
<td>Bolus of 1.5mL/kg of Intralipid 20% IV stat (approx 100ml in 70kg patient)</td>
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<tr>
<td>Start an infusion of Intralipid 20% at 15mL/kg (approx 1000ml/hr in 70kg patient)</td>
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<td>Give further two bolus doses of 1.5mL/ kg IV stat if there is an inadequate response within 5 minutes</td>
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**REFERENCES ( STANDARDS)**

| National Standards – 4.1 |
| Legislation - Nil |
| Related Policies - Other related documents – Nil |

**RESPONSIBILITY**

| Policy Sponsor | HoD Anaesthetics |
| Initial Endorsement | March 2014 |
| Last Reviewed | |
| Last Amended | |
| Review date | March 2017 |

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Access the current version from the WNHS website