LIGNOCAINE HYDROCHLORIDE 1% with ADRENALINE (1:100,000)

Subcutaneous injection by Accredited Emergency Nurses for local anaesthesia of minor wounds

POLICY STATEMENT

This order may only be activated under the specific circumstances set out in the section “Indications” and provided there are no contraindications present.

The administering nurse must be accredited to administer the drug and record the administration in ink on the once only section of the medication chart. This order must be checked and signed by a medical officer within 24 hours, and preferably within 4 hours, of activation of the standing order.

This standing order is only valid until the date noted by the Drug and Quality Use of Medicines Committee under the heading "Effective To:" at the end of this document.

1. NURSING ACCREDITATION REQUIREMENTS

Accredited Registered Nurses employed within SESLHD Emergency Departments (ED) who are working in a extended practice nurse or Advanced Clinical Nurse (ACN) capacity must have at least a minimum of two (2) years emergency / critical care experience and must be able to work at a minimum of resuscitation level or above (i.e. triage / clinical initiatives nurse) and/or as approved by the ED Nurse Manager.

2. INDICATIONS

Adult patients (16 years of age and over) who present to SESLHD Emergency Department (ED) requiring localised, regional anaesthesia to facilitate cleansing, examination and primary closure, (suturing) of minor/superficial wounds within ED guidelines after medical officer or nurse practitioner review and approval of treatment method

3. CONTRAINDICATIONS

- Less than 16 years of age
- Haemodynamically unstable (meets PACE / Between The Flag criteria\(^2\))
- Deep or highly contaminated wounds e.g. burns, bites or puncture wounds
- Allergy or hypersensitivity to amide type local anaesthetics or to any excipients.
- Allergy or hypersensitivity to sodium metabisulfite or a known sensitivity to sympathomimetic amines.
- Inflammation and/or sepsis in the region of the proposed injection and/or in the presence of septicaemia.
- Local analgesia in parts of the body with compromised blood supply or supplied by end arteries, e.g. fingers, toes, nose, ears or penis
- Cerebral arteriosclerosis.
4. PRECAUTIONS

- Elderly, young or debilitated patients, including those with advanced liver disease or severe renal dysfunction,
- Epilepsy,
- Impaired cardiac function
- Neurological conditions
- Hepatic and/or renal impairment
- Advanced diabetes, poorly controlled thyrotoxicosis or any other pathological conditions that might be aggravated by the effects of adrenaline.
- Prostatic hypertrophy.
- Porphyria
- Pregnancy, lactation

5. ACTIONS/MONITORING REQUIRED

**Pre administration:**

- Initial patient wound assessment should include brief history, allergies and consideration of any contraindications for using lignocaine.
- Assessment of previous local anaesthetic agents utilised and a full set of vitals (heart rate, blood pressure, respiration rate, temperature, Glasgow Coma Scale (GCS) and pain score) must be taken prior to administration of lignocaine hydrochloride 1% with adrenaline 1:100,000

**Documentation:**

- Document patient observations including the patient's pain score on the ED Standard Adult General Observation (SAGO) Chart and/or electronically within Firstnet.
- The administering nurse must record the administration in ink on the ‘once-only’ section of the National Inpatient Medication Chart (NIMC) as Emergency Department Standing Order (i.e. “ED SO”) plus print and sign their name.
- The EDSO drug order must be countersigned by the medical officer that subsequently assesses and treats the patient within 4 hours.
- The administering nurse must record in the patient’s progress notes the observations of the wound, the administration and effect of the medication.
- Drugs must be checked and ordered according to hospital policy and adhering to the Ministry of Health Policy Medication Handling in NSW Public Health Facilities PD2013_043.

**Post administration:**

- Careful and constant monitoring of cardiovascular and respiratory vital signs and the patient's state of consciousness and any signs of toxicity.
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Senior medical review must be obtained if any of the following occur:

1. Respiratory rate less than 10 breaths a minute
2. SpO2 <92%
3. Systolic blood pressure <100mmHg
4. Heart rate <50bpm
5. GCS < 14
6. Sedation score >1

- Notify a medical officer if patient meets PACE / Between The Flag criteria^2
- Monitor for side effects and consider escalation to senior medical officer as required

6. PROTOCOL/ADMINISTRATION GUIDELINES:

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<th>Drug</th>
<th>Dose</th>
<th>Route</th>
<th>Frequency</th>
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<td>Lignocaine Hydrochloride 1% (10 mg/mL) with Adrenaline 1:100,000 (10 microg/mL)</td>
<td>(0.3 mL/kg) Maximum dose 500mg or 50 mL</td>
<td>Subcutaneous Injection</td>
<td>Once only (5 minutes prior to procedure)</td>
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Injection should always be made slowly with frequent aspirations to avoid inadvertent intravascular injection.
Wait 5 minutes following administration of lignocaine for anaesthesia to take effect.

7. POTENTIAL ADVERSE EFFECTS/INTERACTIONS:

Most common side effects:
- **Central nervous system.** Lightheadedness, nervousness, apprehension, euphoria, confusion, dizziness, drowsiness, tinnitus, hyperacusis, blurred vision, vomiting, sensations of heat, cold or numbness, twitching, tremors, convulsions, unconsciousness, respiratory depression and/or arrest, agitation, difficulty swallowing, paraesthesia circumoral, numbness of the tongue and slurred speech.
- **Cardiovascular.** Bradycardia, hypotension, cardiovascular collapse, arrhythmias and hypertension
- Allergic reactions

Uncommon side effects:
- Adverse neurological reactions associated with the total dose administered the route of administration and the physical status of the patient.
- Peripheral nerve injury and arachnoiditis
Interactions:

- Antiarrhythmics, amiodarone, beta-blockers, digoxin
- Anti-epileptics
- Inhalational anaesthetics, nitrous oxide
- Muscle relaxants
- Agents structurally related to lignocaine
- Monoamine oxidase inhibitors, tricyclic antidepressants, phenothiazines
- Hypoglycaemics

8. REFERENCES:


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