1. Overview

These guidelines are for use in palliative care only

2. Presentation

- Haloperidol 5mg/mL, 1mL ampoules
- Haloperidol 0.5mg, 1.5mg and 5mg tablets
- Haloperidol oral solution 2mg/mL

3. Indication

<table>
<thead>
<tr>
<th>Licensed</th>
<th>Hallucinations, schizophrenia, delusions, delirium</th>
</tr>
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<tbody>
<tr>
<td>Unlicensed</td>
<td>• Haloperidol has been routinely administered subcutaneously in New Zealand particularly in palliative care but this is not a licensed route</td>
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<tr>
<td></td>
<td>• Nausea and vomiting, intractable hiccups</td>
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</table>
4. Dose

**Note:** These guidelines recommend a conversion ratio of 1:1 for oral to subcutaneous dosing as small doses are usually being used. Other sources may recommend different oral to parenteral conversion ratios. Caution should be used when changing patients from oral to parenteral doses.

<table>
<thead>
<tr>
<th>Indication</th>
<th>Regular and PRN doses</th>
<th>Initial subcutaneous infusion rate per 24hrs</th>
<th>Dose range over 24hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antiemetic</td>
<td><strong>Regular:</strong> 0.5mg – 1.5mg nocte &lt;br&gt; <strong>PRN:</strong> 0.5 – 1 mg prn q4–6 hourly (maximum 5 mg in 24 hours)</td>
<td>1 – 3mg</td>
<td>0.5-3mg (up to 10mg, although more than 5mg/24hours is seldom needed for nausea)</td>
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<tr>
<td>Delirium</td>
<td><strong>Regular:</strong> 0.5mg – 1.5mg nocte &lt;br&gt; <strong>PRN:</strong> 0.5mg – 1mg q2h PRN (maximum 5mg in 24 hours)</td>
<td>2 – 5mg</td>
<td>1 – 5mg (titrate to effect up to 20mg orally or 15mg subcut, although such high doses are rarely used)</td>
</tr>
<tr>
<td>Hiccups</td>
<td>1.5mg TDS</td>
<td>1-3mg</td>
<td>1 – 3mg</td>
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</tbody>
</table>

5. Diluent

- For subcutaneous bolus administration haloperidol does not need to be diluted
- When haloperidol is added to a syringe driver the recommended diluent is water for injection

6. Additional Equipment

- Subcutaneous Saf-T-Intima single lumen [ADM140] *(refer WDHB Policy Palliative Care- Subcut Site Selection and Insertion of BD Saf-T-Intima)*
- Continuous subcutaneous infusion pump (Niki T-34) if required

7. Compatibility

**Compatible With:**
Water for injection, 0.9% sodium chloride, morphine sulfate, clonazepam, cyclizine, glycopyrrolate, ketamine, metoclopramide, hyoscine hydrobromide, midazolam, octreotide, fentanyl, oxycodone, methadone

**Dose-Dependent Incompatibility:**
Hyoscine butylbromide but compatible at usual doses

**Concentration Dependent Incompatibility:**
Dexamethasone - may be compatible at small doses. Consult palliative care or pharmacy for advice
Haloperidol – Palliative Care

8. Administration

• Can be injected directly via a subcut needle or through a Saf-T-Intima which has already been placed
• The Saf-T-Intima should be flushed with 0.2ml of water for injection after administration
• Can be administered via a continuous subcutaneous pump (Niki T-34)

9. Observations and Monitoring

• Monitor for extrapyramidal symptoms (tremor, slurred speech, abnormal muscle tone)
• Akathisia (restlessness, feeling of inner restlessness)
• Excessive sedation
• Postural hypotension

10. Mechanism of Action

Haloperidol is a typical anti-psychotic. It is a specific dopamine (D2) - receptor antagonist and therefore it has a profound inhibitory effect on the chemoreceptor trigger zone (CTZ) making it a potent antiemetic for most causes of CTZ induced vomiting, e.g. medications such as morphine, renal or liver failure, sepsis, hypercalcaemia.

11. Contraindications and Precautions

Contraindications

• Parkinson’s disease
• Known hypersensitivity to haloperidol
• Significant cardiac disorders (i.e. ventricular arrhythmia, 2nd or 3rd degree heart block, decompensated heart failure)

Precautions

• Tardive dyskinesia
• QT prolongation and Torsades de Pointes
• Epilepsy
• Glaucoma
• Urinary Retention
• Hyperthyroidism
• Hepatic impairment
• History of stroke
• Hepatic encephalopathy
• Elderly or debilitated patients

12. Possible Adverse Effects

• Extrapyramidal reactions
• Neuroleptic malignant syndrome
• Akathisia
• Cardiovascular – e.g. postural hypotension, tachycardia, arrhythmias, QT prolongation
• Anticholinergic – e.g. constipation, urinary retention
13. Drug Interactions

- Increased clinical effect/toxicity of haloperidol (due to increased plasma levels) may occur with some CYP450 metabolising enzyme inhibitors e.g. fluconazole, itraconazole, fluoxetine, venlafaxine, promethazine
- Decreased clinical effect/toxicity of haloperidol (due to decreased plasma levels) may occur with some CYP450 metabolising inducers e.g. phenytoin, carbamazepine, rifampicin
- Additive CNS effects with other CNS depressants
- Caution with medications that prolong the QT interval i.e. amiodarone, sotalol, moxifloxacin, erythromycin, tricyclic antidepressants, methadone

14. References & Associated Documents

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<tr>
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<th>Reference</th>
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<tbody>
<tr>
<td>5</td>
<td>Smith, S. Compatibility of syringe driver admixtures for continuous subcutaneous infusion, Pharmacy Department Auckland Hospital 2002.</td>
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<tr>
<td>8</td>
<td>Twycross R, Wilcock A (eds). Palliative Care Formulary 4th edition. Palliativedrugs.com Ltd. Adapted by Dr Cathy Miller for use at WDHB</td>
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