Haloperidol – Palliative Care (Adults)

Contents

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

Licensed	Delirium, agitation and restlessness, nausea and vomiting
Unlicensed	• Haloperidol has been routinely administered subcutaneously in New Zealand particularly in palliative care but this is not a licensed route • Intractable hiccups

4. 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. In delirium, it is proposed that haloperidol may work by rebalancing the unbalanced cholinergic and dopaminergic systems.[3]

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Haloperidol is highly lipid soluble and is metabolised mainly by the CYP3A4 and CYP2D6 enzymes. It has a long half-life of 12 to 38 hours after oral administration.[1]

5. 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.

Indication	Regular and PRN doses	Initial subcutaneous infusion rate per 24hrs	Dose range over 24hrs
Antiemetic	**Regular:** 0.5mg – 1.5mg PO/subcut nocte **PRN:** 0.5 – 1 mg PO/subcut q4–6h PRN (maximum 5 mg in 24 hours including both regular and PRN)	1 – 3mg	0.5 – 3mg (up to 10mg, although more than 5mg/24hours is seldom needed for nausea)
Delirium	**Regular:** 0.5mg – 1.5mg PO/subcut nocte **PRN:** 0.5mg – 1mg PO/subcut q2h PRN (maximum 5mg in 24 hours including both regular and PRN)	2 – 5mg	0.5 – 5mg (titrate to effect up to 20mg orally or 15mg subcut, although such high doses are rarely used)
Hiccups	1.5mg PO/subcut TDS	1 – 3mg	1 – 3mg

6. 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.[4]

7. Additional Equipment

- Subcutaneous Saf-T-Intima single lumen [ADM140] (*See Te Whatu Ora Waitematā policy Palliative Care - Subcutaneous Site Selection and Insertion of BD Saf –T- Intima Cannula*).
- Continuous subcutaneous infusion pump (Niki T-34) if required.

8. Compatibility

Compatible With:

Water for injection, morphine sulphate, clonazepam, cyclizine, glycopyrrolate, ketamine, metoclopramide, hyoscine-N-butylbromide, hyoscine hydrobromide, midazolam, octreotide, fentanyl, oxycodone, methadone, levomepromazine (methotrimeprazine).[3, 4, 8]

Dose-Dependent Incompatibility:

0.9% sodium chloride - compatible at concentration ≤1mg/mL.[8]

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Concentration Dependent Incompatibility:

Dexamethasone - may be compatible at small doses. Consult palliative care or pharmacy for advice.[3, 8]

9. Administration

- Can be injected directly through a Saf-T-Intima.
- 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).

10. Observations and Monitoring

- Monitor for extrapyramidal symptoms (tremor, slurred speech, abnormal muscle tone, involuntary movements).
- Akathisia (restlessness, feeling of inner restlessness).
- Signs of acute dopamine depletion syndrome (severe muscle rigidity, pyrexia, tachycardia, dysphagia, sweating, tremor, leucocytosis).
- Excessive sedation.
- Postural hypotension.

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, debilitated or cognitively impaired patients

12. Possible Adverse Effects

- Extrapyramidal symptoms (e.g. dystonia, tremor, restlessness, abnormal movements)
- Neuroleptic malignant syndrome/Acute dopamine depletion syndrome
- Akathisia
- Cardiovascular – e.g. postural hypotension, tachycardia, arrhythmias, QT prolongation
- Anticholinergic – e.g. constipation, urinary retention, dry mouth
- Sedation.[3,4]

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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, levomepromazine.
- Decreased clinical effect/toxicity of haloperidol (due to decreased plasma levels) may occur with some CYP450 metabolising inducers e.g. phenytoin, carbamazepine, rifampicin, phenobarbital.
- Additive CNS effects with other CNS depressants e.g. anxiolytics, alcohol.
- Enhanced extrapyramidal side effects with lithium.
- Additive anticholinergic effects with other medications that have anticholinergic effects e.g. cyclizine, amitriptyline.
- Caution with medications that prolong the QT interval e.g. amiodarone, sotalol, ciprofloxacin, erythromycin, tricyclic antidepressants, selective serotonin reuptake inhibitors, methadone, domperidone, ondansetron, levomepromazine.[3,8]

14. References & Associated Documents

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