Metoclopramide – Palliative Care (Adults)

Contents

1. Overview

Purpose

This protocol outlines the administration, prescribing and monitoring of metoclopramide at Waitemata District Health Board.

Scope

All medical and nursing staff

⚠ This guideline is for use in Palliative Care ONLY.

2. Presentation

Metoclopramide 10mg tablets
Metoclopramide 10mg/2ml ampoules

- Metoclopramide injection is a clear, colourless solution

3. Indications

Licensed:

- Nausea and vomiting particularly in gastrointestinal disorders i.e. gastric irritation and delayed gastric emptying[1, 2]
- Nausea and vomiting associated with chemotherapy, radiotherapy, malignancy, dysmotility, dyspepsia, heartburn and migraine[2]

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Unlicensed:

- Intractable hiccups[2]

Unlicensed route of administration

- Subcutaneous use (but widely practiced worldwide)

4. Dose

The oral (PO), subcutaneous (subcut) and intravenous (IV) doses are the same.
Patients with nausea and vomiting should be given antiemetics regularly to prevent symptoms.
Use the parenteral route if oral absorption is compromised by vomiting.
Dose reductions of up to 50% may be necessary in patients with renal impairment (CrCl<30ml/min).

Indication	Oral	Parenteral (IV/Subcut)	Via Syringe driver
Gastric Stasis	10mg TDS- QID	10mg q6H – q8H	30mg Subcut over 24 hours (up to 100mg/24hr)
Functional Bowel obstruction due to Ileus/dysmotility without colic	10mg TDS- QID	10mg q6H – q8H ***(preferred route)***	30 – 60mg Subcut over 24 hours (up to 100mg/24hr)
Medication-induced nausea and vomiting	10mg TDS- QID	10mg q8H ***(preferred route)***	30mg – 60mg Subcut over 24 hours

Note: Metoclopramide is licensed for a maximum daily dose of 30mg daily in New Zealand.[1] However, doses of up to 100mg over 24 hours are commonly used in selected patients.[2]

5. Administration

5.1 Diluent

- For subcutaneous bolus / IV administration metoclopramide does not need to be diluted.[4]
- When added to a syringe driver the recommended diluent is water for injection.[2]

5.2 Additional Equipment

- Subcutaneous Saf-T-Intima single lumen [ADM140] (*refer WDHB Policy Palliative Care- Subcutaneous Site Selection, Insertion and Monitoring of BD Saf-T-Intima Cannula*)
- Continuous subcutaneous infusion pump (Niki T34) if required

5.3 Compatibility

Compatible with:

- Water for injection, 0.9% sodium chloride, morphine tartrate, morphine sulfate, levomepromazine, midazolam, dexamethasone, methadone, octreotide, ondansetron, ketamine, haloperidol, glycopyrrolate, fentanyl, oxycodone, clonazepam.[4, 5, 6]
- Although compatible, combination with hyoscine butylbromide or hyoscine hydrobromide is not recommended as the prokinetic effect of metoclopramide is theoretically inhibited by hyoscine.[6]

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Incompatible with:

- Cyclizine - crystallization may occur if metoclopramide is mixed at higher concentrations with cyclizine. This combination is best avoided.[6]

⚠ Do not use if the solution is cloudy or a precipitate is present.

5.4 Administration Procedure

- Inject through a Saf-T-Intima or directly via a subcutaneous needle.
- The Saf-T-Intima should be flushed with 0.2mL of water for injection after administration of medication.
- Can be administered via a continuous subcutaneous infusion pump (Niki T34).

6. Observation and Monitoring

- Observe patients for dystonic reactions (e.g. muscle twitching, involuntary movements) and akathisia (restlessness)
- Observe for increasing colic pain
- Observe for increased frequency of vomiting

7. Mechanism of action

Metoclopramide is a combined dopamine (D2) receptor antagonist and serotonin (5HT4) receptor agonist. In doses over 100mg subcut it manifests 5HT3 antagonism. It increases upper gut motility and gastric emptying without stimulating gastric, biliary or pancreatic secretions. It also increases lower oesophageal sphincter tone.[2, 3]

8. Contraindications and Precautions

Contraindications[1, 6]

- Parkinson's disease
- Mechanical bowel obstruction
- Bowel perforation
- Gastrointestinal haemorrhage
- Phaeochromocytoma
- Acute porphyria
- Avoid within 3 days of gastrointestinal surgery
- Hypersensitivity to metoclopramide

Precautions[1, 6]

- History of seizures/epilepsy
- Renal impairment (dose adjustment may be required)
- Dystonic reactions, especially in the elderly and young adults <20 years of age

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9. Possible adverse effects

Occur in ~10% of patients

- Restlessness
- Drowsiness, Fatigue/ lassitude

Less common

- Insomnia
- Headache
- Dizziness
- Bowel disturbances – including diarrhoea
- Anxiety or agitation may occur, especially after rapid injection
- Extrapyramidal reactions
- Tardive dyskinesia
- Parkinsonian symptoms

Very rare (<1 in 10 000)

- Neuroleptic malignant syndrome [1, 4]

10. Drug Interactions

- Anticholinergic drugs and opioids may antagonise the gastric emptying effect of metoclopramide
- Levodopa
- Metoclopramide may increase the absorption of some medications from the small bowel e.g. paracetamol, diazepam, tetracycline, ciclosporin
- Metoclopramide may reduce the absorption of some medications from the stomach e.g. digoxin, penicillin
- Additive sedative effects can occur when metoclopramide is administered with alcohol, sedatives, hypnotics or opioids [1]
- Antidepressants e.g. increased risk of extrapyramidal effects and serotonin syndrome when given with SSRIs or Venlafaxine (rare)

11. References

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