PHARMACY PROFILE: METOCLOPRAMIDE

Key Messages
- Metoclopramide is a broad spectrum antiemetic
- Common adverse effects include restlessness, drowsiness and fatigue
- Notify the prescriber if the patient develops severe muscle rigidity and fever.

Metoclopramide is used to treat nausea and works predominantly by blocking dopamine receptors both within the brain and peripherally. This provides a broad spectrum of coverage, including:
- Preventing or reducing activation of the vomiting centre within the brain (e.g. caused by biochemical abnormalities such as uraemia and medications such as opioids and chemotherapy); and
- Stimulating motility of the upper gastrointestinal tract (e.g. caused by liver metastases).

The cause of nausea in palliative patients can often be multifactorial, thus metoclopramide with its broad spectrum of action is a common first line agent. While dopamine is also found in the vestibular system (in the brain), other medications tend to be used in disorders originating from here (e.g. motion sickness and Meniere’s disease). Metoclopramide is ineffective in the treatment of symptoms arising from a psychological basis (e.g. anticipatory nausea) or nausea associated with intracranial causes (e.g. raised intracranial pressure).

Metoclopramide is short acting and therefore it should be given by mouth every six to eight hours for ongoing symptom control. Intermittent use may be appropriate for patients with infrequent symptoms. In patients unable to swallow (or who are vomiting), continuous 24 hour subcutaneous infusions are used.

Metoclopramide is a practical and affordable antiemetic to give in all phases of palliative care as both tablets and subcutaneous injection are available through the Pharmaceutical Benefits Scheme (PBS).

Nursing Assessment
Prior to administering a dose, the following nursing assessments should be made:
- Assess the patient’s degree of nausea.
- Contact the prescriber if extrapyramidal symptoms are present (see below for description) – these are more likely in older patients.
- Contact the prescriber if severe muscle rigidity and fever are present.

Administration Points
Metoclopramide has a peak effect within 60 minutes when given orally. This effect will last up to three hours after a single dose. It is best given on an empty stomach.
Metoclopramide tablets can be dispersed in water and administered immediately to people with PEG feeding tubes or with swallowing difficulties. The tablets, however, will take longer than five minutes to disperse, even when crushed beforehand.

**Monitoring**

Common adverse effects include restlessness, drowsiness and dizziness. The sensation of inner restlessness along with the need to move is a subjective symptom (also called akathesia). It occurs with ongoing doses of metoclopramide (typically two to three days after initiating treatment). It can be uncomfortable for the person experiencing this and in severe cases, objective features such as rocking (while upright or seated) are observed. It tends to be dose related and the prescriber should be notified to review the dose or to change to an alternate agent. Because metoclopramide improves the motility of the gastrointestinal tract, it is also associated with diarrhoea. This effect on the gastrointestinal tract makes metoclopramide inappropriate if bowel obstruction is evident.

Infrequently, metoclopramide has causes extrapyramidal side effects. These include:

- Dystonic reactions characterized by involuntary muscle contractions that cause slow repetitive movements or abnormal postures
- Parkinsonism which includes tremor and rigidity; and
- Tardive dyskinesia (TD), which encompasses involuntary movements of the face, mouth or tongue, and sometimes head and neck, trunk or limbs.

Neuroleptic malignant syndrome is a serious (and rare) adverse effect associated with severe muscle rigidity and fever. The prescriber should be notified immediately if these symptoms develop.

Because metoclopramide antagonises dopamine, it should be used cautiously with other medicines that act on dopamine receptors including haloperidol (dopamine antagonist) or medicines used to treat Parkinson’s disease (dopamine agonists).

**Useful Resources**

- Contact your local pharmacist or hospital drug information service

This update is intended to provide practical up to date information relating to medicines management in the setting of palliative care and is based on critical review of available evidence. Individual patient circumstances must be considered when applying this information.

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