USE OF METHADONE

Keywords: Palliative care, palliative pain management, methadone in palliation

AIM

• The appropriate management of pain in palliative care patients.

CAUTION – CONVERSIONS TO METHADONE FROM OTHER OPIOID ANALGESICS ARE COMPLICATED AND PRESCRIBING SHOULD BE RESTRICTED TO MEDICAL SPECIALISTS WITH EXPERIENCE OF METHADONE PRESCRIBING.

BACKGROUND

Methadone hydrochloride is an effective, inexpensive, and relatively safe opioid to use in the management of pain during the final stages of life. In single dose studies methadone is only marginally more potent than morphine; however, with repeated administration it is several times more potent. Methadone is a significant clinical alternative to morphine, but its safe administration requires knowledge of its pharmacology and experience. The plasma half-life of methadone is long, averaging approximately 24 hours (with a range from 13 to over 100 hours) but most patients require dosing at intervals of 4 – 8 hours. This discrepancy between plasma half-life and duration of effect may place patients at increased risk of drug accumulation when treatment is initiated or the dose increased. Sedation, confusion and even death can occur if patients are not carefully monitored.

KEY POINTS

1. Methadone should only be prescribed by or in conjunction with a doctor experienced in pain management or Palliative Care.
2. In the opioid naïve woman, initial doses must be titrated carefully and the woman must be supervised closely until there is reasonable certainty that a steady state plasma concentration has been approached (approximately 1 week).
3. As it is synthetic and has no cross allergenicity, it can be used in women with morphine allergy.
4. Methadone has been shown to be safe in patients with renal failure.
5. Equianalgesic dosing of methadone is more complex than it is for other opioids. Methadone exhibits wide variations in half-life among patients and must be cautiously prescribed, especially in individuals currently medicated with an opioid.
6. Monitor the respiration rate and level of consciousness 4 hourly during the initial 24 hours of initiation of therapy.

INDICATIONS FOR USE

• Neuropathic or mixed nociceptive-neuropathic pain not responding to an NSAID + morphine+ adjuvant analgesics.
• Neurotoxicity with morphine at any dose (e.g. myoclonus, allodynia, hyperalgesia) which does not respond to a reduction in morphine dose and switching to another easier to use opioid (e.g. fentanyl, hydromorphone, oxycodone) is not possible.
• The strong opioid of choice, instead of morphine.
• End stage renal failure.
ADVERSE EFFECTS

- Pruritis
- Nausea
- Constipation
- Confusion
- Sedation
- Respiratory depression
- Diaphoresis (excess sweating)
- Flushing
- Toxicities may not become observable for 2-5 days after initiation of methadone therapy.

COMMENCING THERAPY IN OPIOID NAÏVE WOMEN

- Start methadone at 2.5mg to 5mg every 6 to 12 hours.
- Titrate every 3 to 5 days until adequate analgesia is achieved.
- When a steady state is achieved, change to an every 8 to 12 hour dosing schedule.
- Use a short acting opioid during the titration phase as needed for break through or incidental pain. Monitor the frequency and amount of the short acting opioid and adjust the methadone dose accordingly.
- If adequate analgesia is attained on the second day or if sedation occurs, monitor closely and consider reducing the dose of methadone because of the delayed volume distribution during the titration phase (3 -5 days). If the woman has adequate analgesia, especially if accompanied by sedation prior to the third day before consistent blood levels have been attained, there is greater risk for toxic accumulation.

PO MORPHINE TO PO METHADONE

Stop the morphine abruptly when methadone is started.

- Normal release morphine – give the first dose of methadone ≥2 hours (pain present) or 4 hours (pain free) after the last dose of morphine.
- Sustained release morphine – give the first dose of methadone ≥ 6 hours (pain present) or ≥12 hours (pain free) after the last dose of a 12 hour preparation or ≥12 hours (pain present) or ≥24 hours (pain free) after the last dose of a 24 hour preparation.
- Give a single loading dose of PO methadone as 1/10th of the previous total of 24 hour oral morphine dose, up to a maximum of 30mg.
- Prescribe 3 hourly PRN doses of methadone at 1/3rd of the loading dose, up to a maximum of 30mg.
- If > 2 doses per day of PRN methadone continue to be needed, the dose of regular methadone should be increased once a week, guided by PRN use.
- If the woman:
  - Becomes over sedated, reduce the dose generally by 33-50%.
  - Develops opioid abstinence symptoms, give PRN doses of the previous opioid to control these.
METHADONE PO TO METHADONE SC/IV OR CONTINUOUS INFUSION

- To convert PO methadone to methadone SC/IV halve the PO dose. E.g. PO methadone 10mg / 24 hours = SC/IV 5mg / 24 hours.
- Due to its long half-life, methadone (10mg/mL) can be given subcutaneously 8 to 12 hourly. If subcutaneous injection is painful or caused local inflammation administer by continuous infusion.
- If continuous infusion methadone causes a skin reaction
  - Administer as a more dilute solution in a 20mL or 30mL syringe.
  - Change the syringe 12 hourly and the site daily.
- For additional rescue doses of methadone SC /IV give 1/6th of the 24 hour SC/ IV dose, 3 hourly PRN.

BIBLIOGRAPHY / STANDARDS


National Standards – 1- Care provided by the clinical workforce is guided by current best practice
4- Medication Safety
Legislation – Poisons Act 1964; Guardianship and Administration Act 1990
Related Policies -
Other related documents – Palliative Care WA

RESPONSIBILITY

Policy Sponsor | Nursing & Midwifery Director OGCCU
Initial Endorsement | May 2005
Last Reviewed | September 2014
Last Amended | 
Review date | September 2017

Do not keep printed versions of guidelines as currency of information cannot be guaranteed. Access the current version from the WNHS website.