MORPHINE SULPHATE (SUBCUTANEOUS INJECTIONS) for antenatal and labour pain

1. OPTIMAL OUTCOMES
Provision of pain relief for a pregnant woman expressing distress from moderate to severe pain

2. PATIENT
The pregnant or labouring woman, who requires opiate analgesia

CONTRAINDICATIONS and PRECAUTIONS requiring dose adjustments
- Hypersensitivity or allergy to Morphine
- Liver disease
- Liver dysfunction associated with pregnancy (Fatty Liver, pre-eclampsia with abnormal LFTs)
- Patients with biliary conditions particularly spasm.
- Severe respiratory depression such as severe acute asthma or chronic obstructive pulmonary disease
- Raised intracranial or cerebrospinal pressure, eg head injury
- Severe CNS depression
- Cardiac arrhythmias
- Gastrointestinal Obstruction
- Status Epilepticus
- Severe hepatic or renal disease
- MAOI inhibitors such as pheneizine (Nardil) and tranylcypromine (Parnate) concurrent or taken within the previous 14 days.

3. STAFF
Suitably accredited student midwives
Registered Midwives
Registered Nurses
Medical Staff

4. EQUIPMENT
- Morphine Sulphate 10mg/ml;
- 1 ml syringe
- Drawing up needle
- 25g needle
- Alico wipes
- PPE / sharps container

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cont’d

5. CLINICAL PRACTICE
- Ensure woman is aware of alternative pain relief options
- Explain anticipated effects and known side effects to mother and baby
- Ensure woman meets criteria for receiving morphine
- Explain need to perform additional maternal observations
- Need to observe Neonates for 4 hrs after delivery
- Assess woman prior to administration – including full set of maternal observations and awareness of labour progress
- Obtain verbal consent for administration
- Obtain medical order
- Consider morphine dose based on woman’s weight
- **Recommended dosage** –
  5 – 7.5mg subcutaneous every two hours PRN to a maximum of 2 doses in 12 hours. In general a woman under 50kg bodyweight should have the smaller dose to start and evaluate the effect.

  *Evaluation of analgesia, sedation and nausea will assist decision for further analgesia. Page the Anaesthetic registrar for assessment if further opiate considered necessary after 2 doses or a maximum of 15mg of Morphine has been given in 12 hours without the desired effect.*

- Offer antiemetic such as metoclopramide first choice
- Offer IM 12.5 mg Phenergan to minimise side effects and enhance analgesic effect of morphine (maximum of 12.5mg in 12 hrs)
- Adhere to standard requirements for administration of S8 drugs
- Ensure opioid antagonist naloxone hydrochloride is available
- Administer 5-7.5mg morphine via sub-cutaneous route (+/- IM phenergan)

**Perform observations**
- vital signs half hourly for first hour and then hourly or 2 hours
- note that excessive sedation is a more accurate sign of overdose than a slow respiratory rate
- be aware that there may be reduced fetal heart rate variability

**Neonatal Observations post delivery**
- Monitor vital signs in the term neonate hourly for the first 4 hrs post delivery followed by normal observations- (premature neonates will be monitored in the NCC routinely)

6. HAZARDS/ SUB OPTIMAL OUTCOMES
- Woman does not receive adequate pain relief
- Woman experiences adverse reactions
- Neonate experiences adverse reaction

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Common Adverse Reactions (1 – 10% of women):
- Vomiting, nausea, anorexia, constipation
- Dry mouth
- Confusion, vertigo, sedation, restlessness, mood changes
- Visual disturbances
- Bradycardia, palpitations
- Sweating, facial flushing,
- Urinary retention, hesitancy
- Itch
- Neonatal respiratory depression

Less Common Adverse Reactions (<1% of women)
- Respiratory depression (maternal/ neonatal)
- Postural hypotension –accentuated by hypovolaemia
- Ureteric spasm
- Biliary spasm
- Increased intracranial pressure, coma.

Neonatal Adverse Reactions/ Side Effects
- Respiratory depression
- Decreased neonatal alertness
- Inhibition of suckling
- Lower APGAR scores
- Delay in effective feeding

7. TREATMENT OF SIDE EFFECTS.
- Ensure oxygen applied up to 40% if drowsiness occurs.
- If respiratory depression such that respirations less than 8. give naloxone 100 micrograms as per hospital standing order.
- Nausea may be managed by antiemetics such as metoclopramide and ondansetron.
- Unrelieved Urinary retention may require the insertion of an IDC during labor and further assessment.

8. DOCUMENTATION
- Medication Chart
- Partogram
- Continuation notes
- S8 Drug register

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9. EDUCATIONAL NOTES

- Following subcutaneous administration, the onset of action of morphine is after about 20 minutes with peak analgesic effect observed after about 70 minutes. The duration of analgesia is usually 2 to 4 hours. The mean elimination half-life for morphine is 2 to 3 hours, but effects may extend up to 24 hours.
- Signs of overdose are treated by maintaining adequate respiratory ventilation, applying oxygen and administration of Naloxone – 0.4 – 2mg IV initial dose, repeated every 2-3 minutes. If no response by 10mg, diagnosis of narcotics overdose should be questioned.
- Morphine is preferable to Pethidine as a narcotic in labour for the following reasons:
  - It is less toxic
  - It has a longer duration of action
  - Subcutaneous administration may be less painful than intra-muscular
  - Morphine has less addictive properties relating to staff
  - Morphine is reported to be as effective as pethidine with fewer side effects.
- Morphine binds to many opioid-receptors in the central nervous system, altering the perception of pain and the emotional response to pain. Alterations in mood can include euphoria, dysphoria, drowsiness and mental clouding.
- Morphine is rapidly transferred across the placenta, with the fetus and neonate excreting the opioids more slowly than adults due to the immaturity of the liver enzymes.
- Monitoring Neonates for 4 hrs following birth

10. RELATED POLICIES/ PROCEDURES/ CLINICAL GUIDELINES

RHW Policy: Sub Cutaneous Morphine Procedure and Protocol
RHW Policy: Standing Orders
Standard medicine requirements policy for NSW\Health

11. REFERENCES


King Edward Memorial Hospital Policy: 4.7.2 Intramuscular Morphine Administration; 2006.