PAIN PROTOCOL (KETAMINE) Recovery Room only

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

ONLY TO BE USED IN CONJUNCTION WITH:
SESLHD Acute Pain Management in the Post Anaesthetic Care Unit: Intravenous Opioid Pain Protocol for Adults. Fentanyl, HYDROmorphone, Morphine and Oxycodone.

1. AIM

To provide effective postoperative pain management to women who has severe or uncontrolled pain NOT controlled by opioid pain protocol as per *SESLHD Acute Pain Management in the Post Anaesthetic Care Unit: Intravenous Opioid Pain Protocol for Adults, Fentanyl, HYDROmorphone, Morphine and Oxycodone.* This is achieved through the administration of intravenous boluses of ketamine.

2. PATIENT

- Postoperative woman who has already received 15mL of opioid pain protocol yet continues to have uncontrolled or severe pain (8-10) or;
- Has opioid tolerance due to pre-operative opioid requirement and
- Has a sedation score of ≥ 1 (Modified Aldrete Score – see educational notes)

3. STAFF

- Medical, midwifery and nursing staff (accredited to administer intravenous pain protocol)

4. EQUIPMENT

- Ketamine ampoule – 200mg in 2mL
- eMED prescription
- 10mL sodium chloride 0.9%
- 10mL syringe
- Blunt 18g needle
- Blue medication label
- Alcohol swabs
- Blue ANTT Tray.

5. CLINICAL PRACTICE

- Refer to Appendix 1 for Pain Protocol (Ketamine) flow chart.
- Adhere to Medication Handling in NSW Public Health Facilities – PD 2013_043.
- Prescribe order via eMEDS as per default prescription i.e. Ketamine (10mg, IV, Soln Inj, every 5 mins, PRN for Pain, for 3 doses only)
- Assess the patient prior to commencing Pain Protocol (Ketamine). Refer to educational notes.
- Check the IV cannula site for patency, swelling, inflammation
- Check the medication order and follow the RHW medication policy for handling S8 drugs. This must be done by 2 registered nurses or 2 registered midwives
- Draw up 100mg (1mL) Ketamine into a 10mL syringe and make up to 10mL with Sodium Chloride 0.9%. i.e. (10mg/1mL)

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- Label syringe with patient's name, drug and concentration, date and time.
- Check the patient as per RHW medication policy. This must be done by 2 registered nurses or 2 registered midwives
- Administered oxygen via Hudson mask at 6L/min
- Warn patient of possible side effects such as lightheadedness and disorientation.
- Inject the first dose (1mL) of ketamine solution as a slow push and flush the line with the intravenous fluid in progress or 3-5mL of sodium chloride 0.9% which has been drawn up in a separate syringe and labelled
- Record each dose of ketamine on eMEDS as per RHW medication policy
- Assess patient at 5 minutes then repeat the next dose if necessary. If patient has severe dysphoria wait an additional 5 minutes, then reassess before giving next dose
- Continue with 1mL bolus doses until the patient's pain score is ≤ 5/10 or the maximum of 3 doses (30mg) is met
- Obtain anaesthetic review if the patient is not comfortable after giving 30mg of ketamine.
- Discontinue Pain Protocol (Ketamine) if pain score ≤ 5/10.
- Discontinue Pain Protocol (Ketamine) if the respiration rate is < 10 per minute and obtain an anaesthetic review of the patient.
- Delay ketamine pain protocol until dysphoria has improved
- Regularly monitor woman once the Pain Protocol (Ketamine) has been initiated, as follows:
- Record observations every 10min which must include BP, pulse, respirations, oxygen saturation, sedation and pain scores
- Continuously assess sedation level and level of dysphoria
- Assess pain score prior to each dose of the ketamine
- Observe woman for a further 20 minutes following the last dose of ketamine and before being assessed for readiness for discharge to the ward/unit
- Discharge from unit may occur if respiratory rate ≥ 10 BPM and sedation score of ≥1.
- Do not leave woman or drug unattended at any time

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6. DOCUMENTATION

- eMEDS
- eMR Surginet – PACU IVIEW: Vital Signs and Pain Assessment & Management
- Integrated Clinical Notes

7. EDUCATIONAL NOTES

Pain Assessment:

- Verbal pain score 0 – 10 (0 = no pain; 10 = worst possible pain)
- Verbal pain descriptors (e.g. mild, moderate / strong, severe)
- Visual analogue pain scale (facial expressions incorporating a numerical scale)

Pain Scores:

- 0 = no pain
- 1-3 = Very Mild
- 4 = Mild
- 5-7 = Moderate
- 8-10 = Severe

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Sedation Scoring: (Modified Aldrete)

- 0 = Unrousable
- 1 = Rousable to verbal stimuli
- 2 = Fully awake
- Do not commence Pain Protocol (Ketamine) if Respiratory rate < 10
- Respiratory rate must remain at ≥ 10 at all times during Pain Protocol (Ketamine).
- Respiratory rate of less than 8 per minute = Respiratory Depression
- Do not commence Pain Protocol (Ketamine) if sedation score <1
- **Blood Pressure** – must be within 20% the patient's normal limits using the preoperative blood pressure reading and patient history as a guideline

Caution should be exercised with patients who have a:

- History of allergic reaction or an allergic reaction to ketamine in the recovery room.
- Patients who are unstable: hypotensive, hypovolaemic, bradycardic, poor respiratory effort. **Assessment of the patient by the Anaesthetist is mandatory** in this situation prior to commencement Pain Protocol (Ketamine).
- Concurrent epidural infusion: It is not routine for patients receiving an epidural infusion to also be administered intravenous pain protocol. Only in exceptional circumstances, following an anaesthetic review, will the anaesthetist order additional opioid or ketamine via intravenous pain protocol.
- Reduced dosing is generally required in patients with renal or liver disease and patients over 70 years of age owing to altered metabolism and excretion of opioids.

Nurse Accreditation

- RN accreditation to administer pain protocol consists of successful completion of a worksheet and a competency assessment

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP

- SESLHD Acute Pain Management in the Post Anaesthetic Care Unit: Intravenous Opioid Pain Protocol for Adults. Fentanyl, HYDROmorphone, Morphine and Oxycodone.
- RHW LOP - Accreditation of staff to give drugs in specific units (2015)
- RHW LOP - Medication: Administration (2014)
- RHW LOP - Naloxone – Use of Naloxone for the treatment of opioid induced over-sedation respiratory depression, pruritus and nausea. (2015)
- RHW LOP – Medication – Accountable Drugs (Schedule 4D and Schedule 8) (2014)

9. RISK RATING

- High

10. NATIONAL STANDARD

- Medication Safety

11. REFERENCES

1. Concord Repatriation General Hospital Policy and Procedure Manual (2006). Recovery Pain Management Protocol.
2. Hatfield, A. & Tronson, M. (2009). The complete recovery room book, (4th ed.), New York: Oxford University Press.

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3. Medication Handling in NSW Public Health PD2007_077. Medication Handling in NSW Public Hospitals.
4. St George Hospital and Community Health Service, PACU Policy & Procedure Manual (September 2010). PACU Intravenous Opioid Pain Protocol for Adults.
5. SESLHD Acute Pain Management in the Post Anaesthetic Care Unit: Intravenous Opioid Pain Protocol for Adults. Fentanyl, HYDROmorphone, Morphine and Oxycodone. (2016)

REVISION & APPROVAL HISTORY
Reviewed and endorsed Therapeutic & Drug Utilisation Committee 28/4/21
Approved Quality & Patient Care Committee 16/8/18
Reviewed and endorsed Therapeutic & Drug Utilisation Commmittee July 2018
Approved Quality & Patient Care Committee November 2016
Reviewed and endorsed Therapeutic & Drug Utilisation Committee 11/10/16
Replaced *Tramadol Policy*
Approved Quality & Patient Safety Committee 18/8/1
Reviewed and endorsed Therapeutic & Drug Utilisation Committee 16/8/11
Approved Quality Council 20/6/05 – Updated Pain M'ment CNC & Director/Anaesthesia June 2005
Approved Quality Council 15/12/03

FOR REVIEW : MAY 2023

…/Appendix 1

Appendix 1: PAIN PROTOCOL - KETAMINE (FLOW CHART)

Only to be used in RHW PACU in conjunction with:
SESLHD Acute Pain Management in the Post Anaesthetic Care Unit: Intravenous Opioid Pain Protocol for Adults. Fentanyl, HYDROmorphone, Morphine and Oxycodone.

Patients pain score uncontrolled or patient has severe pain ≥ 8/10 after 15mL of Intravenous Opioid Pain Protocol boluses given

OBTAIN ANAESTHETIC REVIEW
Order Ketamine as per eMEDS:
Ketamine 10mg, IV, every 5 mins
Max. dose 30 mg or 3 × 1mL doses

Prepare Ketamine bolus syringe and label appropriately:
Ketamine 100mg in 10mL of 0.9% sodium chloride ie. Ketamine 10mg/1mL

Is patient awake or rousable to verbal stimuli?
Are vital signs stable?
Warn patient of light headedness or disorientation lasting a few minutes

Administer **1**mL IV bolus
(Ketamine 10mg)

Wait **5** minutes between each dose
(**10** minutes if patient has severe dysphoria)
Assess pain, sedation score, plus level of dysphoria
Administer Ketamine 1mL until pain score < 5/10
(Max 3 doses)

Pain Score **< 5/10**
YES **NO**

Commence maintenance analgesia plan

OBTAIN ANAESTHETIC REVIEW:
Either repeat above order
or
Consider Ketamine infusion