Approved by Quality & Patient Safety Committee
21 May 2015

PATIENT CONTROLLED ANALAGESIA (PCA) REMIFENTANIL – IN LABOUR

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.

1. AIM

- To provide alternative pain relief in labour where an epidural is unsuitable.

2. PATIENT

- Pregnant woman in labour in whom an epidural is contraindicated, unachievable or unwanted

3. STAFF

- Acute Pain Relief Service (APRS)
- Medical, Midwifery and Nursing staff
- Pharmacists

4. EQUIPMENT

- Dedicated intravenous IV Access
- Ambulatory infusion pump
- High volume administration set
- PCA Lockbox
- PCA keys kept on DD Key set
- Nasal prongs
- Wall oxygen supply
- Adult pulse oximetry
- CTG machine
- Prepared medication

5. CLINICAL PRACTICE

PCA Prescription

- Prescribe PCA, by anaesthetist, on the NSW Health Patient Controlled Analgesia (PCA) Adult form (NH606622)

PCA Management Guidelines

- Provide educational advice to the woman regarding this type of pain management plus supply patient with an information leaflet. (Appendix 1)
- Gain verbal consent as remifentanil is not indicated for PCA use in Australia
- Confirm that the patient is familiar with the principles of PCA and is able to activate the pump. The patient receiving PCA is the only person who may press the PCA button
- Contact the APRS if there is any concern about the appropriateness of PCA analgesia for the patient
- Check the medication and pump settings, by two Midwives, before connecting the PCA to the patient.
- Administer oxygen therapy via a mask/nasal prongs for the duration of the PCA therapy
- Check the PCA pump settings at the commencement of each shift, on transfer of woman to another ward and when the medication bag is changed.
- Prescribe Naloxone on the PCA chart and ensure naloxone is available in the clinical area where the PCA is used.
- Do not administer other opioids or sedatives unless ordered by an Anaesthetist.
- Notify the Neonatal team of any woman with a live fetus who has a remifentanil PCA

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LOCAL OPERATING PROCEDURE

CLINICAL POLICIES, PROCEDURES & GUIDELINES

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PCA Program and Dosing

STANDARD REMIFENTANIL CONCENTRATIONS AND PCA BOLUS DOSES

DRUG & PRESCRIPTION	CONCENTRATION	PCA BOLUS DOSE	DURATION OF BOLUS DELIVERY	LOCK OUT PERIOD
Remifentanil 2mg (2000mcg) in 100mL of sodium chloride 0.9%.	**20mcg/mL**	**20mcg = 1mL**	**15 Seconds**	**2 Minutes**
IF ADDITIONAL PAIN RELIEF IS REQUIRED THE BOLUS DOSE MAY BE INCREASED AFTER REVIEW BY AN ANAESTHETIST				
Remifentanil 2mg (2000mcg) in 100mL of sodium chloride 0.9%.	**20mcg/mL**	**30mcg = 1.5mL**	**15 Seconds**	**2 Minutes**
Remifentanil 2mg (2000mcg) in 100mL of sodium chloride 0.9%.	**20mcg/mL**	**40mcg = 2mL**	**15 Seconds**	**2 Minutes**

- Nitrous Oxide (max dose: 50%NO_2:50%O_2) may be used in addition to PCA after review with an Anaesthetist.

Preparing the Drug

- Prepare infusion solution as ordered. Refer to the standard remifentanil concentrations and PCA bolus doses in the table above.
- Check the medication with two Midwives and document on the PCA Chart.
- Re-check the prescription by the same two Midwives then complete an additive label and attach it to the infusion bag.
- Use aseptic technique when handling the PCA line for priming or for disconnection
- Place PCA infusion bag in the lock box prior to connecting to the patient

SET UP PCA PUMP

- Deliver remifentanil PCA via the pump with a Lock box.
- Programming and assembly must only be done by an either an Anaesthetist or a Midwife who has been accredited in care of patient with remifentanil PCA

Connecting to Patient

- Connect maintenance fluids if required to the back check valve. Remifentanil is NOT compatible with oxytocin and therefore requires a dedicated line if the patient's labour is being induced or augmented.
- Teach the patient to initiate a dose as soon as the contraction begins as the effect may take 60 seconds to reach its peak.
- Switch pump on.
- Ensure key is in situ in order to open the lock box and start infusion pump

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PATIENT CONTROLLED ANALAGESIA (PCA) REMIFENTANIL – IN LABOUR cont'd

- Elect to start a new infusion by pressing 'yes'
- Select therapy (IV PCA - Delivery Suite)
- Open the lockbox and hang the prepared solution
- Select qualifier (Bolus Only) by scrolling to the option and pressing the select button.
- Select prime tubing.
- Lock infusion pump and lock box
- Connect the PCA line directly to the IV cannula. DO NOT use a 3 way tap.
- Press start and hand the patient the button.
- Re-open and close the cover any time you stop or suspend the pump

Monitoring

- Record PCA observations on the NSW Health Patient Controlled Analgesia (PCA) Adult form (NH606622).
- Refer to the Patient Controlled Analgesia (PCA) intravenous or subcutaneous LOP for comprehensive details regarding PCA in general.
- Apply continuous CTG monitoring, pulse oximetry and nasal prong oxygen (at 2-4/L min) for duration of PCA.
- Record vital signs and pain observations every 15 minutes for 1 hour, every 30 minutes for 4 hours then hourly if observations are stable.

6. DOCUMENTATION

- NSW Health Patient Controlled Analgesia (PCA) Adult form (NH606622)
- Integrated clinical notes
- Partogram

7. EDUCATIONAL NOTES

- Refer to the Patient Controlled Analgesia (PCA) intravenous or subcutaneous LOP for comprehensive details regarding PCA in general
- Patients on PCA should only be managed in wards/areas where the Midwives have received appropriate education and accreditation in PCA management.
- This type of analgesia is not suitable for patients who:
    - Are allergic to remifentanil
    - Have severe respiratory disease
    - Are unable to comprehend or understand the concept of PCA.
- Remifentanil PCA is delivered via a Patient Controlled Pain Management Pump (CADD Solis).
- Remifentanil is stable for 24 hours at room temperature after reconstitution.

8. RELATED LOPS

- Medications Policies and Procedures
- Accreditation of Staff to Give Drugs in Specific Units
- Sedation – Respiratory Depression
- Naloxone - guidelines for use of naloxone HCL for the treatment of respiratory depression and over-sedation following opiate use
- Patient with Acute Condition for Escalation PACE): Management of the Deteriorating ADULT & MATERNITY Inpatient

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9. RISK RATING

- High

10. EXTERNAL REFERENCES

1. NSW Ministry of Health. PD2013_043. Medication Handling in NSW Public Health Facilities. November 20113
2. Australian and New Zealand College of Anaesthetists and Faculty of Pain Medicine. 2010, Acute Pain Management: Scientific Evidence. Third Edition. Approved by NHMRC
3. Obstetric Anaesthetists' Association. Remifentanil, 2012. www.oaa-anaes.ac.uk/content.asp?ContentID=333
4. Remifentanil for labour analgesia: time to draw breath? Anaesthesia2013, 68, pp.231-235.
5. Remifentanil PCA for labour: Wollongong Hospital, July 2012
6. Remifentanil PCA Protocol, St George Hospital, Department of Anaesthesia Clinical Handbook 2006 pp.63-65

REVISION & APPROVAL HISTORY

Changed title from *Remifentanil Patient Controlled Analgesia (PCA) – In Labour* October 2015
Reviewed and endorsed Maternity Services LOPs 12/5/15 – previously titled *Remi-Fentanil PCA for Labour*
Approved Quality & Patient Safety Committee 21/3/13
Reviewed and endorsed Therapeutic & Drug Utilisation Committee February 2013
Approved Quality Council 21/11/05

FOR REVIEW : MAY 2017

APPENDIX 1

Remifentanil Patient Information

What is remifentanil PCA?

Remifentanil is a very short-acting pain relieving drug rather like morphine. Its pain relieving effect comes on very rapidly It also wears off very quickly afterwards. A small dose of the remifentanil is given into a drip in your arm at your request by pushing a button on an electronic pump.

Who can use remifentanil?

Any woman in labour can request to use remifentanil PCA. We would advise women with an allergy to morphine, pethidine or other related drugs not to use remifentanil. Remifentanil may be useful also in certain situations when a women cannot have an epidural. Having tried remifentanil does not limit your choice of pain relief in labour.

How is it given?

To use remifentanil you will need to have a cannula ("drip") placed in a vein. This is usually on the back of your hand or arm. The drip is connected to an electronic pump, which delivers a small dose of the drug once you press the hand-held button. The pain relieving effect is felt usually in 20 to 30 seconds. It wears off again within a few minutes. You are in control and you get the drug when you need it. There is a safety feature built into the pump so that you can only get a safe amount of the drug. You can use the pump at any time right up to your delivery if you wish. The effects will still wear off very quickly when you stop using the pump after your baby has been born.

Are there any unwanted effects of remifentanil?

Some women can get sleepy between contractions. However, this will wear off very quickly after you stop using the pain relief. Your midwife will measure your oxygen level using a sensor (like a peg) on your finger, as well as your level of pain relief and drowsiness. Otherwise all observations and treatment is the same as for any other woman on labour ward. Remifentanil has been shown to be safe for babies, although some babies may also be sleepy for a short time after birth.

When can I ask for remifentanil?

You can request remifentanil at any time in your labour. Your midwife will organise to get the pump set up. This may take a few minutes, but you will be able to use it as soon as once you are given the button to push.