

Intrapartum Guidelines

No.20 Pain Relief in Labour

1. Patient information and discussion

Women must be afforded a documented discussion re: pain management in labour that includes all forms of analgesia including regional and general anaesthesia, preferably in the antenatal period. To support this, written information may also be supplied in order to assist them in making an informed choice with regard to pain relief options. Confirmation that an information leaflet has been provided must be documented within the Pregnancy Notes.

2. Natural methods of pain relief

These may include the following:

- Posture, positioning and mobilising which may help to relieve the pain and pressure experienced in labour.
- Beanbags and birthing balls are available for this purpose on CDS. Evidence shows that encouraging the woman to remain mobile may also assist in the relief of pain.
- Breathing techniques. These can be taught during the antenatal period or during early labour and may help the woman to feel in control of the labour.
- Massage and hydrotherapy. These are useful relaxation tools.
- Hypnobirthing. Women may choose to use self-hypnosis techniques and this may require birth attendants to be respectful of the birth environment.

3. Pain relief for women admitted in early labour

Please refer to pain ladder (adapted from the Derriford Hospital pain ladder for acute, non-malignant pain) shown in appendix 2. Women admitted to hospital not in established labour who require pain relief may be given up to 30 mg Oramorph (as a midwives' exemption) and be transferred home after 30 - 60 min if it is clinically safe to do so.

4. Transcutaneous Electrical Nerve Stimulation (TENS / Pulsar)

- Women are given instruction in the use of TENS during the antenatal period and should apply it in early labour as it may take an hour to reach maximum effect. Once in use, TENS can be used throughout the labour. Starting to use TENS in active labour is not as effective and may not help with pain once the contractions have become much stronger (NICE, 2014).
- The fetal heart rate should be auscultated intermittently whilst the TENS is in use. There may be some interference with the fetal scalp electrode signal.
- There are no side effects for either the woman or the fetus and can be used in conjunction with other methods of analgesia.
- It is contra-indicated in women who have a pacemaker or for use in a bath.

5. Inhalation Analgesia (Entonox)

- The woman is given instruction in the use of entonox before it is self-administered using either a mouthpiece or facial mask.
- Entonox has a rapid action, and has few cumulative side effects, which are of short duration.
- Some women may experience nausea, vomiting, disorientation or hyperventilation.

6. Immersion in water

Women with uncomplicated pregnancies at term should have the option of immersion in water available to them as a method of pain relief. The written documentation of any discussion is essential. Monitoring of the fetal heart using underwater Doppler should be standard practice, as stated in the current National Institute for Health and Care Excellence guidelines (and local fetal monitoring guidelines, see Intrapartum guideline No. 10). If there are any concerns about maternal or fetal wellbeing, the woman should be advised to leave the birthing pool and an opinion from an obstetrician should be sought in the usual manner. Continuous monitoring using the wireless CTG monitor may be used in the water following a documented discussion and associated risk assessment.

7. Diamorphine

Diamorphine may be given except in the presence of a pathological CTG that requires imminent delivery.

- The drug can be prescribed by a medical practitioner. However, it is a midwives' exemption drug and can be administered by midwives without medical prescription.
- Diamorphine 5 – 10 mg may be given and repeated (up to a total of 15 mg), after an interval of not less than two hours, provided that:

Maternal sedation is not deemed excessive

Diamorphine 10 mg was given at least 2 hours previously

If further analgesia is requested after a maximum of 15 mg diamorphine, reassess pain relief requirements and consider epidural. If further diamorphine is required it must be prescribed by a doctor.

Following intramuscular diamorphine, there is no contra-indication to entonox therapy or epidural analgesia using standard fentanyl dosage.

If diamorphine is not available see appendix 1.

8. Epidural Analgesia in Labour

8.1 Request for Epidural

If a woman requests an epidural, the midwife should refer her to the on-call obstetric anaesthetist. The anaesthetist should be informed of the patient's name, her stage of labour, analgesia used so far in labour and any relevant medical or obstetric conditions.

8.2 Response to a referral for epidural analgesia

The obstetric anaesthetist should attend the patient within 20 minutes of referral. This can only be delayed if the anaesthetist is already dealing with another obstetric patient. In this situation, the obstetric anaesthetist may request another anaesthetist be contacted to attend to provide epidural analgesia. There is a copy of the anaesthetic escalation protocol available on CDS. It is helpful to ensure that the woman has received the laminated information card for epidural analgesia prior to the anaesthetist attending.

8.3 Management

The anaesthetist will discuss the advantages and disadvantages of this method of analgesia before its administration. Informed consent will be based on what a woman is judged able to comprehend at the time. Anaesthetists are encouraged to be sensitive to written "birth plans" and if a woman has changed her mind in labour and now requests an epidural, this should be recorded in her notes. Verbal consent should be documented on the epidural record sheet by the anaesthetist.

8.4 Absolute contraindications to epidural analgesia:

- Local infection.
- Bleeding disorder or low platelet count.
- Maternal refusal.

8.5 Relative contraindications:

- Anticoagulant therapy.
- *Some* neurological disorders.
- Fulminating pre-eclampsia (if clotting status not established).
- *Some* spinal deformities or surgery.
- *Some* intrauterine pathology which may be associated with clotting abnormality.

8.6 Procedure

- Refer patient to anaesthetist.
- Ensure patient is wearing a gown, has removed bra and has TED stockings fitted.
- Establish peripheral IV line, (take bloods for FBC and Group and save and any other relevant bloods specific to patient condition) and start 1000ml Hartmann's solution.
- Inform the anaesthetist in advance if you are aware of patients with any relevant medical or obstetric problems (either on the antenatal ward or in labour).
- Always check cervical dilatation before the epidural is inserted. Rapid progress or identification of full dilatation may be reason not to insert epidural anaesthesia.
- An epidural may be appropriate, despite full dilatation of the cervix in the following:
 - A high head in occipital-posterior position, which might require syntocinon (in primigravida only) to allow time for rotation and descent.
 - Twins delivery.
 - Breech presentation - discuss with obstetrician performing the delivery.
- Record the blood pressure at 5, 10, 15 and 30 minutes after the main epidural dose and thereafter at hourly intervals while the PCEA infusion is running.
- Respiratory rate, sedation scores and umbilical sensation will be recorded on the 'Epidural Infusion in Labour' form. Pressure areas should be checked at the same time.
- The fetal heart rate should be continuously monitored whilst the epidural is in progress.
- Assess Waterlow score following the siting of an epidural. Pressure areas should be checked according to current guidelines during the remainder of the labour.

8.7 Treatment

- The anaesthetist will insert an epidural catheter under sterile conditions.
- A test dose will be given to exclude inadvertent intrathecal or intravenous placement of the catheter.
- The anaesthetist will then establish pain relief using a loading dose of bupivacaine and fentanyl.

8.8 Patient controlled epidural analgesia:

- An infusion of 0.1% bupivacaine + fentanyl 2mcg/ml (250ml bags) is used to maintain the analgesia through a McKinley bodyguard PCEA pump. There will be a background infusion and the facility for patient-triggered top-ups of the solution. The patient triggers a top-up by pressing the PCEA pump handset button. This can occur at any stage of labour and delivery. Only the patient can press (or ask the midwife to press) the PCEA button.
- The midwife will record (on the agreed paperwork) the total volume of PCEA infusion delivered every hour.
- Patients who have inadequate analgesia following siting of epidural must be referred back to the anaesthetist who may choose to give a further top up. The epidural block must be tested for by the midwife and documented on the epidural record sheet. Loss of cold sensation to ice will be used to determine the level of the block.
- The epidural prescription is documented on the epidural record

8.9. Infusion:

- **PCEA** bupivacaine 0.1% + fentanyl 2 mcg/ml in 250ml run as PCEA regime.
- **Top up 1:** levobupivacaine 2.5mg/ml, 5 -10 ml - for pain, if 2 PCEA top-ups have not given adequate analgesia.
- **Top up 2:** levobupivacaine 5mg/ml, 5-10 ml - sitting at 45 degrees only if an instrumental delivery is required.

All women on the Central Delivery Suite with epidural catheters in-situ will be reviewed on a regular basis by the obstetric anaesthetist on call. These women will be handed over at the end of the shift to the on-coming anaesthetist, who will assume responsibility for the review and management of the epidural.

8.10 Follow up

All obstetric patients who have received general anaesthesia or regional anaesthesia will be seen the next day by an obstetric anaesthetist. This follow up will be used to assess patient satisfaction with the anaesthetic intervention and to detect if there were any complications from the technique(s) used.

9. Patient controlled Analgesia (PCA) in Labour using fentanyl

9.1 Background

This may be used as an alternative if epidural analgesia is contra-indicated or not possible e.g.:

- Patient anxiety.
- Low platelet count or other potential bleeding problem.
- Local infection on the skin of the back.
- Major spinal deformity e.g. some spina bifida, Harrington's Rods

Women who have received diamorphine (or pethidine, see appendix 1) in labour may still have a PCA if analgesia is poor. However, *no systemic opioid will relieve labour pain as well as an effective epidural and this should always be considered in the absence of contra-indications, particularly if there is a likelihood of operative delivery.*

Set-up: Use standard PCA pump (obtain from Theatre Recovery 2)

- Dilute fentanyl 500 mcg (10 ml) to 50 ml total volume with normal saline (= 10 mcg/ml). This will be prepared by the anaesthetist or theatre staff.
Set pump to background rate of 2 ml/hour.
- Bolus 20 mcg (= 2 ml).
- Lockout time 5 minutes.
- Maximum hourly rate 26 ml.
- If patient has not received a systemic opiate, give loading dose 50 mcg **before** PCA commenced.
- Epidural **can** be used according to the standard protocol after PCA fentanyl if the anaesthetist reviews the situation and is happy with the reasoning behind the change in decision.

9.2 Observations

- **Continuous pulse oximetry while PCA in use**
- If oxygen saturation 92% or less – check probe position – if still low, contact obstetric anaesthetist on-call for CDS and start high flow oxygen via a face mask.
- Any other problems – call anaesthetist.

Stop use of PCA when active second stage commences or in any case, an estimated 15 minutes before delivery. Offer entonox if deemed appropriate.

9.3 Neonatologist presence for delivery.

There is a possibility of fentanyl induced neonatal respiratory depression. This may be particularly relevant if delivery is by LSCS under general anaesthesia, therefore a neonatal doctor should be called for and be present for delivery.

10. Record keeping

It is expected that every episode of care be recorded clearly, in chronological order and as contemporaneously as possible by all healthcare professionals as per Hospital Trust Policy. This is in keeping with standards set by professional colleges, i.e. NMC and RCOG.

All entries must have the **date and time** together with **signature and printed name**.

Appendix 1. Alternative to diamorphine for obstetric analgesia

In the event of a national or Trust supply issue of diamorphine:

- Pethidine 50 to 100mg s/c or IM repeated within 1-3 hours as needed.
Max. 400mg in 24 hours.

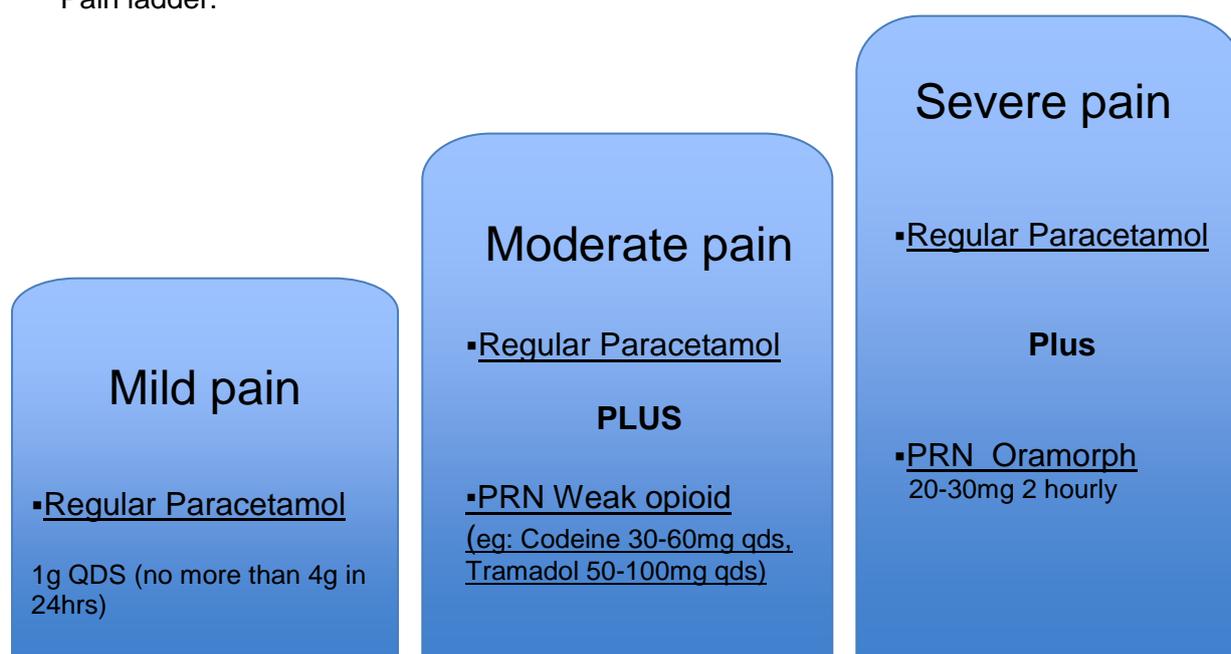
This must be prescribed by a Doctor as it is not a PGD for midwives.

Appendix 2. Analgesic pain ladder for use in early labour.

Pain is the “Fifth Vital Sign” and must be assessed and recorded alongside other vital signs

All staff involved in the prescribing, dispensing and administration of controlled drugs must be familiar with the characteristics of the drug.

Pain ladder:



Notes

Opioid equivalence:

10mg oral Morphine equals

- 3 mg Morphine SC
- 40mg oral Tramadol
- 100mg oral Dihydrocodeine
- 120mg oral Codeine

5mg IM diamorphine ≡

- 10mg IM morphine ≡
- 25 – 30mg Oramorph

•**NB:** Fentanyl patch 25 mcg/hr
= 90mg oral Morphine/ 24 hrs

Only to be used for ongoing chronic pain issues (consultant prescribing only)

- This guideline is to be used in conjunction with the BNF and PHNT joint formulary.
- Ensure a full pain history is taken from all patients and regular analgesics are prescribed.
- Be aware of the dose equivalence of opioids prescribed – particular care is needed with opioid patches.

Monitoring and Audit**Auditable standards:**

Discussion of pain management in labour documented – includes regional and general anaesthesia if required. Patient information leaflets given.

Please refer to audit tool, location: ‘Maternity on cl2-file11’, Guidelines

Reports to:

Clinical Effectiveness Committee – responsible for action plan and implementation of recommendations from audit

Clinical Governance & Risk Management Committee

Frequency of audit:

Annual

Responsible person:

CDS midwife

Cross references

Antenatal Guideline 31 - Maternity Hand Held Notes, Hospital Records and Record Keeping

Antenatal Guideline 44 – Guideline Development within the maternity Services

References

National Institute for Clinical Excellence (2007) NICE Clinical Guideline 55.

Intrapartum Care: Care of healthy women and their babies during childbirth.

London: NICE.

Steve Yentis, Anne May and Surbhi Malhotra, 2007. **Analgesia, Anaesthesia and Pregnancy - A Practical Guide.** Cambridge Press.

Royal College of Obstetricians and Gynaecologists/Royal College of Midwives Joint Statement No. 1, 2006. **Immersion in Water During Labour and Birth.** RCOG, London

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