Guideline on pain relief in labour

Adequate relief of pain is a basic right of every mother in labour. It is the duty of every member of the obstetric team to endeavor to achieve this.

Poor management of pain during labour will result in maternal exhaustion leading to:

- acidosis,
- dysfunctional labour and
- fetal distress.
- Loss of morale and a negative birth experience could have significant long-term effects.

A well-informed, well-supported mother will be more in control of events and in a better position to deal with pain than one who is not. Therefore, it is important to keep the mother informed of the progress of labour and the condition of the fetus throughout the process.

Reassurance plays a major adjunctive role in pain relief.

Prenatal education should include information regarding the available methods of pain relief and their accessibility.

Non pharmacological methods of pain relief such as breathing and relaxation techniques should be introduced during the antenatal period.

It is well recognized that women who have a birth companion will tolerate pain better and require less analgesia. The policy of allowing a birth companion must therefore be encouraged.

1. Methods of pain relief in labour

The selection of the method of pain relief should be based on the patient preference, availability of resources and the institutional protocols. Following methods can be used.

1.1 Non-pharmacological methods of pain relief

- Breathing techniques,
- Transcutaneous electrical nerve stimulation (TENS),
- Massaging,
- Relaxation techniques,
- Positioning and movement.

Any of these methods can be used to relieve pain during labour.

1.2. Pharmacological methods of pain relief in labour

1.2.1. Oral paracetamol/paracetamol and codeine compound:

These oral preparations can be used safely in the latent phase of labour.

1.2.2. Opioids

1.2.2.A. Pethidine

Pethidine is safe and effective in the latent and early active phase. The dose is 1-1.5 mg/kg IM, repeated after 4 - 6 hours. Administration of a third dose should be done only with the concurrence of senior personnel.

It is generally avoided where delivery is anticipated within 4 hours.

Maternal side effects include nausea, vomiting and a reduction in gastric motility with a subsequent increase in gastric acidity. Therefore, it should be administered coupled with metoclopramide 5 mg IV or 10 mg IM.

Neonatal respiratory depression is a recognized consequence of administration of opioids to the mother. Naloxone, a pure opioid antagonist should be available for treatment in all facilities administering opioids for analgesia. Naloxone is given to the baby in a dose of 100µg /kg IV. It has a short duration of action and additional doses may be required. If no improvement is seen with the first dose of naloxone, the cause of neonatal respiratory depression is more likely to be a factor other than opioids.

1.2.2.B. Morphine

This has a longer duration of action than pethidine and may be particularly useful in women who require analgesia in early labour.

The dose is 0.15 mg/kg IM should be administered with metoclopramide. The side effects and neonatal effects are similar to those of pethidine.

1.2.2.C. Fentanyl

Intravenous fentanyl/ramifentanyl may be administered in either a High Dependency or Intensive Care Unit settings under the supervision of an anaesthesiologist.

The dose is 50-100µg per hour as an intravenous infusion.

Pain relief occurs in 3-5 minutes after commencement.

1.2.3. Inhalational analgesia – Entonox

Entonox is a 50:50 mixture of nitrous oxide and oxygen and it has a very short half-life. The onset of action is 30sec to one minute.

The mother should receive clear and definite instructions about its correct use. It should only be self-administered.

She should start using entonox through the controlled valve at the very beginning of the contraction. The mother should be advised to stop using Entonox inhalation in the contraction free interval.

Longer and deeper breaths give better results. There is no limit on the duration of its use.

Women should be informed that Entonox will make them feel nauseous and light-headed.

Entonox is contraindicated in women with intestinal obstruction, pneumothorax, middle ear and sinus disease, and following cerebral air-contrast studies.

1.2.4. Regional anaesthesia

A. Epidural analgesia

Epidural analgesia is the most effective form of pain relief in labour. Therefore, its greater use should be encouraged.

It can be given either as a bolus with top-ups or as a continuous infusion. Continuous administration via a syringe pump is preferred to 'top-ups', since it is safer.

The continuous availability of an anesthesiologist is a prerequisite to offering epidural analgesia. It is also essential that staff on site is trained for its setting up, monitoring and to recognize complications early. Facilities should be available for emergency resuscitation.

Before offering epidural analgesia, women should be informed regarding its risks and benefits and its implications on labour:

- It provides more effective pain relief than other methods
- It will not increase the length of the first and the passive second stages of labour.
- It may however increase the length of the expulsive phase and increase the likelihood of an instrumental delivery. An additional hour is allowed in the expulsive phase therefore.
- It does not increase the chance of cesarean section
- It does not cause long-term backache.
- It needs to be accompanied by a more intensive level of monitoring.

Care and observations for women with regional analgesia in labour

- Intravenous access should be secured prior to commencing regional analgesia.
- Following additional observations should be carried out for women with regional analgesia
  - During establishment of regional analgesia or after top up bolus blood pressure should be measured every 5 minutes for 15 minutes.
  - If the woman is not pain free within after each administration, the anaesthetist should be called.
  - Hourly assessment of the level of sensory block should be undertaken.
- Women with regional analgesia should be encouraged to move and to adopt whatever positions they find most comfortable throughout labour.
- Once established, regional analgesia should be continued until after completion of the third stage of labour and when necessary until perineal repair is done.
- Women should be allowed one additional hour in the second stage of labour, depending on maternal and foetal condition. Thereafter pushing during contractions should be actively encouraged.
- Continuous EFM is recommended for at least 30 minutes during establishment of regional analgesia and after administration of each bolus.

More guidelines to be published in the next issue