



Guidelines for the Conduct of Neuraxial Analgesia in Obstetrics

Version	Effective Date
1	Feb 1993 (Reviewed Feb 2002)
2	Oct 2012
3	Dec 2017

Document No.	HKCA – P4 – v3
Prepared by	College Guidelines Committee
Endorsed by	HKCA council
Next Review Date	2022

Note : This Guidelines is formerly named “Guidelines for the Conduct of Epidural Analgesia for Parturients” , it is changed to the current title in December 2017.



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1. GENERAL PRINCIPLES

1.1 Neuraxial analgesia should be initiated and maintained by anaesthesiologists competent in the technique or by trainees under appropriate supervision. All persons who undertake neuraxial analgesia must understand the relevant anatomy, physiology, pharmacology as well as potential complications and contraindications to its use. They must be able to recognize and promptly treat any complications.

1.2 The responsible anaesthesiologist must be readily available during initiation of neuraxial analgesia until a satisfactory blockade has been established, the parturient is stable and the potential period for immediate complications has passed.

1.3 The ultimate responsibility for the neuraxial analgesia maintenance remains with the anaesthesiologist initiated the technique. The subsequent management may be delegated to another medical practitioner or nurse competent in managing epidural analgesia. This competence include, but is not limited to, an understanding of the technique, the drugs and equipment used, monitoring requirements and the recognition and management of any side effects and complications. There must be adequate handover of information between staff about the parturient.

1.4 It is essential that the parturient is under the care of a medical practitioner in obstetrics who is competent to perform vaginal and operative delivery, has knowledge of maternal and foetal status and labour progress, agrees with the neuraxial analgesia initiation and is able to manage obstetric related complications with delivery. There should also be a qualified personnel other than the attending anaesthesiologist to perform newborn assessment and resuscitation should an imminent delivery is required.

1.5 Experienced nurses or midwives who are trained and competent to manage neuraxial analgesia must be available at all times. The Department of Anaesthesiology should ensure there are labour analgesia service which is supported by designated personnel, clear protocols, standardised equipment, pharmacy, appropriate documents and with audits in place

1.6 Although epidural analgesia is the standard technique referred to as below, this guideline is applicable to all modes of initiation and maintenance of neuraxial analgesia in the delivery suite, which includes but is not limited to, spinal (single



shot or continuous) technique, epidural technique, combined spinal-epidural technique, intermittent boluses, continuous infusions, patient controlled analgesia techniques etc.

2. FACILITIES REQUIRED IN THE LABOUR ROOM OR DELIVERY SUITE

2.1 For the safe administration of epidural analgesia, reference should be made to the documents issued by the Hong Kong College of Anaesthesiologists:

2.1.1 Guidelines for minimum facilities for safe anaesthetic practice in delivery suites [T4].

2.1.2 Guidelines on monitoring in anaesthesia [P1].

2.2 Ultrasound machine with appropriate probes should be readily available when required.

2.3 Accurate clocks in all delivery rooms.

2.4 Readily available “eclampsia boxes” containing all necessary equipment and protocols for eclampsia.

2.5 In addition, maternity units either must have timely access to operating theatres, neonatologist consultation, resuscitation service, intensive care specialist consultation, haematology and blood bank service; or where such services are externally provided, a clear policy must be established and distributed and ready for emergency use.

3. CONDUCT OF NEURAXIAL ANALGESIA FOR PARTURIENTS

3.1 The parturient must have a proper assessment by an anaesthesiologist prior to the initiation of epidural analgesia.

3.2 Informed consent must be obtained which includes a discussion on the risk and benefits of neuraxial analgesia and effects on labour progress and delivery. Other options of pain relief available should be offered. Other concerns if raised by patient (e.g. maternal fever, birth outcomes, breastfeeding success) should also be discussed. Documentation of summary of discussion is recommended.

3.3 Facilities for resuscitation should be confirmed as readily available prior to the performance of epidural analgesia.



3.4 Contraindications to neuraxial techniques must be excluded or corrected prior to the procedure. Particular attention must be given to coagulopathy, bleeding diathesis, blood dyscrasia, thrombocytopenia and anticoagulant uses. Laboratory investigation should be undertaken when appropriate. Precaution should be given to conditions such as hypovolaemia, occult haemorrhage and supine hypotension syndrome. Prior use of parenteral opioid and potential respiratory depression should be noted before administration of neuraxial opioids.

3.5 A wide-bore intravenous cannula should be secured before commencement of neuraxial analgesia. Intravenous fluid loading should be given as clinically indicated at an appropriate rate..

3.6 The anaesthesiologist performing the neuraxial analgesia should have an assistant with the appropriate training.

3.7 Neuraxial analgesia must be performed using optimal aseptic technique. It requires thorough handwashing and barrier precautions including wearing caps, masks, sterile gown and gloves, and the use of sterile drape. Skin preparation should be conducted in such manner that agents used for skin preparation are unable to contaminate drugs or equipment used for neural blockade. Disinfectant must be allowed to dry before skin is palpated or punctured. Gloves should be changed if contaminated before continuing the procedure.

3.8 The parturient on epidural analgesia should be monitored on the following parameters and continued to be monitored following delivery until all effects of the epidural analgesia have subsided.

3.8.1 Blood pressure

3.8.2 Heart rate

3.8.3 Oxygen saturation if appropriate

3.8.4 Pain score

3.8.5 Degree of sensory and motor block

3.8.6 Degree of sedation

3.8.7 Progress of labour and foetal conditions (if applicable)

3.8.8 Body temperature

3.9 If ambulation is facilitated, there should be specific guideline on assessment of risk of slips and falls while mobilizing on neuraxial analgesia



4. EQUIPMENT AND DRUGS

- 4.1 Epidural catheter and tubing must be clearly labelled to minimize disconnection and avoid inadvertent drug administration
- 4.2 The maximal size of the bolus dose and the maximum infusion rate should be limited by ranges specific to the neuraxial technique, to avoid excessive amount of analgesic drug given to the patient
- 4.3 Epidural infusion should be labelled “FOR EPIDURAL USE ONLY”
- 4.4 The infusion system between the pump and the patient should not contain injection ports. An anti-bacterial filter must be inserted at the junction of the epidural catheter and the infusion line. If a handheld syringe is used separately, any bolus injection must follow strict aseptic technique
- 4.5 Devices should not be connected with intravenous Luer connectors or infusion spikes.
- 4.6 Epidural infusions should be stored in separate cupboards or refrigerators away from other intravenous drug infusions

5. THE EPIDURAL RECORD CHART

The epidural record chart is an important document that records the progress of the epidural and warns of changes in the patient’s vital parameters in relationship to the dosages of medication given to the parturient.

The record should include:

5.1 Basic Information:

- 5.1.1 Patient’s name, hospital number, sex, age and body weight
- 5.1.2 Date of procedure

5.2 Pre-anaesthetic history

- 5.2.1 Indications for epidural
- 5.2.2 Parity, obstetric and relevant medical history.
- 5.2.3 Clinical assessment
- 5.2.4 Relevant investigations
- 5.2.5 Known allergy to drugs, materials or foodstuffs.



5.2.6 Recent and current medications taken by the patient

5.2.7 Past anaesthetic history

5.3 Epidural Record

5.3.1 Name of anaesthesiologist(s) performing the epidural

5.3.2 Details of the anesthetic techniques including positioning, needle size, level of epidural catheter insertion, loss of resistance method, depth of epidural space, catheter length in epidural space

5.3.3 Details on epidural infusion including the concentration, volume and the rate of epidural infusion, rescue boluses and times of administration, total infusion amount and patient-controlled epidural analgesic regime if applicable

5.3.4 Details of epidural and other drugs used including time, dosage, route and any untoward reactions. One needs to pay particular attention to drugs used intraspinally as permanent neurological deficit and death can result.

5.3.5 Details of intravascular cannula and any intravascular fluids administered

5.3.6 Details of monitors used.

5.3.7 Record of patient's vital parameters and foetal heart rate

5.3.8 Record of sensory and motor block achieved.

5.3.9 Clinical assessment such as inspection of epidural insertion site, checking block height, checking integrity of catheter, etc

5.3.10 Details of any complications and their management.

5.4 Time and method of delivery and condition of the baby.

5.5 Time of removal of catheter and its integrity upon removal.

5.6 Instructions to nursing staff on the management of the epidural technique and name of anaesthesiologist to contact with contact number.



6 THE POST EPIDURAL FOLLOW UP

Following delivery, the anaesthesiologist should still be contactable to assess and manage any complications secondary to the epidural when required. A postnatal review of the patient should be conducted after the completion of the neuraxial analgesia. The information gathered should include:

- 6.1 Recovery of motor and sensory blockade and urination. Women should be advised not to ambulate unaccompanied or be discharged until full recovery of motor power.
- 6.2 Efficacy of the neuraxial analgesia technique.
- 6.3 Complications (if any) arising from neuraxial technique, outcome and management.
- 6.4 Other information for quality assurance of the Department

7 REFERNCES

- 7.1 ANZCA PS3 (2014) Guidelines for the Management of Major Regional Analgesia
- 7.2 Best practice in the management of epidural analgesia in the hospital setting. Faculty of Pain Medicine of the Royal College of Anaesthetists. November 2010
- 7.3 ASA Guidelines for neuraxial anesthesia in Obstetrics (Approved by the ASA House of Delegates on Oct 12, 1988, and last amended on Oct 16, 2013)
- 7.4 OAA/AAGBI Guidelines for Obstetric Anaesthetic services. June 2013
- 7.5 Practice Bulletin No. 177. Obstetric Analgesia and Anesthesia. Vol 129 (4) April 2017, p e73-e89
- 7.6 Skin antisepsis for central neuraxial blockade. Published by AAGBI. September 2014.
- 7.7 Joint RANZOG / ANZCA Position statement on the provision of Obstetric Anaesthesia and Analgesia services. WPI 14. First endorsed July 2014. Current February 2015.
- 7.8 Acute pain management: scientific evidence. ANZCA. Fourth edition 2015. pp515-540