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Monitoring of Neuraxial Block After Epidural Analgesia for Labour

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Introduction

In 2020, the Association of Anaesthetists (AAGBI) and Obstetric Anaesthetists' Association (OAA) published recommendations for neurological monitoring during obstetric neuraxial block. [1]

The key recommendations are shown in Figure 1.[2]

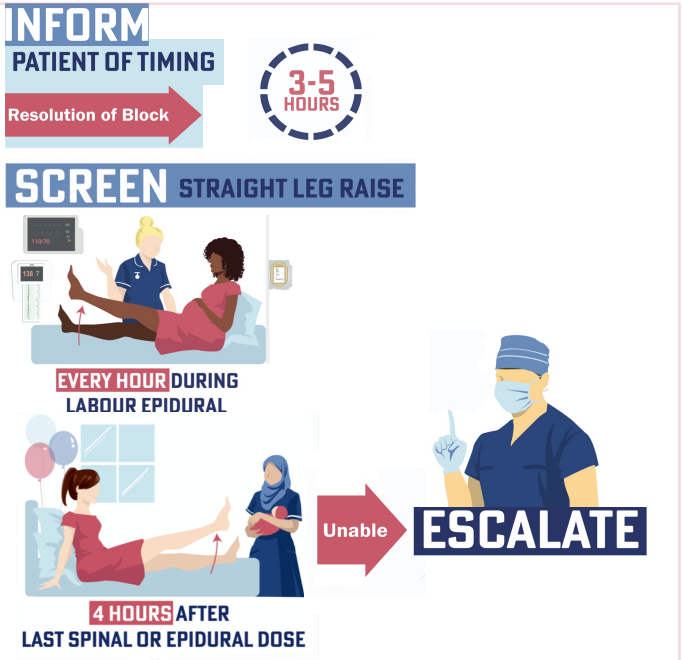


Figure 1. Adapted from OAA Safety guideline poster, designed by Dr Nico Zin [2]

We sought to compare neuraxial monitoring before and after epidural analgesia for labour in our tertiary obstetric unit with the OAA/AAGBI guideline and the pre-existing NICE guidance. [3]

Methods

The obstetric anaesthesia worklog was reviewed to identify women who received epidural analgesia in August 2020. A retrospective review of maternity case notes was conducted, collecting the following data:

- ❑ Duration of epidural analgesia
- ❑ Volume of epidural self-administered via pump
- ❑ Top-ups (midwife/anaesthetist)
- ❑ Motor block assessment (frequency & method)
- ❑ Sensory block assessment (frequency & method)
- ❑ Time to documented recovery of motor block

Results

53 patients' notes were reviewed and 4 were excluded due to epidural duration < 1h. **Of the 49 patients** that were included mean epidural analgesia duration was 7.4h (range 0-17h).

- **SLR was documented in 0 patients**
- **79% of patients had motor block assessed hourly** by ability to move feet

Figure 2. [2]

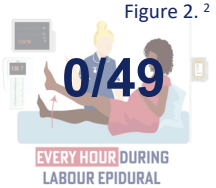
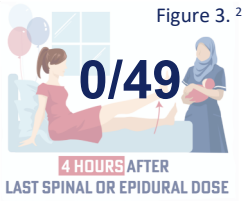


Figure 3. [2]



- **0 had recovery of motor block assessed within 4 hours**
- **24% had no documentation of motor block recovery** prior to discharge
- **Sensory block was documented hourly in all patients,** using light touch at the xiphisternum.

Dermatome level was recorded in 7 patients, by an anaesthetist assessing inadequate analgesia. No patients were reviewed for a prolonged block and there was no evidence that patients were informed of likely block resolution. 24 patients (49%) required operative delivery, of which only 63% had epidural analgesia converted to anaesthesia.

Discussion

Although motor and sensory block is recorded hourly in most cases, the method of assessment is not as recommended in the OAA/AAGBI guideline.

Recovery of motor block after cessation of epidural analgesia is not being documented until the anaesthetic review, which is usually the day after delivery. While it may be informally assessed, there is no section in the postnatal notes to prompt this or record it.

A new epidural document has now been designed that includes assessment of motor and sensory block with:

- Hourly assessment of ability to SLR
- Hourly assessment of dermatome level
- Assessment of block recovery
- Escalation to an anaesthetist if prolonged/inadequate block

This will be introduced along with training on how to assess motor block and sensory level. The audit will be repeated once the new documentation has been adopted.

References

1. Yentis S, Lucas D,Brigante L et al. Safety guideline: neurological monitoring associated with obstetric neuraxial block 2020. Anaesthesia.2020;75(7):913-919.doi:10.1111/anae.14993.
2. Zin, N. OAA Safety guideline poster, Neurological monitoring after spinal/epidural. https://www.oaa-anaes.ac.uk/assets/_managed/cms/files/Trainee-Hub/OAA%20Neurological%20Monitoring%20Poster%20v1.pdf (accessed 29/03/2021)
3. National Institute for Health and Care Excellence. Clinical guideline [CG190]: Intrapartum care for healthy women and babies, 2014 (revised 2017). London: NICE, 2017. https://www.nice.org.uk/guidance/cg190 (accessed 06/01/2020)