Management of impaired leg movement & High Bromage score with Epidural Analgesia

- All patients receiving epidural analgesia must have leg strength/motor function assessed a minimum of 4 hourly (or as guided by the score) using the Bromage scoring system.
- An increasing degree of leg weakness usually implies excessive epidural drug administration. However, it can indicate very serious complications including dural penetration of the catheter, or the development of an epidural haematoma or abscess. If not diagnosed and treated promptly, this will lead to paraplegia. Cord compression as a result of haematoma or abscess is a neurosurgical emergency.
- N.B Some patients may have pre-existing motor impairment pre-operatively e.g. patient’s with cerebral palsy. A pre-operative baseline motor function assessment should be documented and then observed post-op for changes in comparison with their baseline and in discussion with parents/carers.

**Bromage Score of 2 or 3?**

- **STOP epidural infusion**
  - Contact Pain Team on Bleep: 0577

**Unilateral**

- Review catheter insertion details - could the catheter be coiled/kinked/migrated >4cm in space? (Pain Team/Anaesthetist Only)
- **YES**
  - Pull back epidural catheter by 1cm (Pain Team/Anaesthetist Only)
  - **YES**
    - Is patient comfortable?
      - **YES**
        - Re-start epidural infusion at reduced rate
        - Titrate to achieve analgesia (Pain Team/Anaesthetist Only)
      - **NO**
        - Re-start epidural at previous rate
        - Consider need for Clinician Epidural bolus 0.1ml/kg (max 5mls) (Pain Team/Anaesthetist Only)
- **NO**

**Bilateral**

- Re-assess Bromage every 30 minutes
- **Is leg strength improving?**
  - **Bromage 0 or 1?**
    - **YES**
      - **Suspect an epidural haematoma/abscess**
        - Pain Team/Anaesthetist to proceed as follows:
        - **Consider alternative analgesia provision?**
          - PCA or NCA
    - **NO**
      - **Has more than 2 hours elapsed since stopping the epidural infusion?**
        - **YES**
          - **Consider alternative analgesia provision?**
            - PCA or NCA
        - **NO**

- **Do not delay! An epidural haematoma has to be evacuated within 8 hours of the onset of symptoms for patient to have the best chance of recovery of neurological function**
- **Refer to on-call Neurology/Neurosurgery for urgent assessment**
- **Inform Pain Consultant or CIC for anaesthesia**
- **Arrange an urgent MRI**
- **Inform patients admitting Surgical Consultant**

GOSH Pain Control Service April 2021 Adapted from RCOA NAP 3 Report 2009 Major Complications of Central Neuraxial Block