**Unanticipated Dural Puncture Management**

**Incidence**

* Estimated incidence: 1-5%

**Management**

* Go to different level
  + Introduces additional morbidity, but avoids complications of incorrectly dosing intrathecal catheter
* Intrathecal catheter
  + Pro’s: gives reliable analgesia for labor and/or cesarean section, avoids morbidity of further attempts at labor epidural
  + Con’s: introduces risk of incorrectly dosing intrathecal catheter
  + Off label: epidural catheters not FDA approved for intrathecal use, but this practice has been well described in the literature
  + Management
    - Loading dose
      * Use 1.5 cc of solution that was originally intended for labor epidural
        + Labor epidural loading solutions (10 cc total)

5 cc bupivacaine 0.25% + 2 cc fentanyl 50 mcg/cc + 3 cc sterile normal saline

8 cc ropivicaine 0.2% + 2 cc fentanyl 50 mcg/cc

* + - Maintenance
      * Ropivicaine 0.2%
      * PCEA: 0 cc/hr continuous, 1 cc demand, 30 minute lockout, 2 cc/hour
      * Rationale: hydrostatic pressure from bolus provides more predictable distribution of local anesthetic
    - Removal
      * Once thought that keeping it in for 24 hours would decrease postdural puncture headaches – it does not.
      * Remove intrathecal catheters immediately after delivery.

**Postdural puncture headache management**

* Diagnosis
  + Must be postural component
  + Never unilateral
  + Often has neck component
  + Patient usually in significant pain
* Management
  + Symptom relief: caffeine, NSAID’s, fluids, rest (not curative)
  + Epidural blood patch
    - Wait 48 hours after dural puncture: empirical evidence suggests blood patches less effective if done earlier
    - Separate consent form
    - Before doing blood patch, ask patient if she can take care of her baby with headache. If answer yes, offer trial of watchful waiting. If no, do blood patch.
    - Procedure
      * Best with two providers: one to draw blood, one to perform epidural
      * Perform epidural as close to dural puncture site as possible
      * Blood draw: do as sterile as possible with chloroprep. **MUST BE FRESH STICK**
      * Injection of blood: I prefer using 10 cc syringes for sensitivity of pressure. Inject two 10 cc syringes of blood, no more than 20 cc total.
        + Pay careful attention to paresthesias. If paresthesia occurs, stop injecting blood and attempt in 10 seconds. If paresthesias persistent, terminate procedure.
    - Prognosis
      * 80% of patients get relief with 1st blood patch, 90% with 2nd blood patch
      * DO NOT attempt a 3rd blood patch – look for an alternative diagnosis
        + It is known that some women have spontaneous dural tears caused by pushing during labor.

8/22/16: M.P. Hofkamp, MD