Introduction

- Inadvertent intrathecal catheter placement after dural puncture is a relatively common complication of epidural placement, but the migration of a previously functioning epidural catheter into the intrathecal space is extremely rare.1,2
- We present a case of postoperative migration of an epidural catheter to the intrathecal space after fetoscopic neural tube defect repair.

Case Description

Preoperative:
- 28 yo G2Po at 24w2d gestation presented for evaluation for prenatal repair of fetal myeloschisis (L1-sacrum)
- Fetal defects included Chiari II malformation but preserved lower extremity movement at the time of evaluation, otherwise no defects noted

- Fetoscopic repair involves exteriorization of the uterus through a low abdominal incision with two 4mm incisions in the uterus

Intraoperative:
- Epidural placed easily with negative test dose
- Patient transported to the operating room, where she moved herself to the operating table
- General endotracheal anesthesia induced, surgery completed uneventfully
- Epidural bolused with a total of 15cc 0.25% bupivacaine in divided doses, with negative aspiration confirmed
- Extubated and taken to L&D with normal vital signs, minimal lower extremity motor blockade, and no pain

Postoperative:
- Infusion of 0.1% bupivacaine with 10mcg/mL fentanyl started at 10mL/hr
- 2 hours later, decreased variability and late decelerations noted on the fetal heart rate tracing. SBP in upper 80s (marginally lower than baseline). Epidural paused during evaluation.
- Terbutaline given and patient placed in full lateral position. Decelerations ceased and variability improved.
- SBP in the 70s continued, and markedly increased density of motor blockade was noted.
- Aspiration of the epidural catheter revealed free-flowing clear CSF. Epidural catheter removed.
- Bilateral TAP block was performed after block receded.
- Patient transitioned easily to oral pain regimen the following day. No headache occurred, and patient discharged once uterine quiescence confirmed.

What is Fetoscopic Neural Tube Defect Repair?
- Fetal repair of myelomeningocele (MMC) can lead to lower rates of hydrocephalus, decreased need for shunts, and improved leg function
- In 2014, the first fetoscopic MMC closure in the United States was performed at Texas Children’s Hospital
- Fetoscopic repair involves exteriorization of the uterus following a unilateral sacral incision with two 4mm incisions in the uterus

Discussion

- Epidural catheters, particularly the stiff plastic variety, can migrate out of the epidural space even after a catheter has been functioning appropriately.3,4
- Anesthesiologists should have a high index of suspicion in any patient who has unexplained hypotension or acutely increased density of motor blockade.
- Early identification of intrathecal catheter migration can prevent serious adverse events for both mother and fetus undergoing fetal surgery.

References