

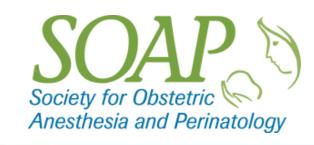
Introduction

- Unintentional dural puncture (UDP)
 remains a common complication of
 neuraxial placement, carrying risk of
 subsequent post-dural puncture
 headache (PDPH) or need for
 epidural blood patch.¹
- Management with an intrathecal catheter (ITC) can provide rapidonset, titratable, and effective anesthesia, although the elevated risks of medication error and high spinal must also be considered.^{2, 3}

We present a 31-year-old G5P0040 at 30w1d planned for urgent cesarean delivery secondary to nonreassuring fetal heart tracing/FGR with abnormal dopplers, who had presented initially at 22w6d for PPROM.

- PMH of complex repaired CHD -> Fontan physiology with large VSD, asthma, bipolar, depression/anxiety
- OB Hx: SAB x 4

- 1. Anaesthesia. 2021 Aug; 76(8):1111-1121.
- 2. Int J Obstet Anesth. 2009 Apr; 18(2):131-6.
- 3. Anaesthesia. 2024 Dec;79(12):1348-1368.



Initial Plan

Preload optimization

Arterial line, largebore PIV x 2, IV filters

Reduced-dose CSE

Norepinephrine, vasopressin, and phenylephrine available for hemodynamic support

UDP > ITC

No frank CSF return via Weiss needle, however aspiration noted via catheter

4.5 mg hyperbaric bupivacaine, 15 mcg fentanyl, and 150 mcg morphine

Sequentially dosed in three increments of 2.25 mg bupivacaine to a level of T4 ost-operative Management

ITC maintained for two days

- Local anesthetic 'top up'
- Intrathecal morphine redosed

Monitored for development of headache

Discharged home on POD#4

Discussion

While unplanned, an ITC dosed incrementally was advantageous:

- To avoid a dramatic reduction in preload
 - Via rapid and precise re-dosing of block intraoperatively
 - Particularly beneficial in this patient with Fontan physiology
- Post-operative pain management
 - Intrathecal local anesthetic, morphine re-dosed
- Some evidence that ITC placement after UDP may reduce the incidence of PDPH^{1,2}





- 1. J Anesth Analg Crit Care. 2023 Jul 20;3(1):22.
- 2. *Int J Obstet Anesth.* 2020 Feb;41:71-82.