

Interdisciplinary Management of a Parturient with Spinal Cord Stimulator and Intrathecal Pump for CRPS During Labor and Delivery

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INTRODUCTION

Complex Regional Pain Syndrome (CRPS)

- Array of painful conditions with chronic pain
- Disproportionate in time or degree of known trauma
- Overall incidence of 16.2 per 100,000 person years
- 3x more likely to affect females
- Existing CRPS diagnosis makes labor and delivery challenging

PATIENT INFORMATION

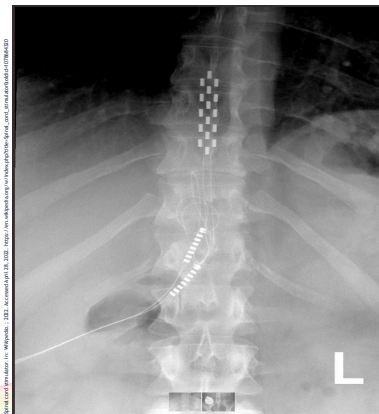
- 35 year old female G3P0101
- CRPS in right upper extremity and left lower extremity
- PMH: obesity (BMI 45), hypertension, GERD, gastroparesis, anxiety/depression, and recent COVID-19
- OBHx: previous cesarean section for GDM, macrosomia and preeclampsia; GDM during this second pregnancy, managed with an insulin pump.
- Pain Therapies: intrathecal (IT) morphine (6.3 mg/day)/bupivacaine (2.52 mg/day) pump; spinal cord stimulation(SCS) to levels T12-L1
- Medications: gabapentin 600 mg TID, hydromorphone 4 mg PRN, tizanidine 4 mg PRN, trazodone 100 mg PRN, Intermittent high-dose (150 mg), short-duration (2 hours) outpatient ketamine infusions

CASE DESCRIPTION

28 week consultation: History and physical exam with anesthesia service, further evaluation with IR and chronic pain

Ultrasonography of spine:

- Interspinous processes, epidural spinal cord stimulator wires and leads
- Intrathecal catheter
- Subcutaneous pockets with devices with batteries and leads
- Neuraxial intervention deemed prohibitive due to existing hardware



37 weeks for Labor:

- IOL
- Labor analgesia: IV morphine → fentanyl PCA
- Three day labor → failure to progress → Cesarean Section under GA
- Intra-op Ketamine infusion
- Post op TAP blocks
- POD1-2 pain control with IV ketamine, PCA → IVP hydromorphone
- Discharged home POD2



DISCUSSION

CRPS complicates the peripartum course.

Goals for care include:

- Accommodate existing therapy strategies
- Plan for peri-partum pain control
- Therapies commonly used:
 - Medical therapy:
 - bisphosphonates, calcitonin, vitamin C, steroids, anti-depressants, anticonvulsants, muscle relaxants, opioids, and ketamine.
 - There is a range of efficacies
 - FDA class C or D for pregnancy.
 - Our patient was taking many drugs from these classes
 - Adjunctive:
 - PT, OT, psychiatric
 - Interventional (SCS, IT pump)

REFERENCES

- Pain 2007;129(1-2):12-20.
- Int J Obstet Anesth 2010;19(1):114-117.
- J Anesth 2013;27(1):124-127.
- Reg Anesth Pain Med 2015;40(3):276-283.
- Int J Obstet Anesth 2009;18(1):64-66.
- Curr Pain Head Rep 2018;22(2):10.
- NeuroRehab 2020;47(3):253-264.
- Pain 2009;147(103):107-115.