# Paravertebral Block for Post-Cesarean Analgesia

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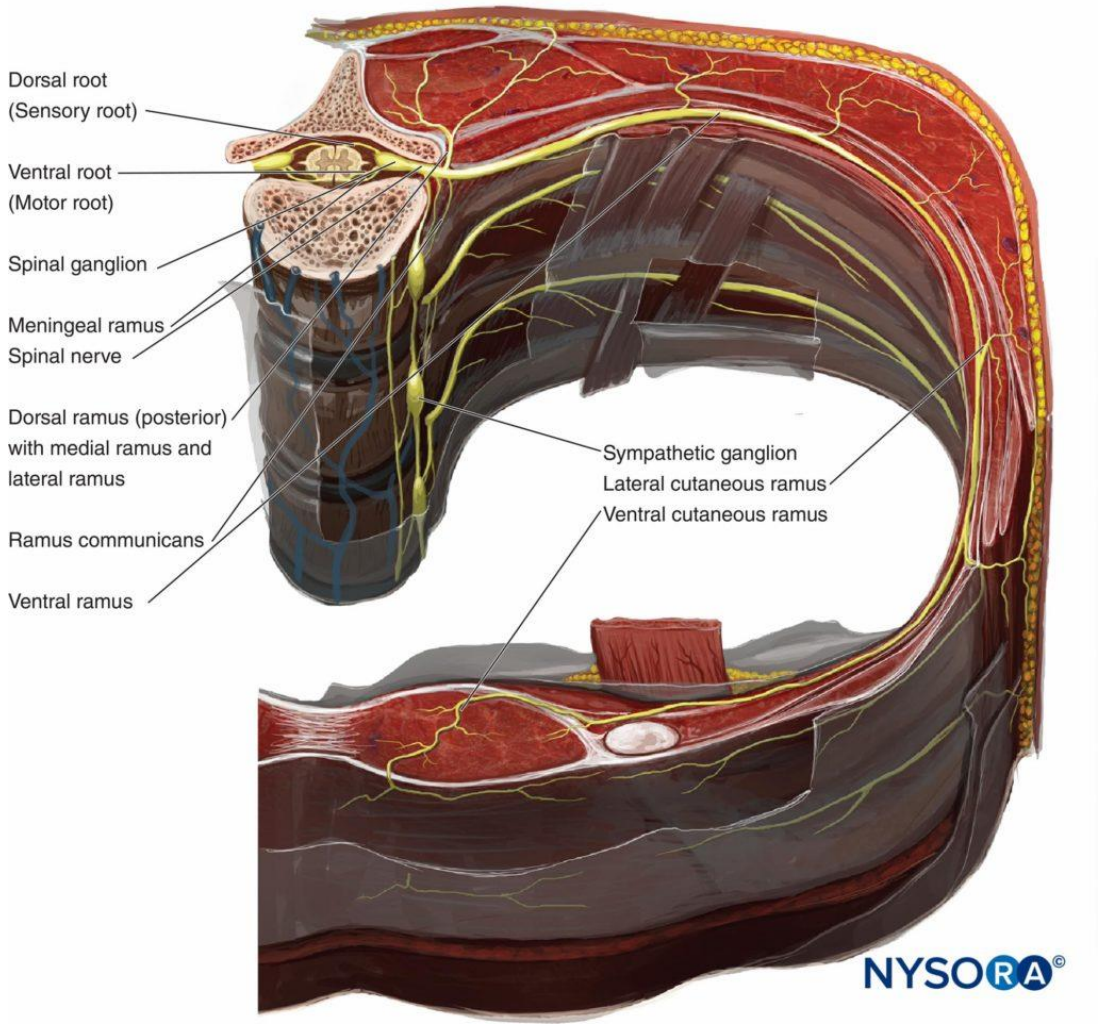
# Background

**Thoracic and lumbar paravertebral block**

- Unilateral, somatic, sympathetic nerve block achieved by injecting local anesthetic close to where the spinal nerves exit the intervertebral foramen
- Lower side-effect profile
  - Shorter time to ambulation
  - Reduced incidence of hypotension
  - Shorter time for bladder catheter
- Ultrasound guidance reduces risk of pneumothorax[1]




1. Sangkum, L.; Liu, H. Peripheral Nerve Blocks for Cesarean Delivery Analgesia: A Narrative Review. *Medicina* 2023, *59*, 1951.

# Case

37 y.o. G3P2 with history of two prior cesarean sections, both complicated by poorly-controlled post-operative pain, requiring prolonged lumbar epidural use for pain control.

- Patient experienced nausea, vomiting, and constipation with post-operative opioid use with both deliveries.

Patient presented for tertiary cesarean section at 38 weeks gestational age.

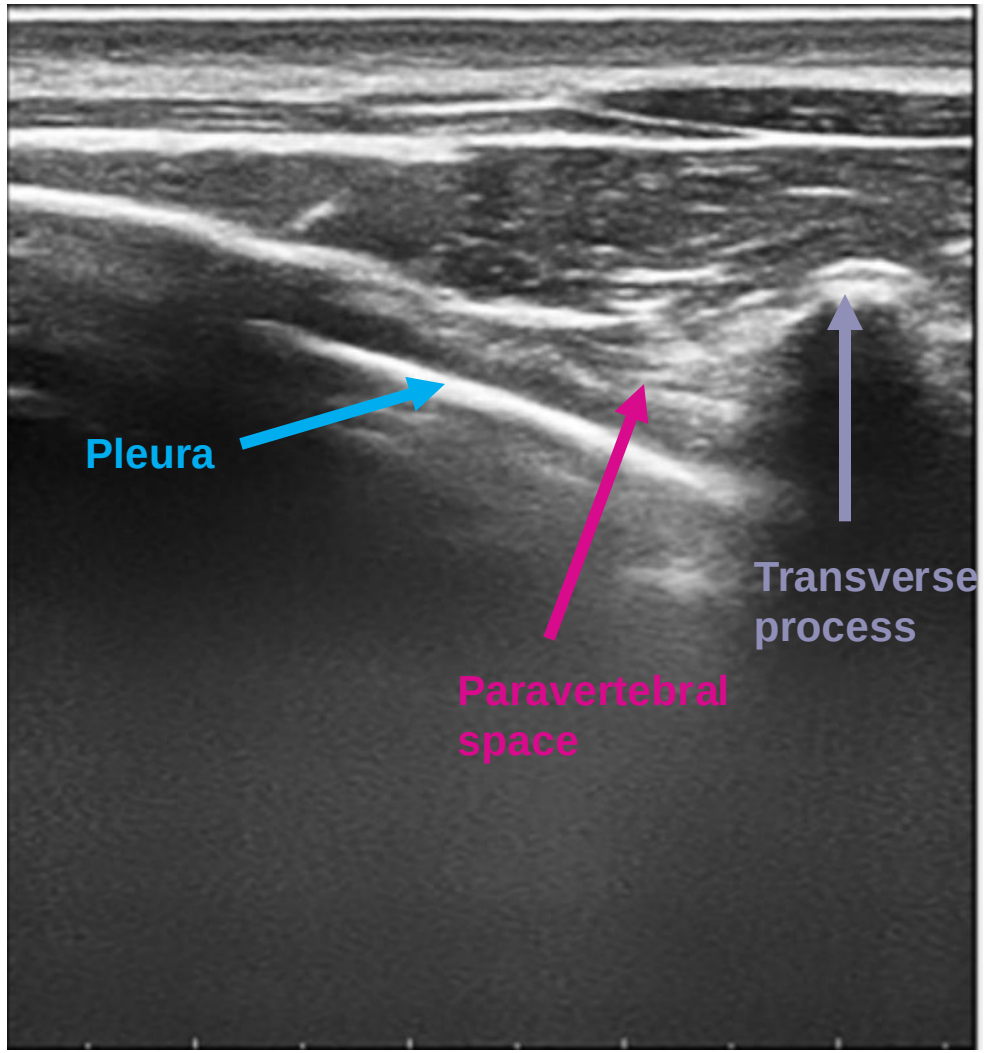
- Combined spinal-epidural technique was utilized as the primary anesthetic.
- Case proceeded uneventfully, and there were no surgical complications.
- Bilateral T10-T11 paravertebral blocks were performed with liposomal bupivacaine 1.3% 10mL and bupivacaine 0.25% 10mL with ultrasound guidance.

Post-operative course was largely uncomplicated.

- One mild hypotensive episode 12 hours following delivery that resolved with an intravenous fluid bolus.
- Patient did not require escalation of analgesics to include opioids until 38 hours following delivery, when one dose of oral hydromorphone 2mg was administered.
- **Overall pain and satisfaction scores improved compared to prior cesarean deliveries.**

# Teaching Points

- Lower thoracic paravertebral block provides appropriate dermatomal coverage for post-cesarean section pain.
  - Additional benefit of providing visceral pain coverage
  - Compared to abdominal wall blocks that only target cutaneous nerves, which only offer partial analgesia
  - Typical coverage is 4-5 dermatomes
- Option for post-operative analgesia in patients who many have challenging neuraxial placement (i.e. secondary to Harrington rod placement)
- Motor sparing
- Reduction in opioid use[2]




2. Mitchell KD, Smith CT, Mechling C, *et al*A review of peripheral nerve blocks for cesarean delivery analgesia. *Regional Anesthesia & Pain Medicine* 2020;45:52-62.

# Questions?