Wired for Success: Labor Analgesia in a Patient with a Sacral Nerve Stimulator

Mount Sinai West

SOAP Society for Obstetric Anesthesia and Perinatology

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BACKGROUND

- Neuromodulation devices range from intracranial, neuraxial (spinal cord or dorsal root ganglion), and peripheral (sacral nerve) stimulators.[1]

- Sacral neuromodulation involves placement of a quadripolar tined lead that stimulates sacral nerve roots to treat conditions such as fecal incontinence, urinary retention, and chronic pain after conservative management fails.[2]

- The mechanism of sacral nerve stimulators (SNS) is thought to involve activation of afferent pathways.[3]

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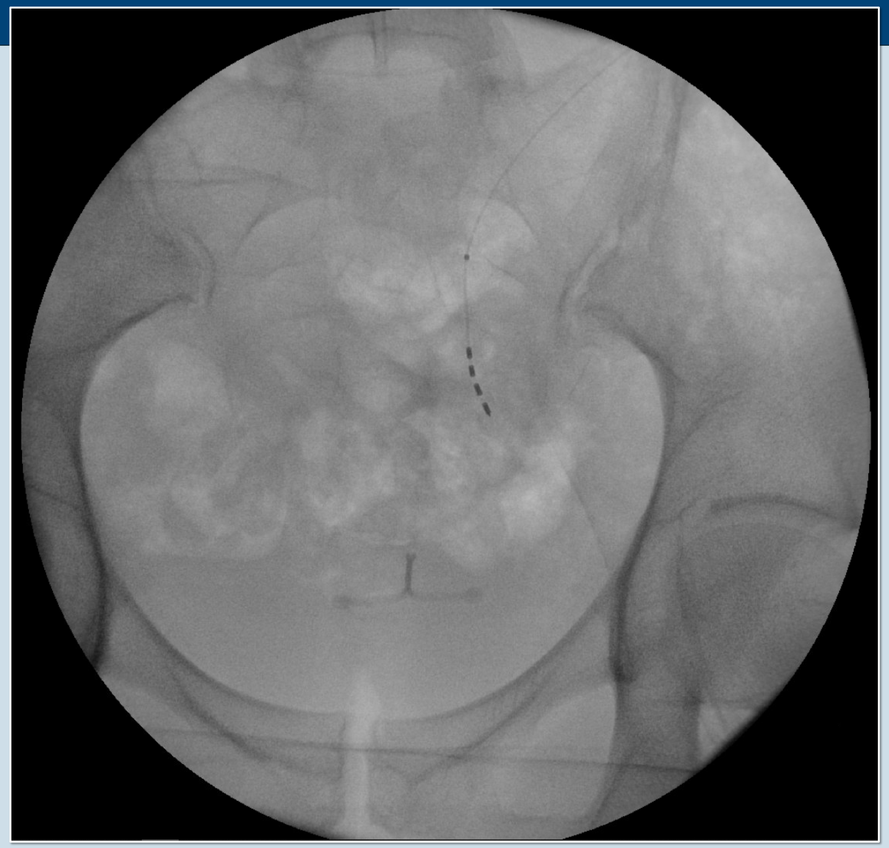

CASE DESCRIPTION

- **34-yo G1P0 @ 38w5d in labor** w/ a Hx of **IBS c/b persistent rectal prolapse** treated with an Axonics **SNS**.
- **Neurostimulator sited below the iliac crest**, **lateral to the sacrum**, with **leads entering through the S3 foramina** (Image 1).
- An **uncomplicated CSE** was placed at L4-L5 in midline position f/b PCEA (infusion 10 mL/hr of 0.0625% bupi-2 mcg/mL fent, demand dose of 5 mL Q 10 min). One 10 mL top off of 0.25% bupivacaine was administered during her labor.
- The patient **delivered vaginally** four hrs later & the epidural was removed **without complications.**

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DISCUSSION

- Pre-operative assessment of SNS should include **device type, last interrogation**, and **confirmation of location** with lumbosacral US, XR or fluoroscopy.[2,4,5]
- **SNS generally does not affect neuraxial block placement** unlike neuraxial stimulators which are often in lumbar or thoracic levels (higher risk of lead infection & epidural fibrosis).[1]
- If CD is indicated, **bipolar cautery is favored**, or grounding pad should be on the C/L side and far away.[2] If emergent defibrillation is necessary, place pads far from the device and perpendicular.[6]
- Pad external stimulators/batteries to **prevent pressure injuries**.[1]
- Patients with neuromodulation devices should be referred to anesthesiology as part of delivery planning.