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Spinal Cord Stimulator In The Parturient And Anesthetic Consideration For Cesarean Section

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Introduction

Pain is a common presenting complaint in any speciality of medicine. Whether it be on the obstetrical floor or the pain clinic, managing pain is the cornerstone of Anesthesia practice.

For patients that experience chronic lumbar radiculopathy, a therapeutic approach includes a spinal cord stimulator (SCS) or a in office neuraxial technique.

A SCS remains implanted in the patient and can offer long lasting pain management, whereas the neuraxial technique may only offer a few hours of analgesia depending on the anesthetic agent used.

When a parturient with chronic low back pain with associated radiculopathy and a SCS presents for a schedule caesarean section (CS), considerations should be made, prior to intervention with a neuraxial technique.

Evaluation of the patient’s labs, assessment from the provider who placed the SCS to understand lead placement and placement of SCS in surgical mode are all very important aspects of patient management prior to initiating a neuraxial technique.

Case Presentation

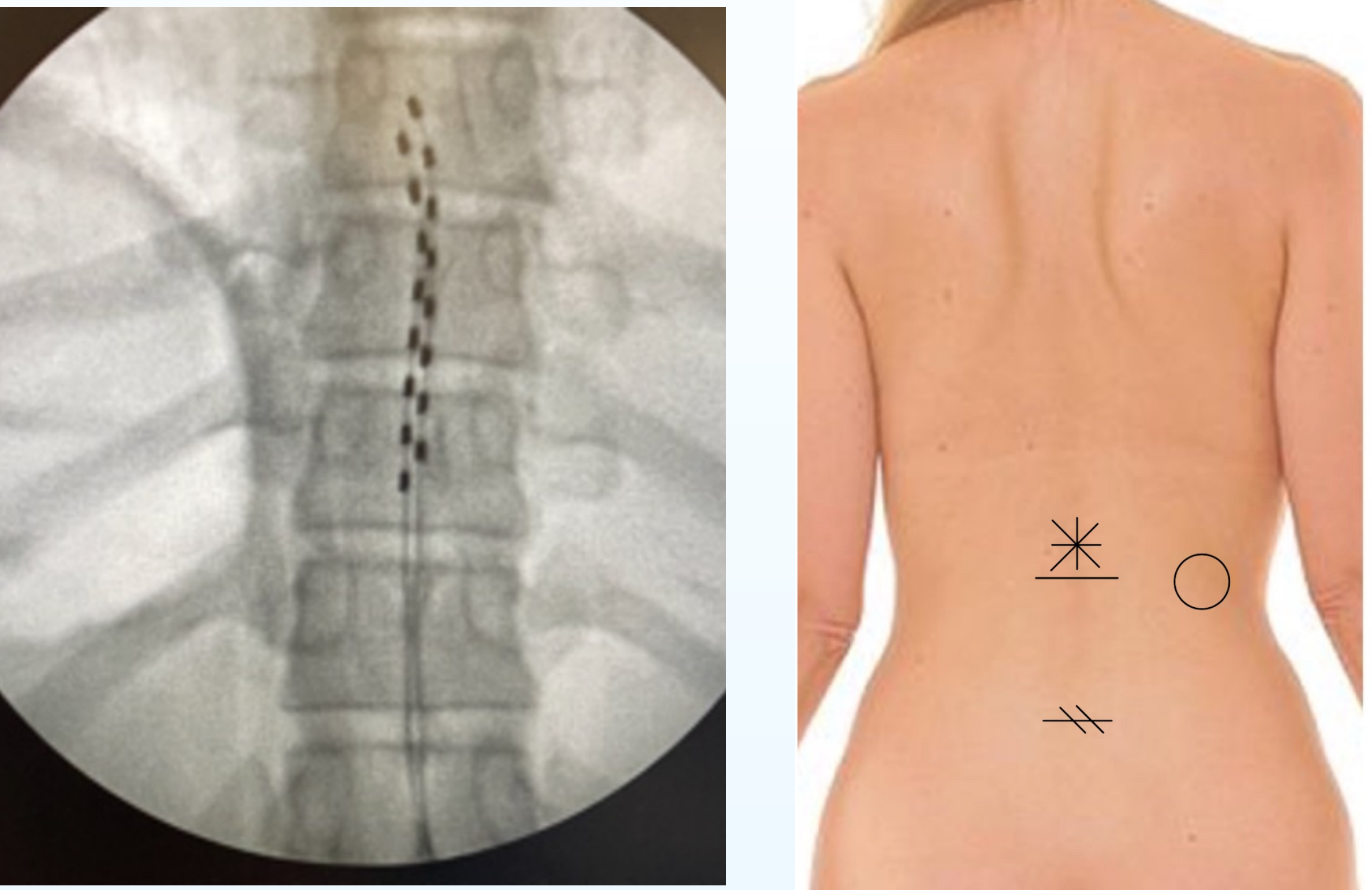
44 y/o F, obese G5P2022

PMHx: Chronic lumbar radiculopathy, with associated sciatica of the left leg, meralgia paresthetica of the left leg, idiopathic thrombocytopenic purpura, GERD and post-partum depression

Obstetrical history was notable for gestational diabetes.

PSHx: included two prior CS, D&C and placement of a SCS

Lumbothoracic X-ray showing lead placement



Evaluation and Intervention

Lead placement identified with ultrasound

Markings made on patient back to identify “safe zones” of where needle placement would be appropriate

SCS in surgical mode on day of planned CS

Placement of Spinal Anesthesia in the OR suite and palpation of the IPG and lead anchors prior to placing the spinal due to positional variations (concern of lead migration)

In conjunction with pain management assessment, spinal anesthesia attempted L4-L5 level following Tuffiers line.

25 G pencil-tip needle with length of 12.7 cm inserted uneventfully, injection of 1.5 ml of hyperbaric 0.75% bupivacaine in 8.75% dextrose with added 15 mcg of fentanyl and 150 mcg of morphine.

Successful placement in one attempt and adequate surgical analgesia, delivery of neonate, patient comfortable

Follow-up for 8 weeks post-CS for IPG testing.

Considerations

Positive outcomes require a multidisciplinary approach including obstetrics, neonatology, pain medicine and anesthesiology from early pregnancy.

Pre-admission to an anesthesiologist-led pre-operative clinic is highly recommended.

Understanding location of leads, possibly with ultrasound, to avoid radiation exposure to fetus.

The number of SCS implantations continues to grow.

Long-term prospective studies of SCS and effects on maternal and fetal wellbeing need to be explored in more detail, efforts thus far have shown an effective way of managing chronic pain without affecting the developing fetus unlike some analgesics (anticonvulsants, antidepressants, opioids and NMDA antagonists).

Continue encouraging provider collaboration and ensure close follow-up.

References

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