

Background

Spinal cord stimulators (SCS) have emerged as an effective modality to treat refractory pain. Because these devices are present in the epidural space, they require additional consideration prior to performing neuraxial labor analgesia. We present the case of a labor epidural performed in a patient with an SCS.

Case

A 33-year-old G2P1 female with a past medical history of chronic back pain status post L5-S1 transforaminal lumbar interbody fusion and thoracic SCS placement presented to the pre-anesthesia testing (PAT) clinic at 27 weeks to discuss options for labor analgesia. The operative note from her SCS placement and a post-operative X-ray requested at PAT revealed that the SCS leads entered the epidural space at L1. Since neuraxial anesthesia could be placed inferior to the SCS leads it was determined that neuraxial anesthesia could be placed with minimal risk of damage to the SCS generator or leads, lead migration, or lead entanglement. The patient was counseled on the aforementioned risks.

The patient subsequently presented to the labor and delivery floor at 37 weeks, and the risks mentioned at the PAT clinic were discussed again with the patient. Prior to epidural placement, neuraxial ultrasound was performed, and the SCS leads were not identified in the L3-L5 interspaces. A lumbar epidural catheter was successfully placed at the L4/L5 interspace. A T10 sensory level was achieved, and the epidural catheter was removed without incident after delivery.

Successful Labor Epidural Placement in a Parturient with a Spinal Cord Stimulator

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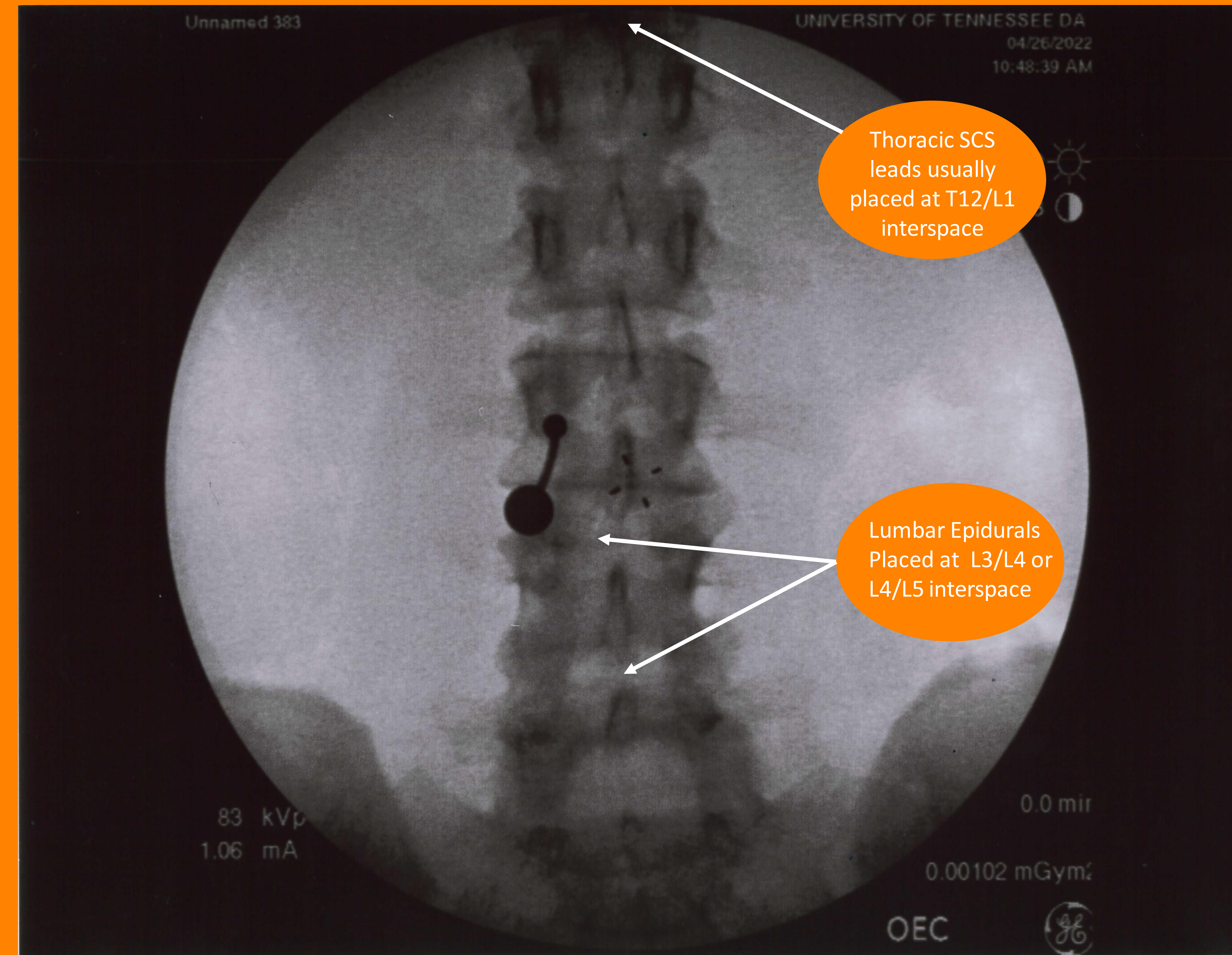


Figure 1: Normal lumbar Xray demonstrating where lumbar epidurals and thoracic SCS are usually placed.

References

1. Gupta M. Improving care of chronic pain patients with spinal cord stimulator therapy amidst the opioid epidemic. *NeuroSci*. 2020;41(10):2703-2710.
2. Bernardini DJ. Spinal cord stimulation and the pregnant patient-specific considerations for management: A case series and review of the literature. *Neuromodulation*. 2010;13(4):270-274.

Discussion:

- Spinal cord stimulators are an effective non-pharmacologic treatment for chronic pain [1].
- Spinal cord stimulators modulate pain signaling through electrical stimulation of the dorsal columns via leads placed into the epidural space.
- As SCS devices become more common, it is important to consider the implications of SCS placement in patients who could become pregnant.
- The presence of the SCS leads in the epidural space necessitates certain considerations prior to neuraxial anesthesia.
- It is important to have documentation of SCS lead location if neuraxial anesthesia is planned.
- Neuraxial ultrasound can help confirm SCS lead location.
- If SCS leads are placed cephalad to where labor analgesia will be performed, it is unlikely that the SCS leads will be damaged, and due to anchoring of the leads and lead fibrosis it is unlikely that the SCS leads will migrate with placement of neuraxial labor analgesia [2].
- Even though the risks are low, patients should be counseled about the potential risk of SCS device damage, lead entanglement, and hardware infection.