

A Path to Pain Relief: Spinal Cord Stimulation for Thoracic Radiculopathy After Fall-Related Rib Fractures

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INTRODUCTION

We present a 77-year-old female with a past medical history significant for obesity, hypothyroidism, osteoporosis, fibromyalgia, prior myocardial infarction, coronary artery disease, mitral valve regurgitation, obstructive sleep apnea, irritable bowel disease, and esophageal stricture, who presented to the outpatient interventional pain clinic with chronic thoracic pain.

Symptom onset was traced to 2018, following a traumatic fall resulting in multiple rib fractures.

MATERIALS & METHODS

- This case report contains no patient identifiers and is exempt from institutional review board (IRB) oversight under The Mount Sinai Hospital policy.
- Verbal & written consent was obtained from the patient to perform the procedure; the patient also gave informed consent to be in an abstract submission with no identifiers.
- In clinical practice, off-label spinal cord stimulation (SCS) may be considered for refractory thoracic radiculopathy when conventional therapies fail, though this is not an FDA-approved indication.
- Notably, there are documented complications, including the development of thoracic radiculopathy following paddle lead placement in the thoracic spine, manifesting as acute postoperative dermatomal pain, which in some cases necessitates surgical revision or lead removal.

IMAGES:

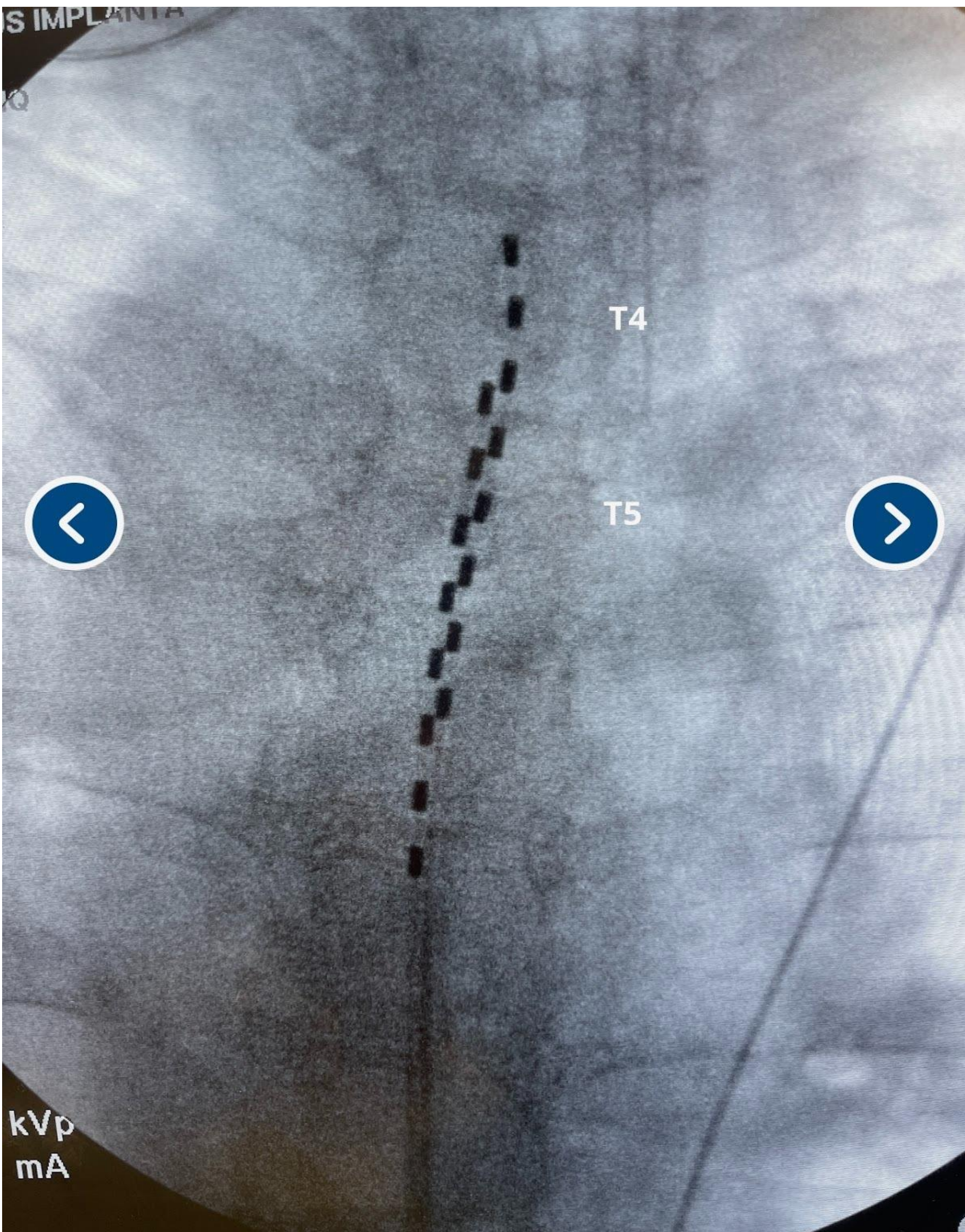


Image 1. Spinal Cord Stimulator leads at T4 and T5

REFERENCES

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RESULTS

- The patient described her symptoms as dysesthetic numbness and tingling radiating circumferentially across the chest, predominantly in a T4–T8 dermatomal distribution.
- Symptoms were exacerbated by prolonged sitting or flexion-based postures and alleviated by rest.
- The pain was functionally disabling, impairing her ability to perform activities of daily living, self-care, errands, and recreational pursuits.
- A diagnosis of thoracic radiculopathy and intercostal neuralgia was established.
- Symptoms persisted despite over 12 months of pharmacologic therapy, including gabapentin, pregabalin, acetaminophen, and NSAIDs.
- She also failed structured physical therapy, home exercise programs, and multiple transforaminal epidural steroid injections, all without pain relief.
- She subsequently underwent an SCS trial on February 24, 2025, during which an 8-contact lead was introduced into the epidural space and advanced to the mid-T4 level in the right paramedian position.
- A second lead was positioned at the mid-T5 level in the left paramedian position.
- The patient reported 90% improvement in pain and functional capacity during the eight-day trial.
- A permanent implantation was performed on April 18, 2025, resulting in sustained 70–90% pain relief at the three-month follow-up.

DISCUSSION

To our knowledge, only one other published case describes SCS implantation for thoracic pain following traumatic rib fractures. While SCS remains an off-label intervention for thoracic radiculopathy, its use may be warranted in select patients with refractory pain who have failed conservative and interventional modalities. Further study is necessary to define its role and long-term outcomes in this population.