

Spinal Cord Stimulation for the Treatment of Pain Secondary to Iatrogenic Syring

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Background

- Syringomyelia: the presence of an abnormal, fluid-filled cavity within the spinal cord^{1,2}
- There have been documented cases of syrinx formation following intramedullary injection during spinal anesthesia³
- Spinal cord stimulation (SCS) has been used to treat neuropathic pain secondary to syringomyelia due to various etiologies^{3,4}
- There has not been a report of SCS used to treat pain from an iatrogenic syrinx after cervical epidural steroid injection (CESI)

Patient History

- 68yo F with complaint of worsening pain following CESI performed at another facility under IV sedation
- PMHx: migraine headaches and chronic cervical radicular pain
- PSHx: C4-C6 anterior cervical disc fusion
- Symptoms after CESI included neck pain radiating into the right hand, allodynia, numbness of the right 1st-3rd digits, weakness of the right arm and hand, neck stiffness, cervicogenic headaches, and increased pain affecting daily functionality and sleep
- C spine MRI revealed a syrinx of the spinal cord from C4 to C6 [Image 1]
- Deemed appropriate candidate to trial SCS for her pain symptoms based on evaluation in our office and independent evaluation by pain psychology



Image 1. Demonstrated syrinx at C4-C6 levels of spinal cord on MRI following CESI

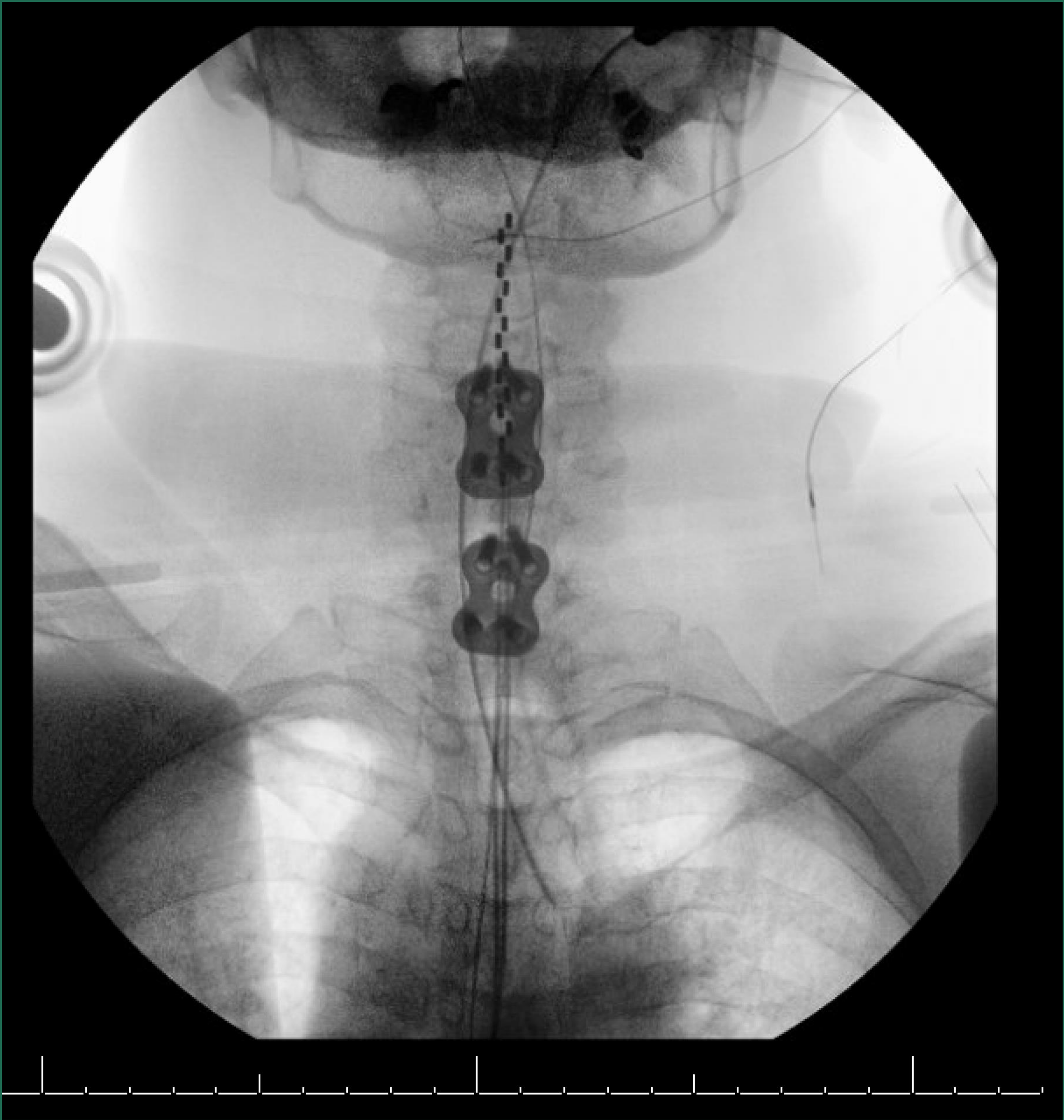


Image 2. SCS leads placed at mid-point of C2 vertebral body

Case Details and Results

- SCS trial demonstrated 70% reduction in symptoms and improved sleep
- Subsequent uncomplicated placement of spinal cord stimulator lead and internal pulse generator implant
- Two leads were placed above the level of the syrinx at the midpoint of the C2 vertebral body [Image 2]
- One week follow up: 80% reduction in her radicular pain
- One year follow up: continues to report decreased daily pain scores and improved quality of life including daily functionality

Conclusions and Clinical Implications

This case highlights the use of SCS to treat neuropathic pain symptoms following an iatrogenic cervical spinal cord syrinx. Although we do not have an MRI prior to the CESI to directly compare with the MRI obtained after the CESI, the timing, new character, and severity of her symptoms strongly suggest iatrogenic injury secondary to CESI complication. The patient’s neuropathic pain secondary to syringomyelia was successfully treated with SCS.

References

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