



## Early Detection of Complex Regional Pain Syndrome (CRPS) and Treatment with Spinal Cord Stimulation: A Case Study and 4 Year

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**INTRODUCTION:** The treatment of chronic neuropathic pain and or interstitial cystitis with spinal cord stimulation (SCS) in most cases involves retrograde placement of percutaneous single- or dual-lead contact arrays over S2-S3 nerve root. Retrograde approaches into the sacrum may present with challenges associated with limited epidural space and curvature of the spine. In contrast, the challenge with an anterograde approach is that the pelvic area is difficult to capture since the sensory fibers are more central and deep within the dorsal column. Here, we report a novel case where an anterograde placement of percutaneous dual-lead arrays gave near complete amelioration of pain.

**MATERIALS AND METHODS:** A 26-year-old woman presented with a 1-year history of chronic intractable pelvic pain and interstitial cystitis. She was referred to our pain clinic with persistent symptoms after repeated failed attempts to treat the painful condition with oral medication, ganglian impar blocks, and trigger point injections consisting of local anesthesia and depo medrol. Using Medtronic dual 8-contact percutaneous linear leads for a SCS trial, leads were placed retrograde from an entry point at L3-L4. The leads were threaded down into the sacral area to approach from S2-S3, but adequate analgesic coverage of the painful pelvic area was not obtained. We developed a novel approach where the original 2 leads were repositioned through the interlaminar space at L3-L4 and directed anterograde into the epidural "gutter" and bilaterally over the T11-T12 nerve roots. After 1 week trial period, permanent leads were connected to a generator placed into a pocket within the upper buttock.

**RESULTS:** During a 1 week trial, the patient received great

coverage over the painful pelvic area. Electrodes were then replaced with a permanently implanted SCS system, where the patient reported a 90% decrease in pain. Improvement has since been maintained without complications.

**CONCLUSION:** These results suggest a novel approach of percutaneous dual-lead arrays anterograde from L3-L4 and into the epidural "gutter" of T11-T12 for treating chronic intractable pelvic pain and interstitial cystitis. This approach achieved stimulation coverage for all the painful pelvic areas. The patient was able to return to work as an elementary school teacher and wean off her medications.