

High Frequency Spinal Cord Stimulator Implantation for Combined Alleviation of Chronic Back and Abdominal Pain

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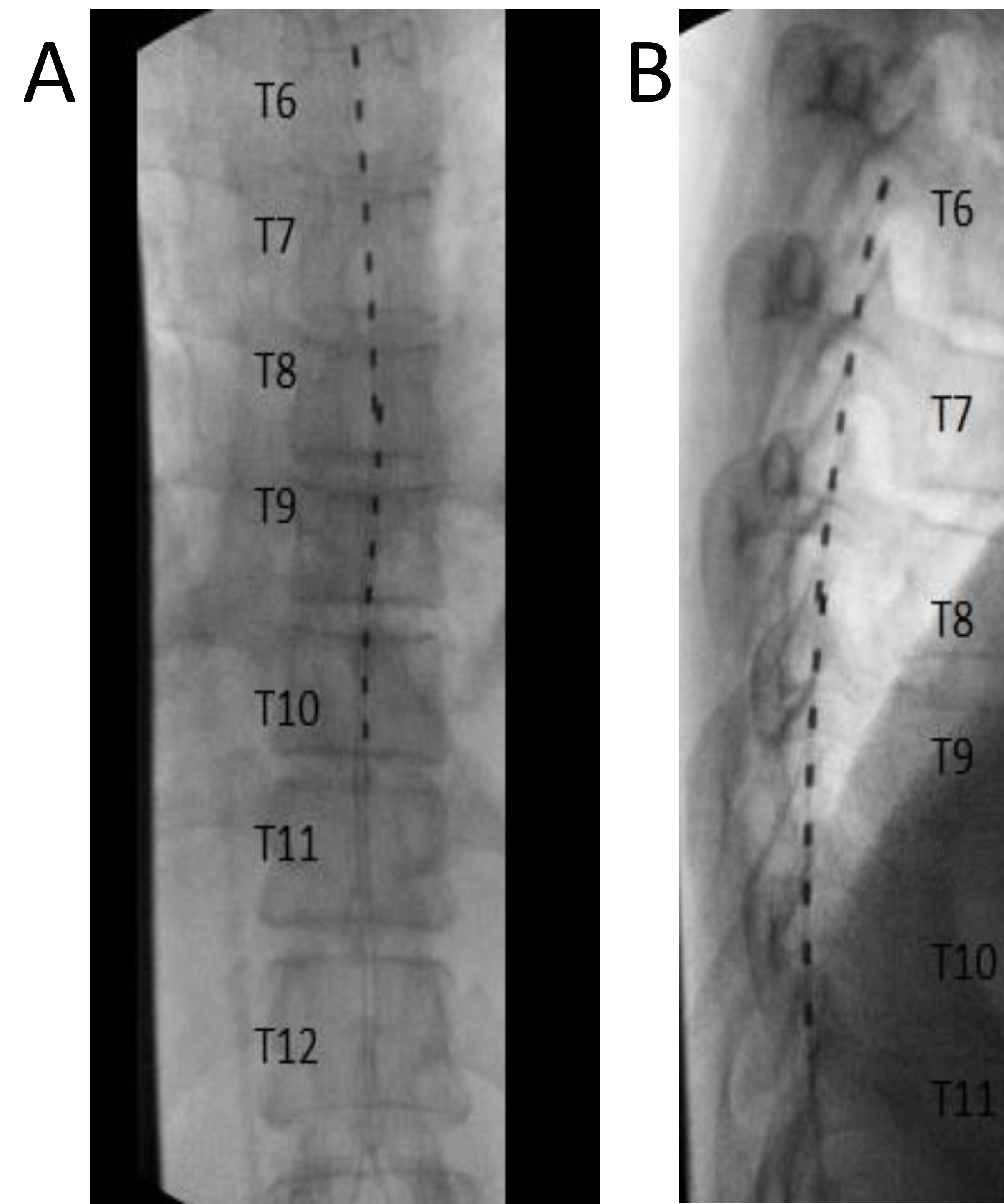
INTRODUCTION

According to CDC data, chronic pain affects 50 million Americans, 20% of national population. Spinal cord stimulation (SCS) is a cost-effective treatment modality for patients with chronic back and leg pain, especially those who failed previous line of treatment. Traditionally, leads are advanced to the T8-T9 level to achieve maximal alleviation of back and leg pain. However, recent evidence support the use of SCS for visceral abdominal pain syndromes. For the latter, leads are usually advanced further and placed around T5-T6 levels for optimal visceral coverage. Here we describe a challenging medical case of an individual who failed previous therapy for post-laminectomy associated back pain that was complicated by masking of chronic abdominal pain.

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LEAD PLACEMENT



Lead Placement: (A) Anterior and (B) Lateral views. Intra-operative fluoroscopy images demonstrate overlapping placement of the SCS leads from (A) Anterior and (B) Lateral views. The placement of the leads allows coverage from T6 down the T10 segment for optimal coverage of both back and leg as well as abdominal pain.

CASE REPORT

Our patient is a 56 years old man suffering from post-laminectomy syndrome with long-standing right-sided back and leg pain, with previous long history of failed treatments, including combinations of non-opioid analgesics, neuropathic medications, NSAID, muscle relaxants and opioids; he underwent numerous procedures, including epidural steroid injections and radiofrequency ablations, all to no avail. He also participated in pain-targeted psychotherapy, including cognitive behavioral therapy, with no improvement in his pain. His comorbidities include hypertension, asthma, GERD, hyperlipidemia, lactose intolerance, obesity, PVD, sleep apnea and chronic abdominal pain with diarrhea. He was referred to our practice for SCS implantation. During SCS implantation trial, the patient endorsed a 60% reduction in his back pain, far outperforming any previous intervention. However, he experienced increased abdominal pain, most likely due to unmasking of his chronic abdominal pain. A shared decision was made to implant an SCS with an attempt to cover both of the chronic back and leg as well as abdominal pain. The patient underwent SCS implantation without any major events during the procedure. Instead of leaving both leads at the T8/T9 level, in this procedure, one lead was advanced to the T8 level to provide good coverage for his chronic back pain, while the second was advanced all the way to the T6 level to provide good abdominal coverage. The patient tolerated the procedure well, and went home the same day.

RESULTS

In the immediate follow up to the procedure, the patient reported more than 50% pain alleviation of his chronic back pain. Unlike during simulation, following permanent insertion of the SCS with the above mentioned lead placement, the patient did not complain of increased abdominal pain.

At his two months follow up, as well as his regularly scheduled follow with his gastrointestinal specialist, the patient continues to endorse significant decrease in his abdominal pain and a reduced requirement for pain medication, which he attributes to the SCS implantation. He also continues to experience about 50% overall benefit to his back pain, far out weighing any previous treatment. We look forward to continued follow up of the patient and report on his long term pain control.

DISCUSSION

Here we present, for the first time to our knowledge, a SCS insertion with non-traditional leads placement targeted at providing alleviation of both chronic abdominal and back pain. This strategy may provide not only benefit to patient with concurrent pain from more than one source, but also possibly a treatment strategy by SCS for patients with chronic truncal pain other than back pain. This should be considered as a possible treatment for such non-refractory pain, and could potentially be trialed for other pain syndromes, such as irritable bowel syndrome, interstitial cystitis, post-herpetic neuralgia and similar syndromes. We look forward to continue reporting the long term follow up of this patient. Further investigation is required to provide insight into usage of this technology with other pain syndromes.