

Spinal Cord Stimulator for The Treatment of Chronic Pancreatitis

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Abstract

We report a case of using a spinal cord stimulator for the treatment of severe chronic intractable abdominal pain associated with chronic pancreatitis and placement of intraabdominal stents. This patient also had concurrent severe chronic intractable cervicgia with upper extremity radiculopathy secondary to failed back syndrome. The patient attempted and failed medical and interventional therapy for the treatment of her pains. Percutaneous 8 contact leads were placed midline at the level of C3-C6 and T5-T6 with excellent results. This case demonstrates that chronic pancreatitis can be successfully treated with spinal cord stimulation.

Introduction

Chronic pancreatitis continues to be a challenging entity to treat. There have been a number of case reports that demonstrate the use of spinal cord stimulation to treat chronic pancreatitis. However, it continues to not be a well-known treatment option in the medical community. As it was seen in our case, the patient went 18 years before being offered the option for spinal cord stimulation despite being treated, albeit unsuccessfully, for her condition during that time. We propose that spinal cord stimulation should be considered early in the interventions for patients with chronic pancreatitis that is refractory to other treatments.

Case Report

A 41-year-old female presented with a primary complaint of 18-year history of intractable abdominal pain. She also had a secondary complaint of chronic neck pain and upper extremity pain. Her surgical history included an appendectomy, hysterectomy, multiple ERCP's with stent placement, cervical laminectomy with fusion, and two cervical radiofrequency ablations. The abdominal pain started just after having a cholecystectomy. It was a burning sensation in the periumbilical area that she rated as 7/10. The pain was worse post prandial and it was associated with nausea or vomiting. She

had workups with a gastroenterologist and was diagnosed with chronic pancreatitis and irritable bowel syndrome. She ultimately had 7 endoscopic pancreatic stents placed. In addition to this, she also had concurrent chronic intractable cervicgia with right upper extremity pain that was secondary to cervical laminectomy with cervical fusion. She was diagnosed with failed back syndrome. She attempted and failed medical and interventional management for all of her pains. She had unsuccessfully tried Toradol, tramadol, morphine, and buprenorphine patches. She only had temporary relief of her cervicgia and upper extremity pain after cervical radiofrequency ablations. The patient was approved for a trial of a two lead Boston Scientific spinal cord stimulator system. An 8 contact percutaneous lead was placed midline at the level of C3-C6 and T5-T6 as shown in (Figures 1-3). The best program location for the cervicgia and right upper extremity was at the level of C5, and the best program location for the abdomen was at the level of T5. This resulted in 60% and 90% pain relief respectively. In addition to this, the patient was able to sleep on her right side and sleep throughout the night, which she was not able to do before. She was approved to have a permanent spinal cord stimulator after this successful trial for which one was placed. She is going on 2 years of relief.

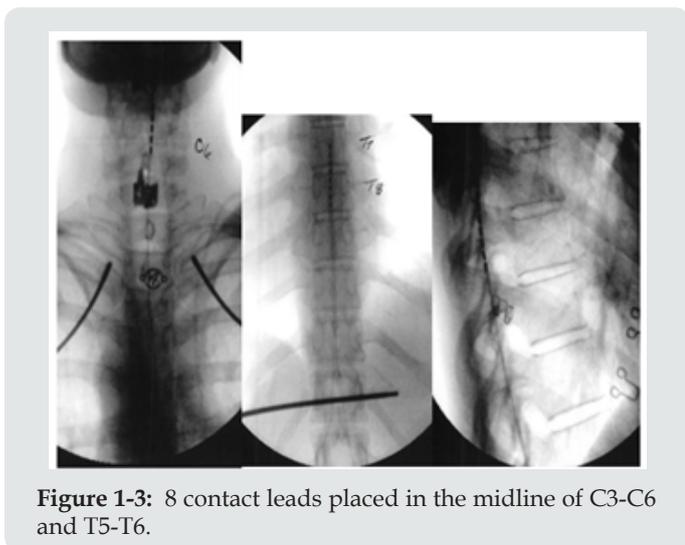


Figure 1-3: 8 contact leads placed in the midline of C3-C6 and T5-T6.

Discussion

Spinal cord stimulation has been a treatment modality since Melzack, and Wall introduced their groundbreaking paper of the gate control theory in 1965. Since then, the list of indications has evolved and grown over time. Spinal cord stimulation is now indicated for failed back syndrome, complex regional pain syndrome, peripheral vascular disease, refractory angina, diabetic peripheral neuropathy, post herpetic neuralgia, intercostal neuralgia, and phantom limb pain [1,2]. However, it is currently not indicated for the treatment of chronic pancreatitis. There have been several case reports on the use of neuromodulation in the treatment of chronic visceral pain [3,4]. Spinal cord stimulation has

been used to successfully treat chronic pancreatitis, as in our case. However, in our opinion, it appears to be underutilized for this. We hypothesize that the reason for this is the lack of knowledge amongst providers that this is an available treatment option. However, in our case, as in others, the reliability of spinal cord stimulation and its benefits of marked improvement in pain and decreased use of opioids in the long term should have providers considering spinal cord stimulation for chronic pancreatitis as one of the preferred treatments [4,5]. This is especially important in refractory cases. In our case, spinal cord stimulation was used to successfully treat chronic pancreatitis. In addition to this, we were also able to treat failed back syndrome at the same time with a single intervention. If our intervention was performed sooner, the number of failed interventions and medical management that this patient underwent could have been significantly reduced.

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