

Targeting the Gut via the Spine: Spinal Cord Stimulation to Treat Chronic Idiopathic Gastroparesis

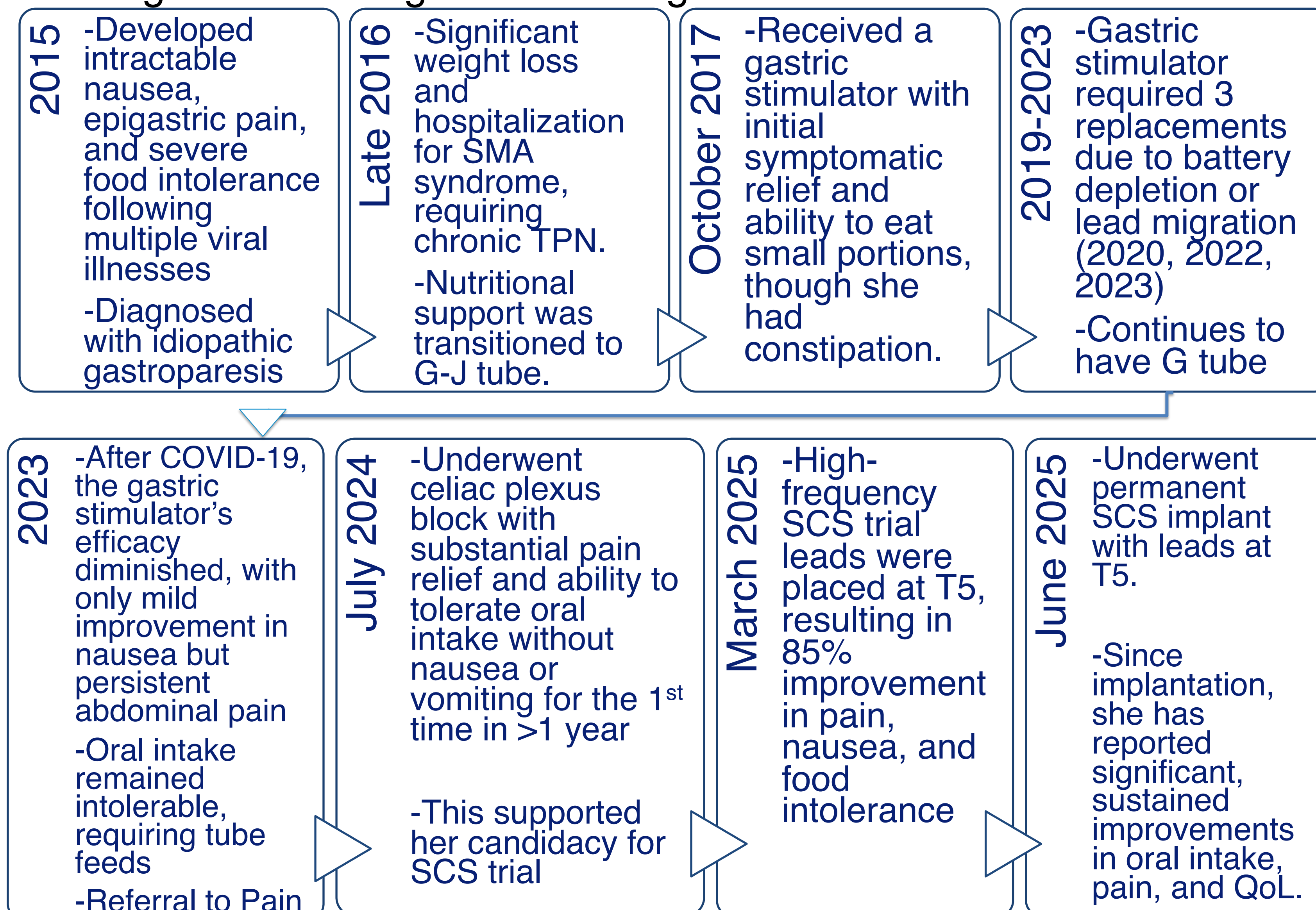
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Introduction

- Gastroparesis can present with difficult-to-treat abdominal pain, nausea, and ↓ quality of life (QoL) [1].
- Symptoms are often attributed to underlying dysautonomia, which delays gastric motility.
- Spinal cord stimulation (SCS) can interrupt sympathetic pathways that transmit pain signals to the thalamus and cerebral cortex.
- SCS has demonstrated benefit in patients with chronic visceral pain and may improve gastric motility by autonomic modulation [1-5].

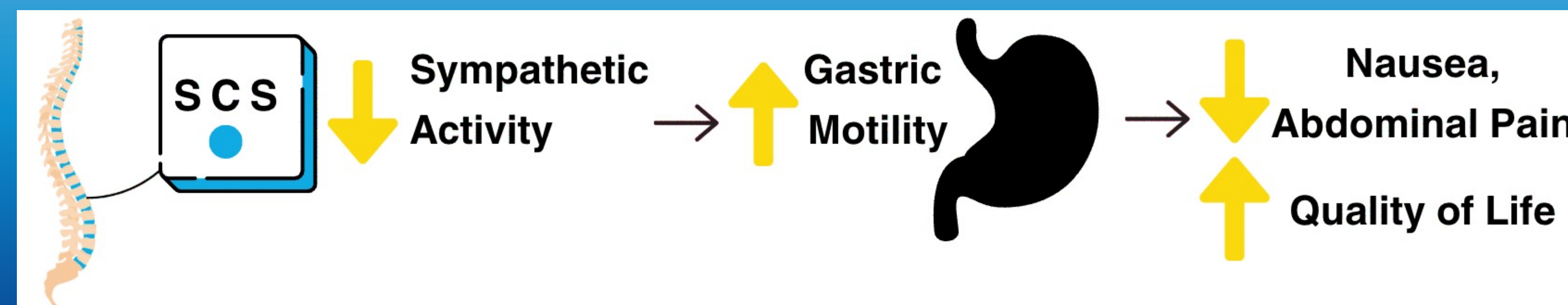
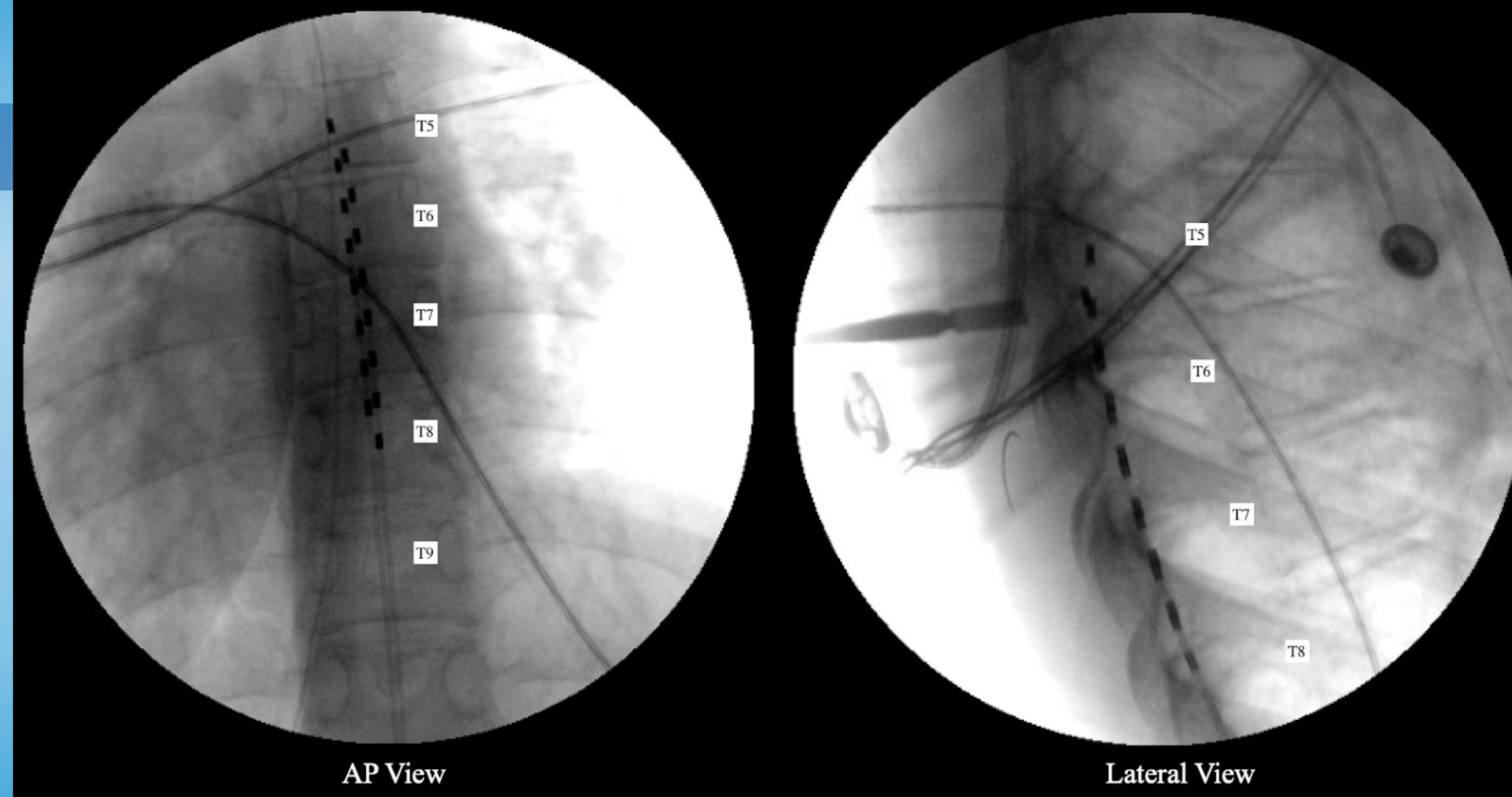
Case Description

- 21 y/o F with chronic gastroparesis, lower GI dysmotility s/p colostomy, POT syndrome, and demyelinating disease on Baclofen 20mg BID and Pregabalin 100 mg BID



This case report presents the use of SCS to treat idiopathic gastroparesis with intractable nausea, epigastric pain, and food intolerance, highlighting its potential as a novel therapy.

Figure 1. Leads from the spinal cord stimulator implant at the T5 level.



Discussion

- GI motility is promoted by vagal efferent activity and inhibited by sympathetic efferent activity
↳ Sympathectomy may improve motility and gastroparesis symptoms [3].
- SCS at a high thoracic level suppresses sympathetic outflow similar to sympathectomy from a celiac plexus block [2,4].
↳ Our patient's positive response to diagnostic celiac plexus block supported her candidacy for SCS.
- Scattered literature has suggested that the use of high-frequency SCS at high thoracic levels for gastroparesis can improve gastric emptying post-implant [2,3].
- Our case illustrates a successful, pragmatic approach to treating a patient with refractory gastroparesis and profound food intolerance with SCS.
↳ Our findings contribute to the growing body of evidence supporting neuromodulation for gastroparesis and warrant the conduct of large-scale clinical trials.

References

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