



Dorsal Root Ganglion Stimulation Restores Functionality From Chronic Debilitating Crohn's Disease: A Novel Use

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Introduction

- Crohn's is a chronic inflammatory bowel disease (IBD) that can cause various symptoms, especially pain, due to the ongoing intestinal inflammation
- Up to 60% of IBD patients experience abdominal pain in their lifetime regardless of disease severity
- Remains one of the major reasons individuals with IBD seek medical attention
- Pharmacologic agents typically used to manage pain include NSAIDs, anti-depressants, antispasmodics, anticonvulsants and opioids
- However, all of these agents, when used as a monotherapy, have limited efficacy and come with a myriad of side effects including an increased risk of flares
- Even after verified remission on clinical exam and endoscopic imaging, up to 20% of patients will continue to experience pain
- Recent literature shows that adequate pain-control correlates with better outcomes and quality of life (QOL)

Case Report

- 20-year-old female with history significant for juvenile idiopathic arthritis and Crohn's disease referred to us for chronic debilitating abdominal pain
- Daily aching throb, exacerbated post-prandially, in her lower right abdomen with fluctuating intensity, averaging 5/10 but often exceeding 9/10 during severe flares
- Pain refractory to a multimodal regimen with gabapentin, nortriptyline, duloxetine and acetaminophen
- This resulted in severe functional debility affecting her appetite, sleep, mood, activity level and overall QOL
- The decision was made to trial dorsal root ganglion (DRG) stimulation
- Patient stated her goal was to achieve 20% pain reduction and improved functionality ie able to participate in her daily life including school and social activity

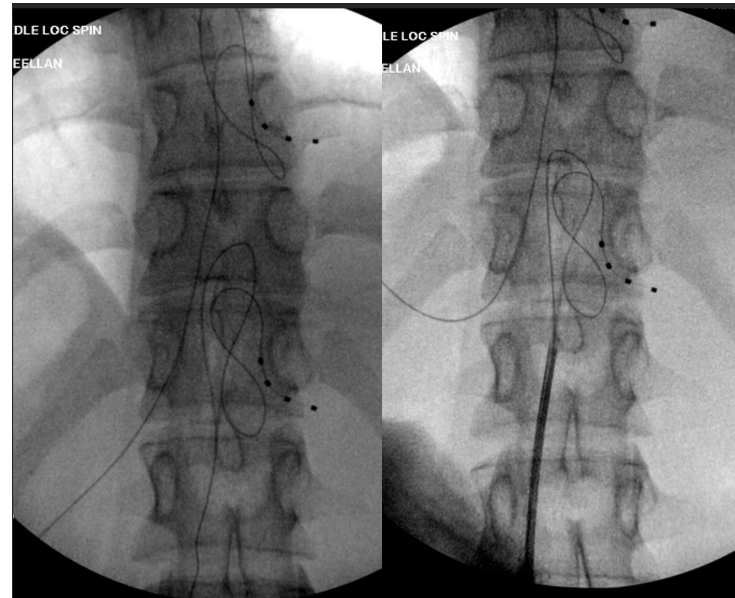


Figure 1. Fluoroscopic imaging showing leads placed at the right T10 and T12 DRG

Post-procedural Outcomes

- At follow-up., the patient reported an average of 25% pain reduction from 8/10 to 6/10
- She reported a remarkable improvement in quality of life, stating she could eat, sleep and walk better, and spend more time out of bed
- Overall, she preferred the T12 lead over T10, which she deemed ineffective
 - The patient and her other expressed extreme satisfaction and wished to proceed with the permanent implant

Discussion

- Pain management for acute IBD flares is a challenging and unresolved issue
- IBD causes significant physical, psychological and financial distress for patients as well as a high-cost burden on the healthcare system
- DRG stimulation is approved for CRPS, persistent post-surgical pain syndrome, and peripheral neuropathy for T10-below
- **To our knowledge**, this is the first report of successful application of DRG stimulation trial for the management of a Crohn's induced acute on chronic debilitating abdominal pain crisis
- More research needs to be done with controlled trials and established outcome measures

Conclusions

- This case report highlights that a prolonged DRG trial can provide functional improvement in debilitating Crohn's disease
- We hope this empowers the pain community to continue to explore other unconventional avenues for improved pain control in this patient population.

References

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