

Application of Sacral Dorsal Root Ganglion Stimulator for Management of Chronic Anorectal Pain in Complex Regional Pain Syndrome



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BACKGROUND

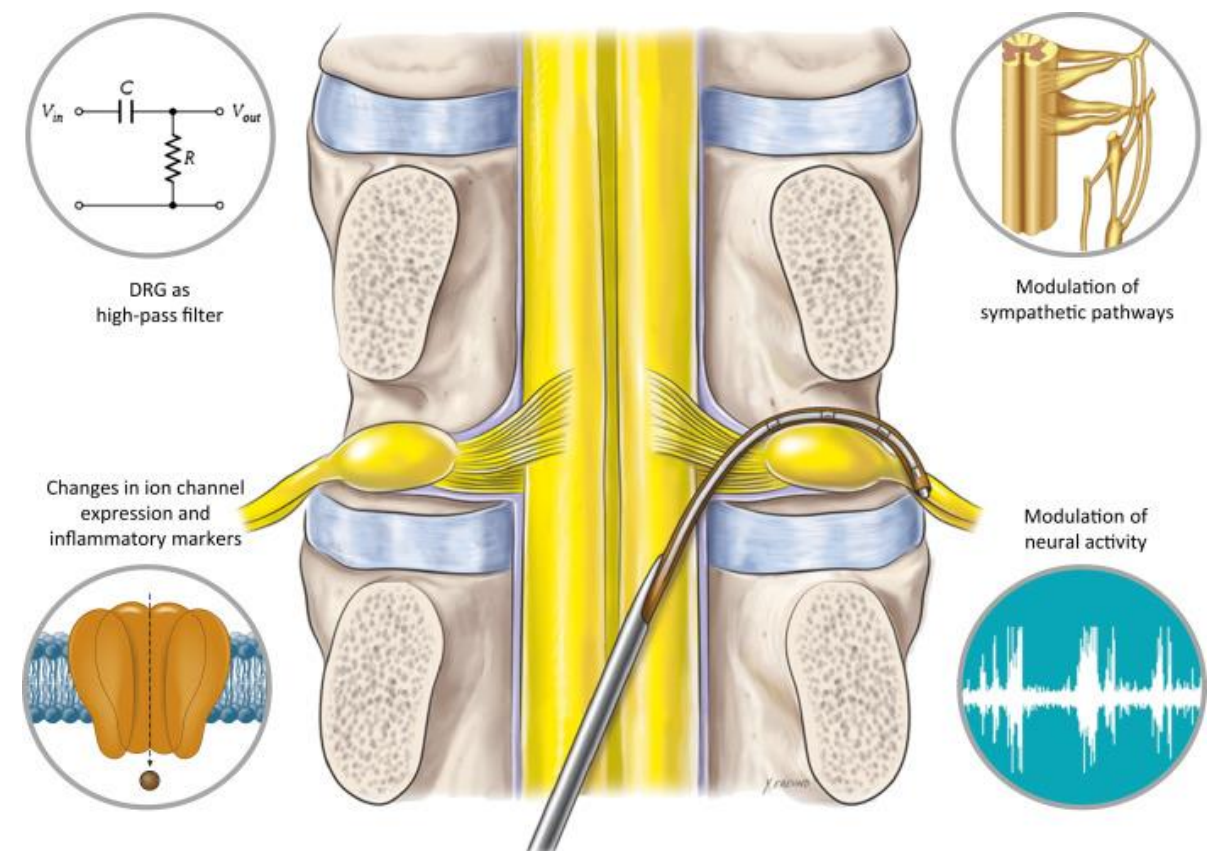
- Dorsal root ganglion (DRG) stimulators offer minimally invasive alternative to back surgery and has been shown highly effective for treating neuropathic pain resistant to conventional treatments
- Complex regional pain syndrome (CRPS) is characterized by allodynia and hyperalgesia, most commonly of the limbs
- CRPS can be physically and psychologically debilitating, reducing health-related quality of life
- Small-sized trials show efficacy of spinal cord stimulators to manage CRPS when conventional therapies fail, however studies in DRG stimulators are lacking
- Relying on opioids for pain control is unpredictable and provides inconsistent coverage due to:
 - Tolerance, side effects, disease progression, poor response, metabolism
- Nerve stimulators disrupt pain sensation by interrupting smaller C and A delta fibers with larger A beta fibers

CASE DESCRIPTION

- 72-year-old woman with history of chronic anorectal pain
- First presented with pain in 2008
- Underwent numerous hypogastric plexus nerve blocks and radiofrequency ablations
 - Neurolytic ablations provided relief for months at time
- No findings of reversible causes of GI pain
- Refractory to physical therapy, piriformis injection, epidural injections, sacrococcygeal injection
- Decision to proceed with DRG stimulator placement in January 2024

METHODS

- 14-gauge Tuohy needle
- Quad leads inserted into left S2-S3 neuroforamen under fluoroscopy
- Positioning confirmed with XR and patient feedback
- Device assessed and reprogrammed in recovery room
- Battery pocket placed laterally and electrodes tunneled underneath



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Step 1: Diagnostic Trial

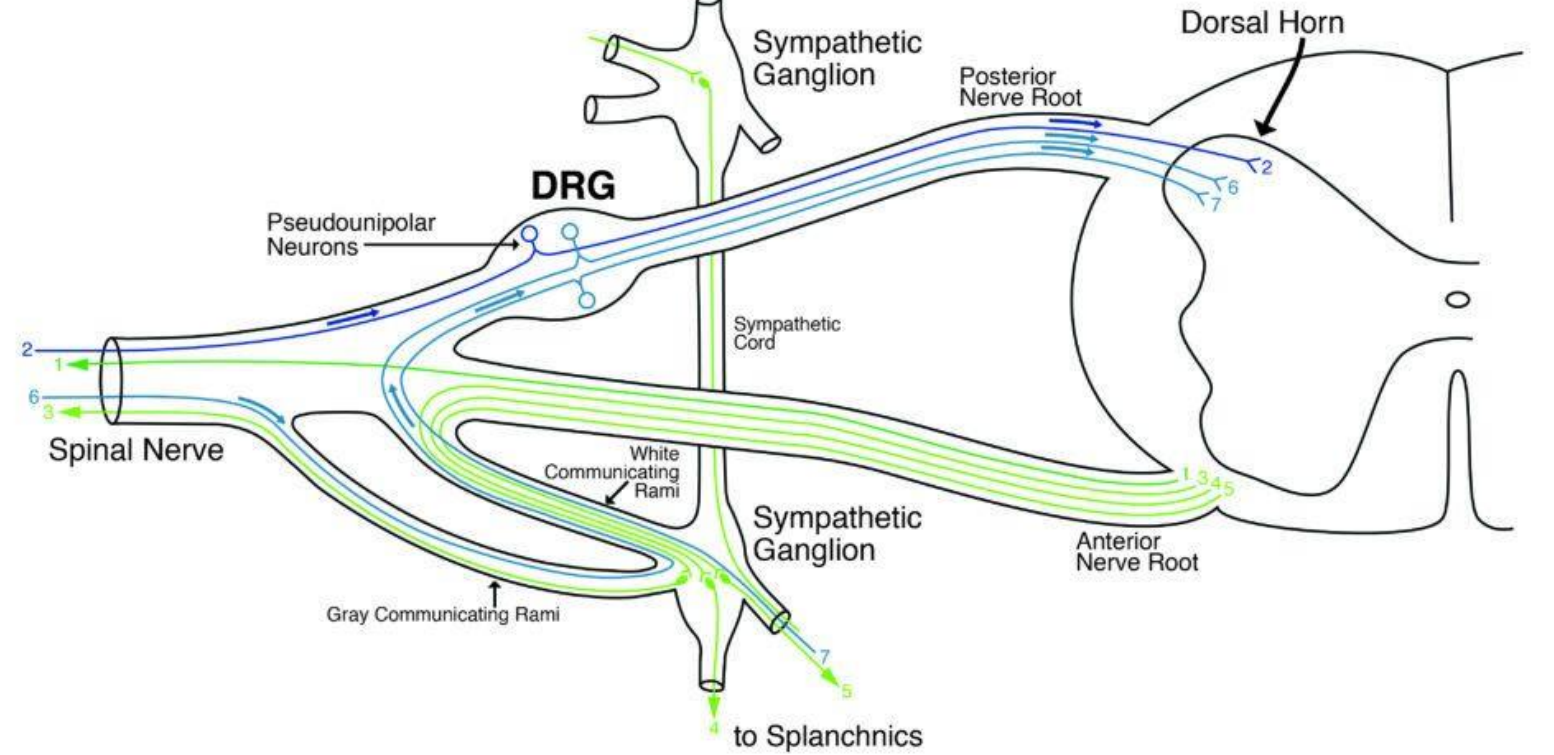
50-70% improvement in pain after ONE week

Step 2: Permanent Placement

75% improvement during daytime and 35% improvement at nighttime after ONE week with continued management after four months

WHY DORSAL ROOT GANGLION

- Spinal stimulation provides less invasive approach
- DRG stimulators are more localized versus traditional spinal cord stimulators
- Thin layer of CSF surrounding DRG allows lower amplitudes of electrical stimulation to provide sufficient pain relief – as low as 4 Hz and at intermittent intervals



CONCLUSION

- Increase in HRQOL due to:
 - Relief of chronic pain
 - Rapid recovery (minimally invasive)
 - Reduced opioid demand
- High value in populations with:
 - Chronic pain refractory to PT and pharmacotherapy
 - History of opioid use disorder or overuse
 - Pain from complex etiology e.g. CRPS
- Improved tolerance for ADLs and other daily activities
- Sense of control and agency over pain

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