

Dorsal Root Ganglion Stimulation for Chemotherapy-Induced Peripheral Neuropathy: A Review of the Current Evidence

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SCAN FOR FULL REVIEW

Methods & references

MAIN FINDING

Stimulating the dorsal root ganglion relieved chemotherapy nerve pain in most reported patients — but no randomized trial has tested it yet.

Why the DRG

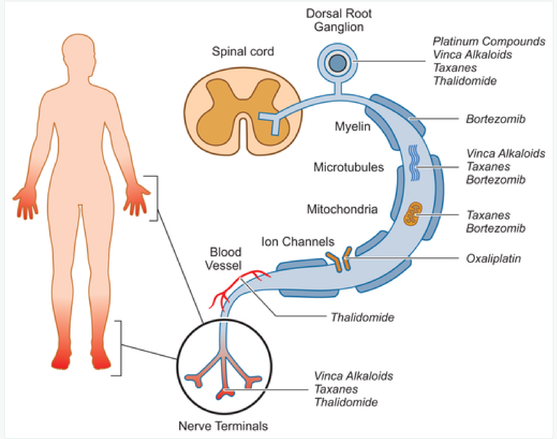


Fig. 1 — Preclinical mechanisms of DRG injury: mitochondrial dysfunction, ion channel dysregulation, neuroinflammation.

The DRG sits outside the blood–brain barrier, where chemotherapy injures it directly. **DRG-S targets the source.**

Objective & methods

Objective. Synthesize preclinical and clinical evidence for DRG-S in painful CIPN, and define its role alongside conventional spinal cord stimulation (SCS).

Methods. Narrative review of preclinical and clinical literature: systematic reviews, translational reviews, and comparative case series.

THE TREATMENT GAP

80–90% develop CIPN on neurotoxic chemotherapy

30–40% of survivors still have it years later

1 drug with guideline support: duloxetine, modest benefit

Clinical evidence

RETROSPECTIVE SERIES · N = 9

38% pain-free at 2 years; 75% cut analgesics; mean pain −2.3 (p = 0.014)

POOLED CASE REPORTS · 8 CASES

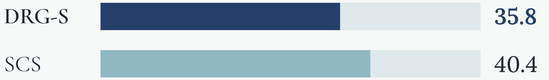
50–100% pain reduction; better standing, walking, mood, sleep

TRIAL-TO-IMPLANT

89% of trials converted to permanent implant

All clinical data are **Level IV**.

DRG-S vs. SCS



TNAS score after treatment, from 56.8 baseline; lower is better. Crossover, n = 5.

The catch

GRADE: **very low quality**. 23 studies, 73 patients, zero randomized trials. Complications: lead migration; rarely, nerve root compression.

NEXT STEP

Sham-controlled trials in refractory, distal lower-limb CIPN.