

Restorative Neurostimulation for Chronic Low Back Pain

– A disease modifying pain medicine therapy

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Introduction

- **Chronic low back pain (CLBP)** afflicts considerable portions of the adult population
- Some with **mechanical CLBP** do not have adequate symptom relief from optimal management strategies
- **Restorative neurostimulation** has shown to be effective at mechanical CLBP arising from impaired multifidus function
- **Aim:** Evaluate clinical trial published data across multiple studies with restorative neurostimulation

Methods

- Data analyzed from patient-reported outcomes (PROs) from consented patients with restorative neurostimulation implantations in 3 major trials (ReActiv8-B (US, UK, EU, AUS), ReActiv8-C (Germany), ReActiv8-PMCF (UK))¹⁻³
- Analyzed data at pre-op, 6-, 12-, and 24-months post-op
- PROs:
 - Numeric rating scale (NRS) or Visual Analog Scale (VAS) – recorded as response
 - Oswestry Disability Index (ODI)
 - EuroQol 5-Dimension 5-Level (EQ-5D-5L)

Results

Complete patient data at 2 years: N=261/333; F51%; Age=49.1±0.7yrs; BMI=28.4±0.3kg/m²

- ODI improved from 41 to 21
- 65% had >50% reduction in pain
- 60% improved ODI by >15-points
- 60% classified as Remitters* (*≤2.5 on VAS or ≤3 on NRS)
- EQ-5D-5L improved from 0.544 to 0.769

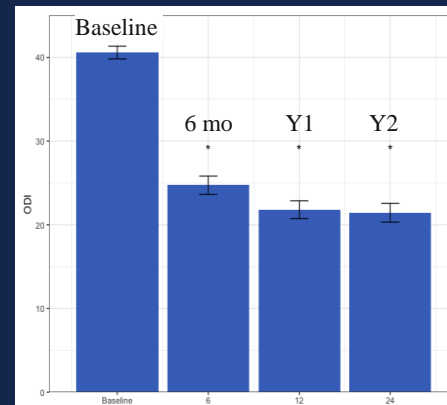


Figure 1: Mean Change in ODI

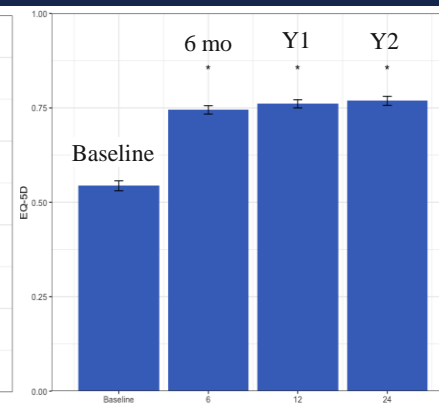


Figure 2: Mean Change in EQ-5D

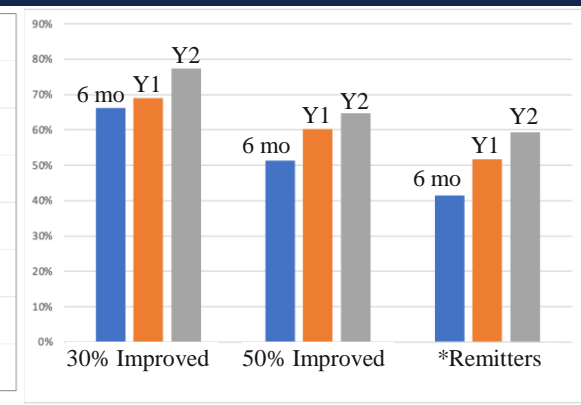


Figure 3: VAS/NRS Responder rates

Discussion

Evidence across multiple clinical studies showed positive changes from baseline in VAS/NRS, ODI, and EQ-5D-5L in patients with mechanical CLBP and multifidus dysfunction

Conclusion

Restorative neurostimulation, an additional treatment option, provides sustained pain, function and quality of life improvements long-term for patients with multifidus dysfunction resulting from mechanical CLBP