A Retrospective Review of 60-Day PNS Treatment Used For Pain In The Cluneal Nerve Distribution: Real World Outcomes

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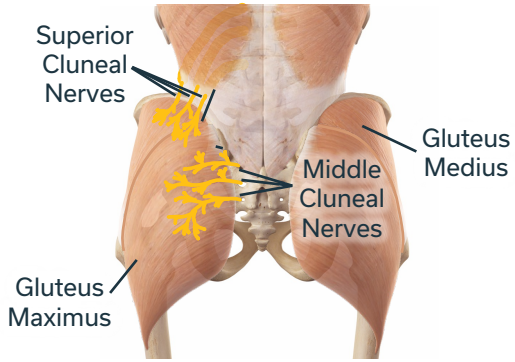
OBJECTIVES

- Real-world evidence (RWE) can provide insights into treatment effectiveness[1-3], but limited data have been published on Peripheral Nerve Stimulation (PNS) targeting the cluneal nerves.
- Recent studies have suggested that percutaneous PNS treatment via implanted leads for up to 60 days can produce significant pain relief[4-7].
- The present work is a retrospective review of outcomes from patients receiving 60-day PNS treatment targeting the cluneal nerves in routine clinical practice.

METHODS

- Anonymized data were reviewed from a national real-world database of patients who previously underwent commercial implantation of 60-day PNS system leads targeting the cluneal nerve and who opted in to provide data.

Cluneal Nerve Anatomy



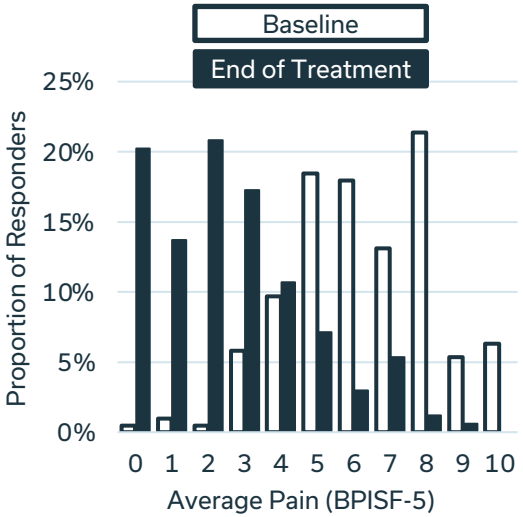
Posterior View

- Outcomes, including patient-reported percent pain relief, average pain (BPISF-5), and quality of life (PGIC), were evaluated at baseline and end of treatment (EOT).
- Responders were defined by ≥50% pain relief and/or clinically meaningful improvement in quality of life as measured by PGIC (≥1).

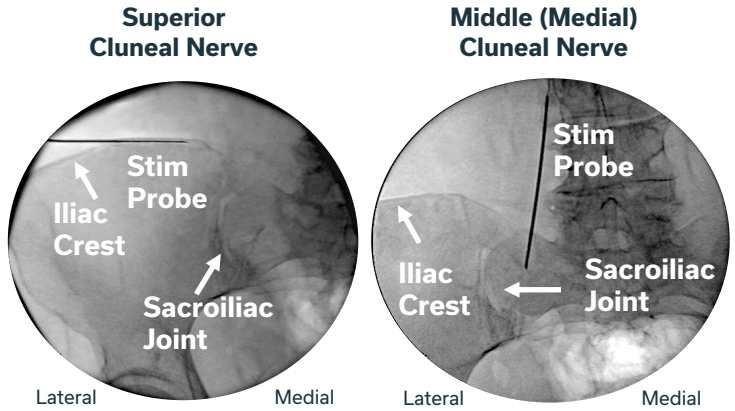
RESULTS

Most Patients Reported ≥50% Pain Relief and/or Clinically Significant Improvement in Quality of Life Following 60-day PNS

- 69% (95% CI: 63-74, 206/300) of patients were responders at EOT with ≥50% pain relief and/or clinically meaningful improvement in quality of life (≥1).
- Mean average pain (BPISF-5) in responders decreased from 6.3 ± 2.0 at baseline to 2.6 ± 2.1 after 60-day PNS treatment.



Example Lead Placement Approaches



- While safety was not directly analyzed in this review, published studies indicate the most common events are skin irritation due to adhesive bandages, pain or discomfort due to stimulation, and pain due to the lead placement procedure.

KEY TAKEAWAYS

- Sixty-day PNS targeting the cluneal nerves produced significant improvements in pain and quality of life in a majority of patients.
- The response rate (69%) is consistent with reports of PNS treatment in prospective clinical studies[4,6] and published real-world data[9,10]
- This 60-day PNS treatment may serve as a promising, non-destructive option for management of pain in the distribution of the cluneal nerves.

ACKNOWLEDGMENTS

1. Kim et al., 2019; 2. Chakravarthy 2018; 3. Gilmore et al., 2021; 4. Gilmore et al., 2020; 5. Wilson et al., 2014; 6. Deer et al., 2021; 7. Chae et al., 2013; 8. Woo et al., 2015; 9. Naidu et al., 2022; 10. Huntoon et al. 2023

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