Functional Improvement and Opioid Reduction Following Temporary Middle Cluneal Nerve PNS for Refractory Sacroiliac Joint Pain

Lily A. Justine, MD[1] | Merna Naji, MD[2] | Chinar D. Sanghvi, MD[2]

1. University of California, Davis Department of Physical Medicine & Rehabilitation, Sacramento, CA 2. University of California, Davis Department of Anesthesiology & Pain Medicine, Sacramento, CA

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BACKGROUND

- Sacroiliac (SI) joint dysfunction is a common source of chronic axial low back pain; pain may arise from intra-articular or extra-articular structures.
- Response to conservative therapy, injections, and radiofrequency procedures may be incomplete or temporary; some patients consider fusion.
- Temporary peripheral nerve stimulation (PNS) may offer a minimally invasive treatment option for refractory SI joint pain.

OBJECTIVE

Describe functional and opioid-use outcomes after temporary percutaneous PNS targeting the bilateral middle cluneal nerves in refractory bilateral SI joint pain.

CASE PRESENTATION

82-year-old woman
Patient with chronic axial low back pain attributed to bilateral SI joint dysfunction.

Functional limitation
Limited standing, sitting, walking, exercise, and daily activities.

Refractory pain
Persistent pain despite physical therapy, home exercise, medication management, acupuncture, chiropractic care, transcutaneous electrical nerve stimulation, massage, and cognitive behavioral therapy.

Prior response
Bilateral therapeutic SI joint injections gave transient 50–60% relief.

METHODS / PROCEDURAL COURSE

DEVICE: Temporary percutaneous PNS | **TARGET: Bilateral middle cluneal nerves** | **METHOD: Fluoroscopic guidance**

On February 2, 2026, temporary percutaneous PNS was implanted under fluoroscopic guidance targeting bilateral middle cluneal nerves (MCN)

CLINICAL COURSE TIMELINE

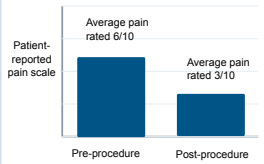
Pre-procedure	Feb 2	Mar 3	Mar 24	Apr 13–May 13	May 13	Jul 22
Baseline	**PNS Implant**	**Generator Issue**	**Generator Replaced**	**Extended Therapy**	**Lead Removal**	**Follow Up**
Chronic bilateral SI joint pain Functionally limited Using ~10 morphine milligram equivalents (MME) per day (hydrocodone)	Temporary bilateral MCN PNS implanted under fluoroscopy	Generator issues resulting in intermittent loss of stimulation and pain recurrence Temporary increase in hydrocodone use	Generator replaced after failed troubleshooting	Therapy extended 30 days to recover lost stimulation time (off-label extension)	Leads removed uneventfully	~50% pain improvement Meaningful functional gains Using ~2.5 MME/day*

*MME/day at lower-activity periods; intermittent hydrocodone use equivalent to 5 MME/day with increased activity.

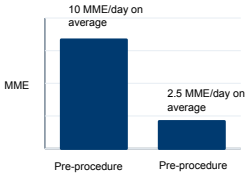
RESULTS

~50%	10 → 2.5	0	1
patient-reported pain improvement	MME/day reduction at follow-up	lead/procedure complications	temporary generator malfunction

Pain improvement



Opioid use (MME/day)



Functional gains at follow-up

Walking tolerance	↑
Activity tolerance	↑
Mobility	↑
Daily activities	↑
Recreational biking goal	continued

DISCUSSION

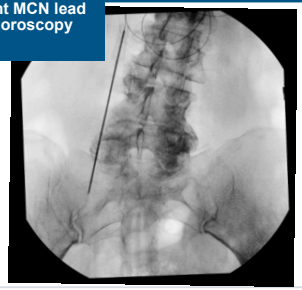
- This case supports temporary middle cluneal nerve PNS as a potential minimally invasive treatment for refractory SI joint pain.
- The middle cluneal nerves arise from the dorsal rami of S1–S3 and provide sensory innervation to the posteromedial buttock region, which may contribute to SI-region pain.
- Targeting the MCN may be relevant for patients with limited response to injections or who are poor surgical candidates.
- Sustained functional gains and opioid reduction occurred after lead removal.

CONCLUSION

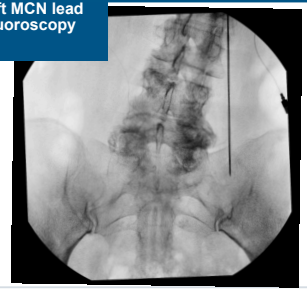
Temporary percutaneous PNS targeting the middle cluneal nerves was associated with approximately 50% pain improvement, meaningful functional gains, and reduced opioid use in an 82-year-old woman with refractory bilateral SI joint pain.

PROCEDURAL IMAGING

Right MCN lead fluoroscopy



Left MCN lead fluoroscopy



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