

Magnetic Peripheral Stimulation (mPNS) for Back Pain

¹Marshall D. Bedder, MD DABA DABAPM DABPM (addiction) FASM, Chief Pain Medicine Service VA Augusta Health System, Commander USN MC (det)

²Lisa Parker, NP, Department of Surgery, Pain Medicine Service, Charlie Norwood Veterans Administration Medical Center, Augusta, GA, USA

Introduction and Objectives

Case report of mPNS successfully treating chronic low back pain unresponsive to conventional medical management (CMM). Both pain (VAS) and functional improvement were monitored.

Materials and Methods

A 37-year-old male presented for initial consult for lower back pain. Patient endorses a 5/10 dull like pain, localized in his lower back, not radiating, not associated with numbness or weakness or affecting his gait. Pain typically increases with lifting heavy objects over 10-15 lbs. and standing for prolonged time over 45 minutes. Patient previously tried message therapy, acupuncture and TENS which all provided little help. Patient only uses Diclofenac gel and Lidocaine patches without any relieve of pain. MRI imaging showed a disc herniation at L5-S1 impinging on the exiting S1 nerve. Disc protrusion displaces the transiting S1 nerve roots posteriorly, left slightly greater than right.

Results

The patient underwent 6 treatments over a 50-day period. Initial pain VAS score was 5/10 and by at his last treatment follow-up his pain level recorded on a VAS was reported as a 2/10, a 60% improvement. He personally reported a “1000% improvement”. His functional capacity improved with a return to the gym and ability to now bend at the waist with much improved function.

Conclusion

The Dorsal root ganglion (DRG) is a known component of the peripheral nervous system which mPNS targets¹. Placing the hand-held wand which delivers the magnetic current just lateral to the dorsal spines, putatively stimulates the DRG to be able to produce the improved pain and function reported. This is in line with previous studies demonstrating significant improvement of chronic neuropathic in post-traumatic, postoperative and painful diabetic neuropathy^{2,3,4}. This report may change the algorithm for treating herniated disc disease using a nonmedication, noninterventional painless therapy.

References

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