Spinal Cord Stimulation for Refractory Axial Low Back Pain in a Patient with Complex Multisystem Chronic Pain: A Case Report

Andrew Salgado[1], Matthew Slitzky[2], Peter Boateng[2]

1. Burke Rehabilitation Hospital

2. University of Pittsburgh Medical Center

BACKGROUND

Spinal cord stimulation (SCS) has become an increasingly important tool in the management of refractory chronic pain, offering a reversible, minimally invasive option that modulates pain signaling before patients progress to more invasive or higher-risk therapies. Traditionally used for neuropathic pain and failed back surgery syndrome, SCS is now being explored for axial low back pain and complex, multi-diagnosis pain syndromes that are poorly responsive to conventional pharmacologic and interventional treatments.

OBJECTIVE

To present a case that highlights the success of SCS in a patient with complex overlapping pain that has been refractory to multiple modalities.

CASE DESCRIPTION

A 53-year-old female with a past medical history significant for chronic pain syndrome, migraine, fibromyalgia, facioscapulohumeral muscular dystrophy, stiff person syndrome, and scleroderma presented with refractory, bilateral axial low back pain without radicular symptoms.

Physical examination was notable for the absence of focal sensory or motor deficits and reproducible pain with flexion, extension, twisting, and bending.

Prior to presentation, the patient had failed multiple modalities, including an intrathecal pump with morphine, physical therapy, oral neuromodulators, muscle relaxants, anticonvulsants, and benzodiazepines.

RESULTS

Given the refractory nature of her pain, a spinal cord stimulator trial was placed for one week. The patient experienced immediate pain relief following implantation. Throughout the trial period, she reported approximately 90% reduction in pain. She also noted substantial improvements in functional mobility, sleep quality, and energy level. Given the robust response, the patient elected to proceed with permanent implantation.

CONCLUSIONS

This case illustrates the potential for SCS to provide substantial relief in patients with complex, overlapping chronic pain conditions, even in the absence of a classic neuropathic or post-surgical pain etiology. Notably, this patient was already being managed with an intrathecal morphine pump, an approach associated with risks including tolerance, dependence, and systemic side effects. Her dramatic response to SCS trial raises the question of whether neuromodulation should be considered earlier in the treatment algorithm; prior to escalation toward intrathecal opioid or other higher-risk pharmacologic therapies. Particularly in patients with refractory axial pain and multiple contributing pain generators.

REFERENCES

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