Sacral Nerve Stimulation Therapy: A Minimally Invasive Solution to Fecal Incontinence

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Abstract
Fecal incontinence is a potentially life-altering problem that is frequently unresponsive to conservative medical management and can negatively affect quality of life. In this case study, sacral nerve stimulation therapy was recommended to a female patient with a long-standing history of fecal incontinence nonresponsive to conservative medical therapies. The patient underwent a minimally invasive procedure to place a sacral nerve stimulation device (MedTronic InterStim™). Two years post-procedure, she continues to experience significantly fewer and less extensive incontinence episodes.
CASE STUDY
Sacral Nerve Stimulation Therapy

Patient Presentation
- A 49-year-old female with a 10 year history of fecal incontinence. Two to three incontinent episodes daily of solid and liquid stools and gas.
- Unremarkable medical history.
- Past surgical history: anal overlapping sphincteroplasty four years prior without substantial improvement of symptoms.
- Treatment history: Conservative medical therapy, including anti-spasmodics and cholestyramine, tried and failed.
- Assessment: Evaluation revealed a normal colonoscopy and the rectal ultrasound with anal manometry identified a 25 percent anterior sphincter defect.

Diagnosis
- Fecal incontinence unresponsive to medical therapy.

Treatment
- Minimally invasive placement of a sacral nerve stimulation device (Medtronic InterStim), an implantable system, placed through S3 foramen, that sends low-level electrical pulses near the nerves of the sacral plexus, producing a physiological effect on the organs innervated by those nerves. Trial placement used for two weeks, followed by patient assessment.
- With direct neuromodulation, there is the potential to alter colonic motility, pelvic floor and anal sphincter function and rectal sensation.

Outcomes
- Two weeks post-implantation of temporary device: Patient’s bowel movement diary showed a 50 percent improvement of her symptoms. On this basis, she underwent permanent placement of the implanted Medtronic InterStim sacral nerve stimulation device.
- One month post-procedure: Significant improvement in the frequency of fecal incontinence, with episodes of incontinence limited to only four in a month.
- Two years post-procedure: Continued substantial symptom relief, averaging just one mild fecal-incontinent episode per week.

Conclusion
- Fecal incontinence is a potentially life-altering problem and sacral nerve stimulation has been shown to help approximately 80 percent of appropriate candidates.
- The option of a trial period before permanent implantation makes it a unique form of therapy.
It was very satisfying to make a difference for this patient. She had suffered for 10 years with no relief, and sacral nerve stimulation restored her quality of life. It is just one of the advanced technologies that our team offers for highly complex disorders and diseases of the colon, rectum and anus. We work collaboratively to ensure that your patient receives not only high-quality care, but also the kind of support that you would want for a member of your own family.”

Jennifer Ayscue, MD

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