

SACRAL NEUROMODULATION FOR NEUROGENIC BLADDER AND BOWL DYSFUNCTION: THE EXPERIENCE FROM ONE CENTER IN CHINA

Hypothesis / aims of study

To assess the clinical effects of sacral neuromodulation (SNM) on patients with neurogenic bladder and/or bowel dysfunction.

Study design, materials and methods

Between 2004 and 2013, 23 patients (6 women and 17 men) with single or multiple bladder and/or bowel disorder (mean age 37.26±2.94 years), were treated with a preliminary test SNM. If clinical improvement was at least 50%, the patient underwent a permanent SNM procedure. We evaluated the patients using a bladder diary, a post-void residual volume measurement, Patient Perception of Bladder Condition-scale (PPBC-S) and the Wexner questionnaire scores for constipation before the test phase, during the test phase, and after permanent SNM.

Results

In the test phase, the improvement rate of dysuria (29.4%) was significantly lower than that of urgency-frequency (64.7%), urinary incontinence (69.2%), and constipation (75.0%). An implant was performed in 13 (56.5%) patients, including three patients whose symptoms of urgency-frequency, urinary incontinence, and constipation all achieved >50% improvement; but whose residual urine volume did not decrease significantly: including one patient who achieved a positive result in constipation control, and another patient who achieved a positive result in lower urinary tract dysfunction. During follow-up (mean of 31.31±8.61 months), only one patient (7.7%) failed, and one patient had bilateral vesicoureteral reflux.

Interpretation of results

Although originally not thought to be a promising treatment option for patients with neurogenic bladder disorders, more recent studies suggest that these patients can benefit from SNM and up to 68% of patients in a test phase and 92% of patients in permanent SNM phase can be successfully treated. Our study found similar success rates (56.5% and 92.3%). In our group, 17 (73.9%) patients had multiple symptoms. In these patients, SNM may only have had an effect on one or two symptoms, but if QoL can be improved, an implant may be indicated, even if not all symptoms are improved. In our study, 11 of 13 patients who underwent permanent SNM had multiple symptoms prior to the procedure, including 3 patients whose symptoms of urgency-frequency, urinary incontinence, and constipation achieved >50% improvement, although their residual urine volume did not decrease significantly; one patient achieved positive results in constipation only, and one patient achieved positive results in lower urinary tract dysfunction only. In our study, we found that the improvement rate of dysuria (25.0%) was significantly lower than for urgency-frequency (62.5%), urinary incontinence (66.7%), and constipation (73.3%) during the test phase, which is different from what is found in the non-neurogenic population.

Concluding message

In conclusion, chronic sacral neuromodulation is an effective and safe treatment alternative for neurogenic lower urinary tract and bowel dysfunction. Sometimes it may not resolve all the symptoms of the patients, but combined with other treatments, it may be a good option for those patients with multiple symptoms.

References

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Disclosures

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