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Gajewski J[1], Chang M[1]
1. *Dalhousie University*

SACRAL NEUROMODULATION FAILURES

Hypothesis / aims of study

Sacral neuromodulation (SNM) is a validated treatment option for refractory voiding dysfunction. It is less invasive than augementation cystoplasty or urinary diversion, and it is reversible. However, it does not work for all patients, and/or there can be complications associated with it that require its removal. At our institution the explantation rate has previously been reported at 20.8% (1). There are no studies examining the status of patients who have had a sacral neuromodulator removed. The goal of this study is to examine the current treatment(s) and quality of life of patients who have had a sacral neuromodulator removed. Reasons for device removal and attitudes towards SNM will also be described. The information obtained from this study will hopefully aid in the counselling and prognostication of patients with refractory voiding dysfunction who are considering or who have failed SNM.

Study design, materials and methods

Patients treated by sacral neuromodulation between the years of 1995-2008 by a single urologist were identified. 96 patients had a sacral neuromodulator placed for refractory voiding dysfunction and of these, 22 patients subsequently had the device removed. There were no exclusion criteria. Initial contact was made by mail. Reasons for device removal, post-removal and current treatments, and attitudes toward SNM were assessed by chart review and questionnaire answers. Current quality of life was assessed by the ICIQ-LUTSqol questionnaire (2).

Results

A 45% participation rate (10 of 22) was achieved. In the remaining 55% of potential partipants, seven declined, four were not able to be contacted, and one had passed away from an unrelated illness. Of the ten participants, four had a diagnosis of urgency incontinence (UI), and six had interstitial cystitis or painful bladder syndrome (PBS). Reasons for device removal were device pain, lack or loss of effect, and stimulation radiation down the leg, as depicted in **Figure 1.**

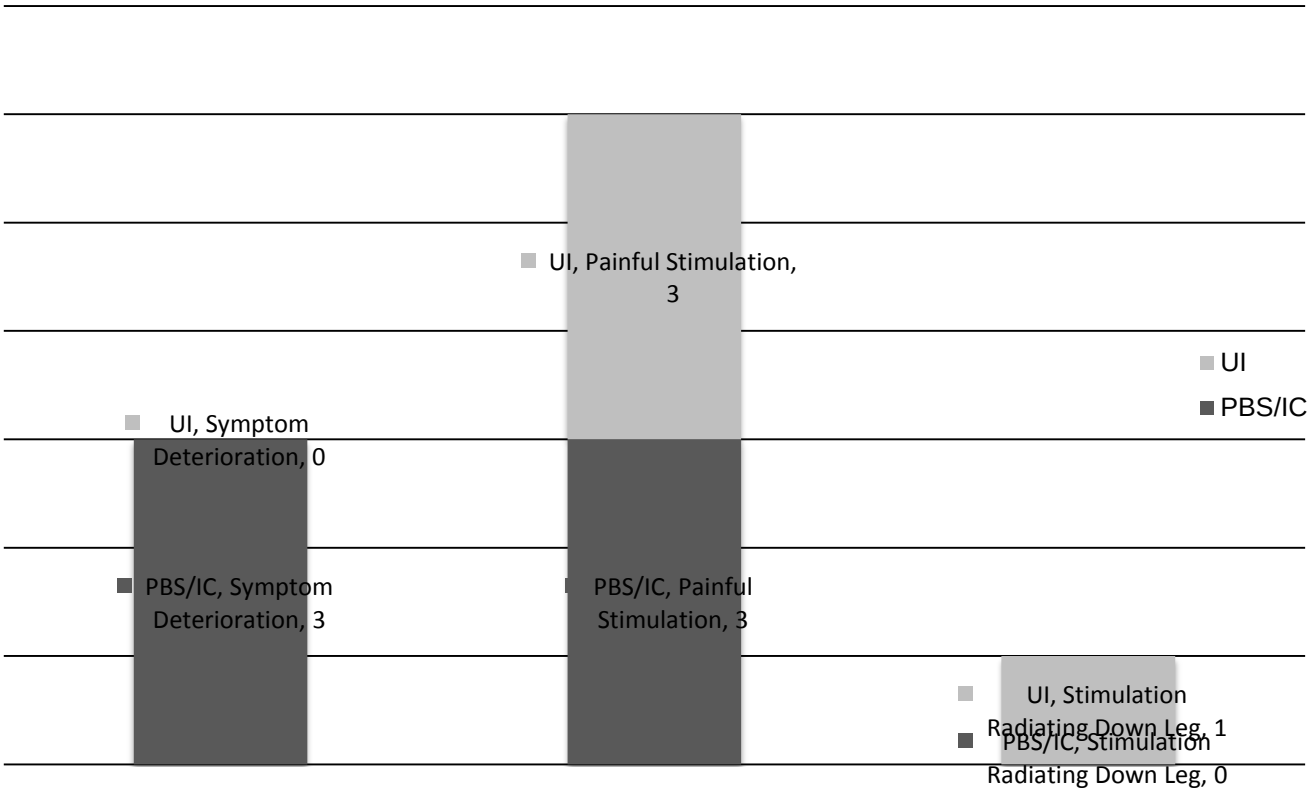

Figure 1. Reasons for SNM explantation according to underlying diagnosis.

Subsequent treatments were oral anticholinergics, opioid analgesics, urinary diversion with cystectomy, ileocystoplasty, or none. **Figure 2** illustrates the relative distrabution of these treatments in our cohort.

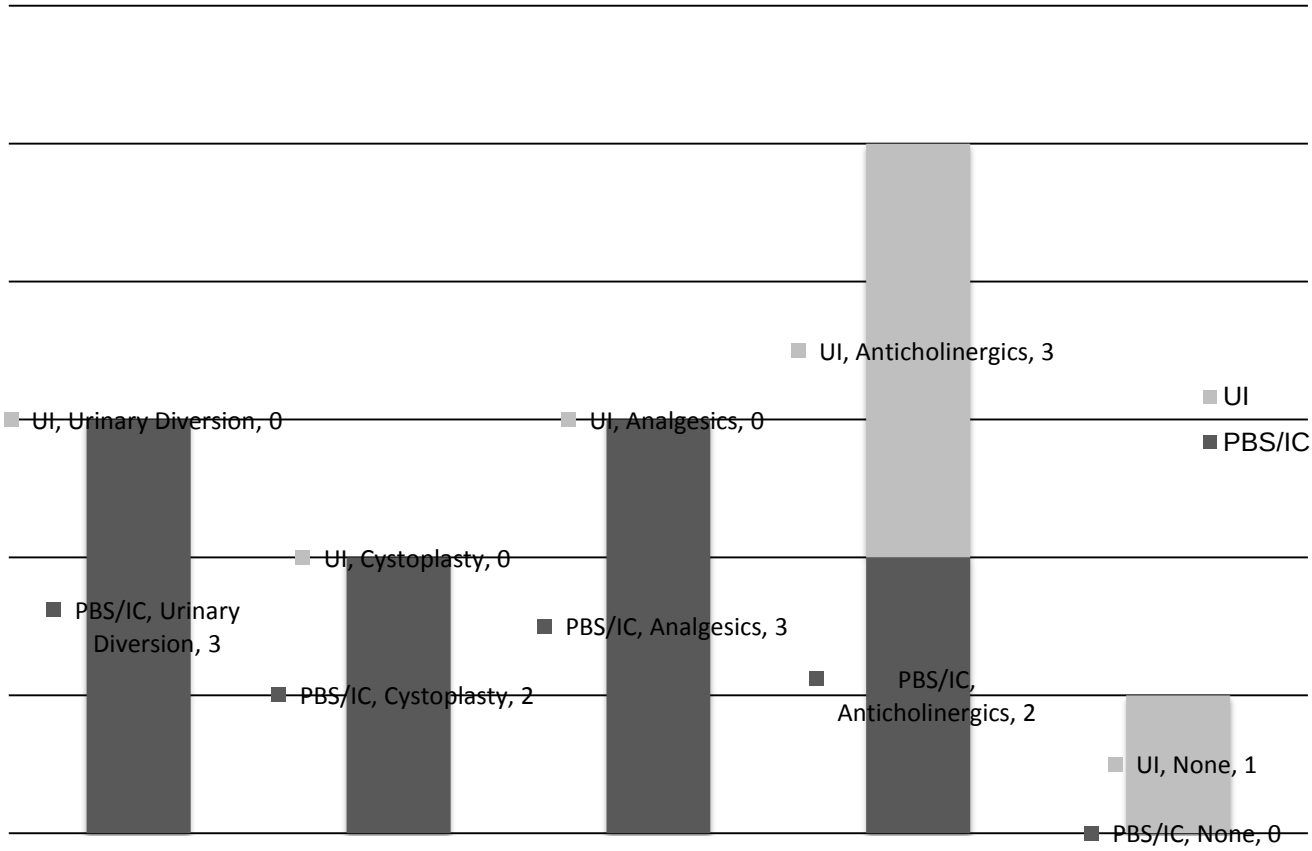

Figure 2. Treatments post SNM explantation according to underlying diagnosis.

The mean score on the ICIQ-LUTSqol questionnaire was 53 (range 22 to 65) out of 76 , with a mean bother score of 6.7 (range 0-10) out of 10. When asked if they would consider SNM again, five responded “yes”, two said “maybe”, and three replied “no”.

Interpretation of results

This represents a small, but difficult to treat, group of patients. Quality of life, related to voiding dysfunction, is poor and although this is not a surprising finding, it underscores the paucity of effective treatment options. Because the number of participants is small, any trends must be interpreted with caution. Nevertheless, in this series the patients with UI, compared to those with PBS/IC, seem to have less symptom deterioration as a reason for explantation and underwent less invasive subsequent treatments Presumably this reflects the different natural history of each condition.

Concluding message

Sacral neuromodulation offers a less invasive option for patients with refractory voiding dysfunction. However, patients should be counseled about the possibility for device complications necessitating removal and regarding treatment options in that scenario. Many of these patients are subsequently treated by more invasive surgical interventions, yet continue to have a poor quality of life. Despite treatment failure, several patients would consider trying SNM again, and this may be a reasonable option as surgical and device improvements evolve.

References

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Disclosures

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