

SACRAL NERVE STIMULATION IS AN EFFECTIVE TREATMENT OF IDIOPATHIC, NON-OBSTRUCTIVE REFRACTORY URINARY RETENTION.

Hypothesis / aims of study

Pelvic floor dysfunction, when severe and refractory to medical and physical therapy, can be a debilitating disease. Symptoms can include urinary retention in patients without any evidence of obstruction. Urinary retention in such patients with pelvic floor dysfunction can be refractory to behavioral therapy, pelvic floor exercises and medical therapy. We report long-term follow-up in 19 patients.

Study design, materials and methods

Forty five patients were initially evaluated for idiopathic non-obstructive urinary retention. Twenty out of forty five patients showed greater than 50% improvement with temporary percutaneous implant. These patients underwent placement of a Medtronic Implantable Pulse Generator sacral nerve implant at our institution between 1998-2001. All patients suffered from chronic, non-obstructive idiopathic urinary retention requiring self-catheterization. All patients had failed conventional and pharmacotherapies. We report a long-term follow-up results in 19 patients. Mean age was 42 years (30-61). Mean duration of symptoms was 52 months (18-96). Mean follow-up was 48 months (36-60). Voided volume, post void residual and satisfaction rating in 19 patients were recorded. Paired student t-test was used as a statistical analysis model.

Results/ Interpretation of results

Sacral nerve stimulation in patients with urinary retention showed a marked increase in voided volume from 44 cc per void (pre-op) to 177 cc at 24 month post-op and 180 cc at 48 month post-op. Reduction in post void residual (PVR) improved from 325 cc (pre-op) to 63 at 24 month post-op and 50 cc at 48 month post-op ($p < 0.05$). All 19 patients are able to void spontaneously presently. At 24 months post-op, 18 out of 20 (90%) patients reported greater than 50% improvement in symptoms. At 48 months, 17 out of 19 (85%) patients reported greater than 50% improvement. Complications included 1 device infection requiring removal with subsequent replacement, migration of the sacral nerve wire in 3 cases which were repositioned, and 2 cases of buttock wound hematoma which was evacuated without any clinical sequelae.

Concluding message

Sacral nerve stimulation is an effective modality of treatment in selected patients with refractory urinary retention associated with pelvic floor dysfunction who have failed other modes of therapy. Temporary Percutaneous Nerve Evaluation offers an excellent screening test to select the patients for whom this procedure will be most beneficial. Improvement in voided volume, post void residual, and subjective improvement in symptoms appears to be durable.