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SACRAL NEUROMODULATION: LONG-TERM EFFICACY, INCIDENCE AND PREDICTORS OF COMPLICATIONS

Hypothesis / aims of study
The aim of this paper is to examine the long-term efficacy and durability of sacral nerve stimulation (SNS), report the complications in a large series of patients and to identify predictors of complications / failures in order to optimize patient selection and outcomes.

Study design, materials and methods
A retrospective review was performed to determine the incidence and predictors of complications with SNS. Patients with refractory urgency incontinence, urgency/frequency or idiopathic urinary retention treated with SNS were identified and selected as the study cohort. Patients completed a one-week voiding log and underwent urodynamic evaluation prior to staged SNS lead placement with the Interstim® (Medtronic) device. Patients were followed for evidence of complications and device efficacy. Patients and device variables including operative indications, patients co-morbidities and social history, as well as the type of lead and generator employed were examined statistically for evidence of predictive value.

Results
From June 2001 to March 2008 271 patients (228 females and 43 males) with an average age of 52 years (range 17-86 years) underwent staged SNS lead placement by a single surgeon, for intractable urgency incontinence (126), urgency/frequency (105) or idiopathic urinary retention (40). Of this group 244 patients (90%) experienced a greater than 50% improvement in symptoms based on a one-week voiding log and underwent urodynamic evaluation prior to staged SNS lead placement with the Interstim® (Medtronic) device. Patients were followed for evidence of complications and device efficacy. Patients and device variables including operative indications, patients co-morbidities and social history, as well as the type of lead and generator employed were examined statistically for evidence of predictive value.

Interpretation of results
SNS is an effective treatment for patients with intractable voiding dysfunction. Complications are not uncommon but can be minimized.

Concluding message
Complications may be minimized with better patient selection, use of the IPG II, an experienced surgeon and a dedicated clinical programmer. A committed and educated patient may ultimately represent the most important key to success.

Specify source of funding or grant
None

Is this a clinical trial?
No

Was this study approved by an ethics committee?
No

This study did not require ethics committee approval because
this is a retrospective review of patients treated with SNS for their voiding dysfunction

Was the Declaration of Helsinki followed?
Yes

Was informed consent obtained from the patients?
Yes