

PNE VERSUS STAGED TEST TRIALS FOR SACRAL NEUROMODULATION: SENSITIVITY, SPECIFICITY AND PREDICTIVE VALUES OF EACH TECHNIQUE

Hypothesis / aims of study

The aim of our study is to determine sensitivity, specificity, and predictive values of each test trial procedure and to establish a decision algorithm for the most appropriate screening test method.

Study design, materials and methods

A cross sectional study from August 2009 to February 2012, including patients with voiding dysfunction who underwent stimulation test trial prior to InterStim® implant. All patients presenting at that time period were included in the study.

Intervention: Patients underwent PNE as the first stimulation test. Patients who encountered technical difficulty during PNE or electrode migration underwent the staged procedure.

Outcome Measurements: True positive cases are patients with positive test and symptom control after InterStim® implantation. True negative are negative PNE and staged procedure result.

Results

A total of 213 patients, 172 females and 41 male underwent PNE. Patient's diagnoses: refractory Overactive bladder (47%), non-obstructive urinary retention (29.6%) and frequency urgency syndrome, pelvic pain (21.6%). A total of 202 had PNE, 10 patients underwent staged procedure. Overall sensitivity of PNE was 87.3% compared to 90% staged procedure. PNE specificity was 98.5% versus 92.9% for staged procedure. Positive predictive value and negative predictive value for PNE was 99% and 82.1% compared to staged procedure was 90% and 92.9% respectively

Interpretation of results

PNE test has high specificity, positive predictive value in comparison to the staged procedure. We recommend PNE, a simple office-based procedure as the first option in stimulation tests prior to SNM therapy and reserve staged procedure as a second-line option.

Concluding message

We compared sensitivity of both screening test for patient eligibility for interstim®

Implantation, we found that PNE is better first line screening test while staged procedure is reserved for special conditions.

References

1. Hassouna M, Siegel S, Nyeholt A, et al. Sacral neuromodulation in the treatment of urgency- frequency symptoms: a multicenter study on efficacy and safety J Urol 2000;163:1849-54
2. Alshajji Tariq , Banakhar Mai, Hassouna Magdy, Pelvic electrical neuromodulation for the treatment of overactive bladder symptoms Adv Urol, 2011;2011:757454.Epub 2011 May 14
3. Peters KM1, Carey JM, Konstandt DB. Sacral neuromodulation for the treatment of refractory interstitial cystitis: outcomes based on technique: international Urogynecology Journal vol.14, no.4, pp.223-228 (2003)

Disclosures

Funding: no funding resource. **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** ERB(Ethical research board) Toronto western hospital **Helsinki:** Yes **Informed Consent:** Yes