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**Title:** SACRAL NERVE TEST STIMULATION (INTERSTIM) GENERAL vs LOCAL ANESTHESIA

### **Aims of Study**

The purpose of this study was to compare the efficacy of performing sacral nerve test stimulation under general anesthesia versus local anesthesia.

### **Methods**

This was a prospective non-blinded randomized study where 20 consecutive patients with refractory voiding disorder underwent InterStim test stimulation. This group included refractory urge incontinence (N=11), urinary frequency-urgency syndrome (N=6), and chronic urinary retention (N=3). Ten (10) patients were assigned to the local anesthesia group (LAG) and the remaining 10 patients were assigned to the general anesthetic group (GAG). All patients underwent preoperative multichannel urodynamics, cystoscopy, pad test, and voiding diaries. During the test stimulation, test leads were placed bilaterally. Postoperative urodynamics, voiding diaries, and pad tests were obtained.

### **Results**

Twenty consecutive patients (pts) underwent bilateral test stimulation (N=40) using fluoroscopy. The mean age was 58.2 years (range 32 to 86). Positive bellows sign and plantar flexion of hallux longus constituted positive test. The mean follow-up was 9 months (range 6-14). The mean operating time to localizing the sacral nerve was 85 minutes vs 15 minutes (LAG vs GAG) ( $p < 0.001$ ). During the test stimulations, positive response was evoked in 50% vs 100% (LAG vs GAG) ( $p < 0.001$ ). On a visual analogue scale, the mean intraoperative pain score was 8/10 vs 0/10 (LAG vs GAG). The postoperative pain score was 6/10 vs 2/10 (LAG vs GAG) ( $p < 0.001$ ). The incidence of infection at the lead site and worsening incontinence was zero for both groups. Of LAG, 5/10 (50%) proceeded with permanent implant whereas 10/10 (100%) of GAG received permanent implant. When asked if they would undergo the same procedure again, 4/10 (40%) patients in the local anesthesia group responded as yes whereas 10/10 (100%) patients in the general anesthetic group reported as affirmative.

### **Conclusions**

Sacral nerve test stimulation under general anesthesia appears to be a useful alternative to local anesthesia for those patients who cannot tolerate local anesthesia. This also raises the question whether the sensorymotor response evoked during local anesthesia is as important as previously thought since only motor response was evoked during test stimulation under general anesthesia. Further research on a larger scale is needed.