

# Is The Presence of Stress Urinary Incontinence Associated with Sacral Neuromodulation Outcomes for OAB?

D Charles, E Bejarano, R Everett, RC O'Connor, M Guralnick  
 Department of Urologic Surgery  
 Medical College of Wisconsin, Milwaukee, WI, USA

## Introduction

- Sacral neuromodulation (SNM) is considered 3<sup>rd</sup> line therapy for refractory overactive bladder (OAB)
- Our prior study noted possible positive association between presence of patient reported stress urinary incontinence (i.e. subjective SUI, sSUI) and outcome of SNM testing [1]
  - sSUI defined as answering “yes” to “do you experience incontinence with laugh/cough/sneeze/exercise?”
- To date, no strong research to suggest SNM improves SUI
- We reanalyzed the data from our prior study to see if there is an association between SUI and SNM outcomes

## Methods

- Retrospective re-analysis of our prior study of patients who passed SNM test and now includes those who did not (i.e. < 50% improvement)
- All patients reported sSUI in addition to refractory OAB symptoms
- Overall, 100 female patients who underwent SNM for OAB with concomitant report of sSUI
- Inclusion criteria: +sSUI and preoperative UDS with LPP testing
- SNM patients grouped based on their results of stage 1 SNM testing: 50-75% (group 1), >75% (group 2), <50% (group 3) improvement
- Improvement % based on combination of overall subjective impression (analog scale) + objective measures (e.g. diaries, pad usage)
- Compared clinical and UDS parameters with respect to presence of objective SUI
  - oSUI = positive Valsalva/cough stress test during UDS (LPP testing)
  - T test, ANOVA

## Results

Stage 1 Subjective Improvement Groups				
	50-75%	>75%	<50%	p-value
Patients (n)	33	39	28	
Age (yrs, mean)	51.1	49.6	59.3	0.96
AUASS pre-SNM (total score, mean)	26.7	19.4	23.6	0.83
Objective SUI presence (# of pts, %)	6 (18.1%)	6 (15.4%)	4 (14.3%)	0.29
Lowest LPP (VLPP or CLPP, cm H2O)	75	78	83	0.56
Cystometric capacity (mL, mean)	336.7	336.2	310.8	0.82
Detrusor Overactivity (%)	13 (32.5%)	17 (42.5%)	9 (22.5%)	0.41
Cough Induced DO (%)	2 (6%)	2 (5%)	0	
Pdetmax with DO (cm H2O, mean)	41.4	37.5	34.1	0.55

## Conclusions

- sSUI does not equate to oSUI (oSUI noted in 16% of patients with sSUI)
- Is it stress--induced DO rather than genuine SUI?
  - Only noted in 10% of our patients with DO, 4% overall (but UDS can miss DO [2])
- The presence of sSUI in patients with OAB does not appear to be associated with the outcome of SNM

## References

- 1 Charles DK, Everett RG, Prebay ZJ, Landowski TP, O'Connor RC, Guralnick ML. Is a 50% improvement threshold adequate to justify progression from sacral neuromodulation testing to implant? *Neurourol Urodyn.* 2021 Aug;40(6):1524-1531.
- 2 Al-Ghazo MA, Ghalayini IF, Al-Azab R, Hani OB, Matani YS, Haddad Y. Urodynamic detrusor overactivity in patients with overactive bladder symptoms. *Int Neurourol J.* 2011 Mar;15(1):48-54.